Appendix L:

Utilities and Services Systems Supporting Information

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L.1 - Wastewater Hydraulic Modeling Study

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CITY OF CLOVIS

TECHNICAL MEMORANDUM

Wastewater Hydraulic
Modeling Study

VISTA RANCH MASTER PLAN

FINAL

September 2025

AKEL
ENGINEERING GROUP, INC.

AKEL
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Smart Planning Our Water Resources

FINAL

September 23, 2025

City of Clovis
1033 Fifth Street
Clovis, CA 93611

Attention: Thad Avery, P.E., City Engineer

Subject: Vista Ranch Wastewater Hydraulic Modeling Study

Dear Thad,

We are pleased to submit this wastewater hydraulic modeling study summarizing the capacity analysis for Vista Ranch Development in the City of Covis. This study is organized as follows:

1. Purpose and Scope
2. Study Area
3. Flow Projections
4. Hydraulic Model Updates
5. Servicing Alternatives
6. Capacity Evaluation
7. Recommendations

We are extending our thanks to you and other City staff whose courtesy and cooperation were valuable components in completing this study.

Sincerely,

AKEL ENGINEERING GROUP, INC.

Tony Akel

Tony Akel, P.E., D. WRE.
President
Enclosure: Wastewater Hydraulic Modeling Study

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City of Clovis
Vista Ranch Wastewater Hydraulic Modeling Study

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LIST OF ABBREVIATIONS

2017 WCSMP	2017 Wastewater Collection System Master Plan
ADWF	Average Dry Weather Flow
Akel	Akel Engineering Group, Inc.
City	City of Clovis
d/D	Depth of Flow to Pipe Diameter Ratio
DU	Dwelling Units
EDU	Equivalent Dwelling Units
Firm Capacity	Available capacity with the largest pump out-of-service
fps	Feet per Second
ft	Feet
HGL	Hydraulic Grade Line
I&I	Infiltration and Inflow
mgd	Million Gallons per Day
PDWF	Peak Dry Weather Flow
PWWF	Peak Wet Weather Flow
ROW	Right-of-Way
RWRF	Fresno-Clovis Regional Wastewater Reclamation Facility
SOI	Sphere of Influence
Spillway	Big Dry Creek Spillway
ST/WRF	Clovis Sewage Treatment – Water Reuse Facility

1.0 PURPOSE AND SCOPE

The City of (City) is currently planning to provide wastewater collection service to the Vista Ranch Master Plan located immediately north of the City limit. The purpose of this study is to evaluate wastewater servicing alternatives and recommend infrastructure improvements to connect this development to the City's existing collection system. The scope of work for this study included the following tasks:

- Describe the study area and proposed land uses.
- Estimate wastewater flows from the proposed Master Plan.
- Update the City's existing hydraulic model to include on-site infrastructure.
- Identify servicing alternatives and develop hydraulic model scenarios.
- Evaluate system capacity based on the City's design criteria.
- Recommend infrastructure improvements needed to maintain the target level of service.

2.0 STUDY AREA

The Vista Ranch Master Plan proposes to develop 507 acres of land located within the City's Sphere of Influence (SOI), immediately north of the City limit. The Master Plan area is bound by East Behymer Avenue to the north, Big Dry Creek Reservoir to the east, Shepherd Avenue to the south, and Sunnyside and Fowler Avenues to the west.

According to the conceptual plan received from the developer, the Vista Ranch Master Plan will consist of 30 distinct planning areas, as illustrated on **Figure 1**. The proposed land uses will include a mix of residential, commercial and office spaces, described as follows:

Wastewater Flow Generating Areas

- **Residential**. This land use includes a maximum of 3,286 dwelling units (DU) varying in density from Medium (4.1 to 7 DU per acre), Medium High (7.1 to 15 DU per acre), to Very High (25.1 to 43 DU per acre). The total residential area is quantified at 376 acres, which accounts for 74 percent of the Master Plan.

- **Non-Residential**. This land use consists of commercial, recreational, and professional office space with a total area of approximately 48 acres. Non-residential land use represents 9 percent of the Master Plan.

Non-Flow Generating Areas

- **Parks and Open Space**. This land use features public parks, trails, and an open space corridor with a total area of approximately 59 acres. This land use accounts for 12 percent of the Master Plan.
- **Major Roadways**. This land use enhances connectivity by providing access for public transportation and promoting the use of bike lanes. These public roadways encompass an area of approximately 24 acres and represent 5 percent of the Master Plan.

The Master Plan is separated into two distinct phases based on site topography. The area southeast of the Big Dry Creek Spillway (Spillway) is identified as Phase 1 whereas the area northwest of the Spillway is identified as Phase 2. These development phases are illustrated on **Figure 2** and included in the subsequent analysis.

3.0 FLOW PROJECTIONS

Average wastewater flow projections for the 30 distinct planning areas are quantified on **Table 1**, and were established from the unit factors provided in the City's 2017 Wastewater Collection System Master Plan (2017 WCSMP). These projections account for proposed land uses with potential for flexibility units in areas that can accommodate additional growth.

One of the planning areas currently contains a Derrel's Mini Storage Facility, designated as light industrial land use. Based on discussions with the City, flow projections for this area reflect existing land use, as no immediate development is anticipated. In total, the Average Dry Weather Flow (ADWF) from Vista Ranch Master Plan (Phase 1 and 2) is estimated at approximately 0.49 million gallons per day (mgd).

Peak Dry Weather Flow Distribution

- Phase 1 – 0.58 mgd (63% of Total)
- Phase 2 – 0.34 mgd (37% of Total)
- **Total – 0.92 mgd**

For evaluation and modeling purposes, wastewater flow projections were grouped into the two development phases listed on **Table 2**. Peak wastewater flow projections are also documented on **Table 2** and were estimated from diurnal peaking factors in the City's 2017 WCSMP. A peaking factor of 1.9 was applied to residential areas whereas a peaking factor of 1.7 was applied to non-residential areas. The development will contribute a total peak dry weather flow (PDWF) of 0.92 mgd.

In addition to peak dry weather flow, unintended flows can enter the collection system during rainfall events. The resulting peak is defined as the peak wet weather flow (PWWF) and typically attributed to infiltration and inflow (I&I). Infiltration occurs from high groundwater levels or saturated soils, while inflow is commonly associated with structural defects in pipes, manholes, laterals, or illegal stormwater connections. Based on a 2023 - 2024 geotechnical

investigation completed by Krazan and Associates, Inc., the northern limits of the study areas parallel and adjacent to the Big Dry Creek reservoir are subject to high groundwater levels that may seep into the proposed pipelines. Proposed pipeline alignments and borehole locations are mapped in **Appendix C** for future design and construction phases.

The project proponent is proposing to install an interceptor trench drain along the front of, and parallel to, the Big dry Creek Reservoir Dam. The intent of the drain is to alleviate shallow groundwater migration that is occurring from the toe of the dam and infiltrating into the development site. The aforementioned Krazan report goes into detail on the potential drain design and operation, which is outside the scope of this report. This report does not evaluate the potential impacts of groundwater infiltration on the sewer system or the effectiveness of the drain system. Should groundwater be encountered during construction of the sewer system, construction operations shall comply with the requirements identified in **Appendix D**.

4.0 HYDRAULIC MODEL UPDATES

The City's existing wastewater collection system hydraulic model was developed as part of the 2017 WCSMP and used in this study for capacity evaluation. Key physical and operational elements of the hydraulic model were updated as follows:

- **GIS Database**. The physical model was updated for consistency with the City's latest GIS database, which included recently constructed gravity pipes along Shepherd Avenue and Willow Avenue.
- **Proposed Wastewater Infrastructure**. The physical model was also updated to include new on-site and off-site infrastructure required to convey Vista Ranch flows into the City's existing collection system.
- **Flow Allocation**. ADWF from **Table 2** was allocated to on-site manholes and assigned peaking patterns to simulate a PDWF scenario.

5.0 SERVICING ALTERNATIVES

This section provides an overview of the existing wastewater collection system and hydraulic model scenarios considered in this study.

5.1 EXISTING WASTEWATER COLLECTION SYSTEM

The City owns and maintains a wastewater collection system comprised of 408 miles of gravity pipes, 10 miles of force mains and 6 lift stations. Currently, most of the wastewater flows are conveyed to the Clovis/Fresno Regional Trunk Collectors through 5 major discharge points located along Herndon Avenue, Sierra Avenue, Peach Avenue, Clovis Avenue and Fowler Avenue. These trunk collectors are equipped with a permanent flow meter and ultimately discharge into the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF) for

treatment. The remaining flows from the City's southeast service area are conveyed to the Clovis Sewage Treatment – Water Reuse Facility (ST/WRF) located west of McCall Avenue and Ashlan Avenue.

5.2 HYDRAULIC MODEL SCENARIOS

Potential servicing strategies discussed with the City were mostly constrained by site topography. Phase 1 area is situated at a higher elevation than Phase 2, and therefore Phase 2 requires a lift station or routing to a separate trunk system. As such, this study considered two alternatives:

- **Alternative A.** This alternative consists of routing flows south into the existing 12-inch pipe at Armstrong Avenue and Everglade Avenue, as shown on **Figure 3**. Two hydraulic model scenarios were developed to simulate this alternative:
    - **Scenario 1** (Phase 1 Only). Routing Phase 1 flows south along Armstrong Avenue via gravity pipes.
    - **Scenario 2** (Phase 1 + Phase 2). Includes Scenario 1 with Phase 2 flows connected via an on-site lift station.
- **Alternative B.** This alternative consists of routing flows south and southwest into two separate trunk systems. Phase 1 flows will be conveyed into the City's existing 12-inch pipe at Armstrong Avenue and Everglade Avenue, while the remaining flows will be conveyed into the City's existing 15-inch pipe at Shepherd Avenue and Fowler Avenue. The proposed on-site and off-site infrastructure required for this alternative are shown on **Figure 4**. One hydraulic model scenario was developed to simulate this alternative:
    - **Scenario 3** (Phase 1 + Phase 2). Routing Phase 1 flows south along Armstrong Avenue via gravity pipes and routing Phase 2 flows southwest along Shepherd Avenue via gravity pipes.

Both servicing alternatives and corresponding hydraulic model scenarios are also listed on **Table 3**. **Alternative A** conveys all flows south along Armstrong Avenue and ultimately connects into the 36-inch Fowler Avenue Trunk. In contrast, **Alternative B** conveys flows from Phase 1 into the Fowler Avenue Trunk with Phase 2 flows discharging southwest into the 33-inch Herndon Avenue Trunk.

6.0 CAPACITY EVALUATION

This section documents the City's design criteria and capacity evaluation results for each scenario.

6.1 DESIGN CRITERIA

The design criteria used for capacity evaluation is listed on **Table 4** and was established from the City's 2017 WCSMP. According to the criteria, the maximum allowable depth-to-diameter ratio (d/D) for existing gravity pipes should not exceed 0.82 during the PDWF simulation. Similarly, the d/D ratio for new gravity pipes should not exceed 0.65 during the PDWF simulation. Additionally, the criteria stipulates that lift stations shall be designed to convey the PWWF with the largest pump out-of-service (firm capacity). The force main velocities should also be within 3 to 8 feet per second (fps) during varying flow conditions.

Pipe alignments, invert elevations, and ground elevations of all proposed infrastructure were provided by the City and conform to the minimum slopes established in the design criteria. Where necessary, Google Earth was used to infer manhole ground elevations and estimate a typical manhole cover depth. The final design of all infrastructure shall comply with the requirements specified in the City's Design Guidelines. Potential utility conflicts, geotechnical constraints and constructability issues should be investigated during subsequent design phases of the development. A topographic survey is also strongly recommended prior to implementing capital improvements.

While high groundwater levels are noted in this report, the City's hydraulic model does not have a calibrated wet weather flow scenario that will allow for a comprehensive evaluation of infiltration impacts on the wastewater collection system. It is recommended that the City monitors the effectiveness of the proposed infiltration trench in mitigating groundwater infiltration on the wastewater collection system, especially during wet weather months.

6.2 CAPACITY EVALUATION RESULTS

The hydraulic grade line (HGL) profiles illustrating pipe capacity for **Alternative A** are provided in **Appendix A** and HGL profiles for **Alternative B** are shown in **Appendix B**. The capacity evaluation results are summarized as follows, and can be cross-referenced with the plan view shown on **Figure 3** and **Figure 4**. An exhibit of the pipeline alignments and critical groundwater levels obtained from borehole logs is included in **Appendix C**.

Alternative A

- **Scenario 1** (Phase 1 Only). The hydraulic model results illustrated on **Figure A1** indicate that the existing system is adequately sized to accommodate Phase 1 flows from Vista Ranch. A maximum d/D ratio of 0.78 is observed in the existing 12-inch gravity pipes located near the Enterprise Canal, south of Armstrong Avenue and Teague Avenue. Based on the results, the developer will need to construct 600 ft of new off-site 12-inch gravity pipes along Armstrong Avenue, from Shepherd Avenue to Everglade Avenue.

- **Scenario 2** (Phase 1 + Phase 2). The HGL profile of the Armstrong Avenue Trunk shown on **Figure A2** indicates several gravity pipe deficiencies. A d/D ratio of 1.0 is observed along the length of this profile, resulting in surcharged conditions and potential risk of overflows. When compared to Scenario 1, Phase 2 triggers additional off-site improvements that require the developer to construct 600 ft of new 15-inch gravity pipes and upsize 6,000 ft of existing 12-inch gravity pipes to 15-inch, as illustrated on **Figure A3**. The on-site lift station northwest of the spillway will also require a minimum pumping capacity of 0.34 mgd to convey Phase 2 flows.

Alternative B

- **Scenario 3** (Phase 1 + Phase 2). The capacity evaluation results for this scenario indicate that the existing collection system is adequately sized to accommodate Phase 1 flows routed south (Armstrong Avenue) and Phase 2 flows routed southwest (Shepherd Avenue). This scenario requires new off-site infrastructure at three locations:

    - Construct 600 ft of new off-site 12-inch gravity pipes along Armstrong Avenue from Shepherd Avenue to Everglade Avenue. These new pipes will exhibit a peak d/D ratio of 0.58 according to the HGL profile shown on **Figure A1**. The downstream Armstrong Avenue Trunk will exhibit a peak d/D ratio of 0.78 near the Enterprise Canal Crossing.

    - Construct 4,700 ft of new off-site 12-inch gravity pipes along Perrin Avenue and Fowler Avenue from the Phase 2 development area to Shepherd Avenue. Based on the HGL profile shown on **Figure B1**, these new pipes will exhibit a peak d/D ratio of 0.45, satisfying the City's design criteria.

    - Construct 2,400 ft of new off-site 15-inch gravity pipes along Shepherd Avenue from approximately 800 ft west of Fowler Avenue to 500 ft west of Sunnyside Avenue. The HGL profile on **Figure B1** indicates that these pipes will have a peak d/D ratio of 0.37 while the existing 18-inch gravity pipes located further downstream along Shepherd Avenue will have a peak d/D of 0.48.

7.0 RECOMMENDATIONS

Alternative A improvement recommendations are shown on **Figure 5** with unique identifiers and proposed pipe sizes that can be cross-referenced with **Table 5**. **Alternative B** improvement recommendations are also shown on **Figure 6** with corresponding improvement IDs listed on **Table 6**.

Overall, to minimize capital costs and potential constructability issues associated with a lift station, **Alternative B** is recommended as the preferred servicing strategy. This alternative consists of a gravity-based system and does not require upsizing existing infrastructure.

Alternative A

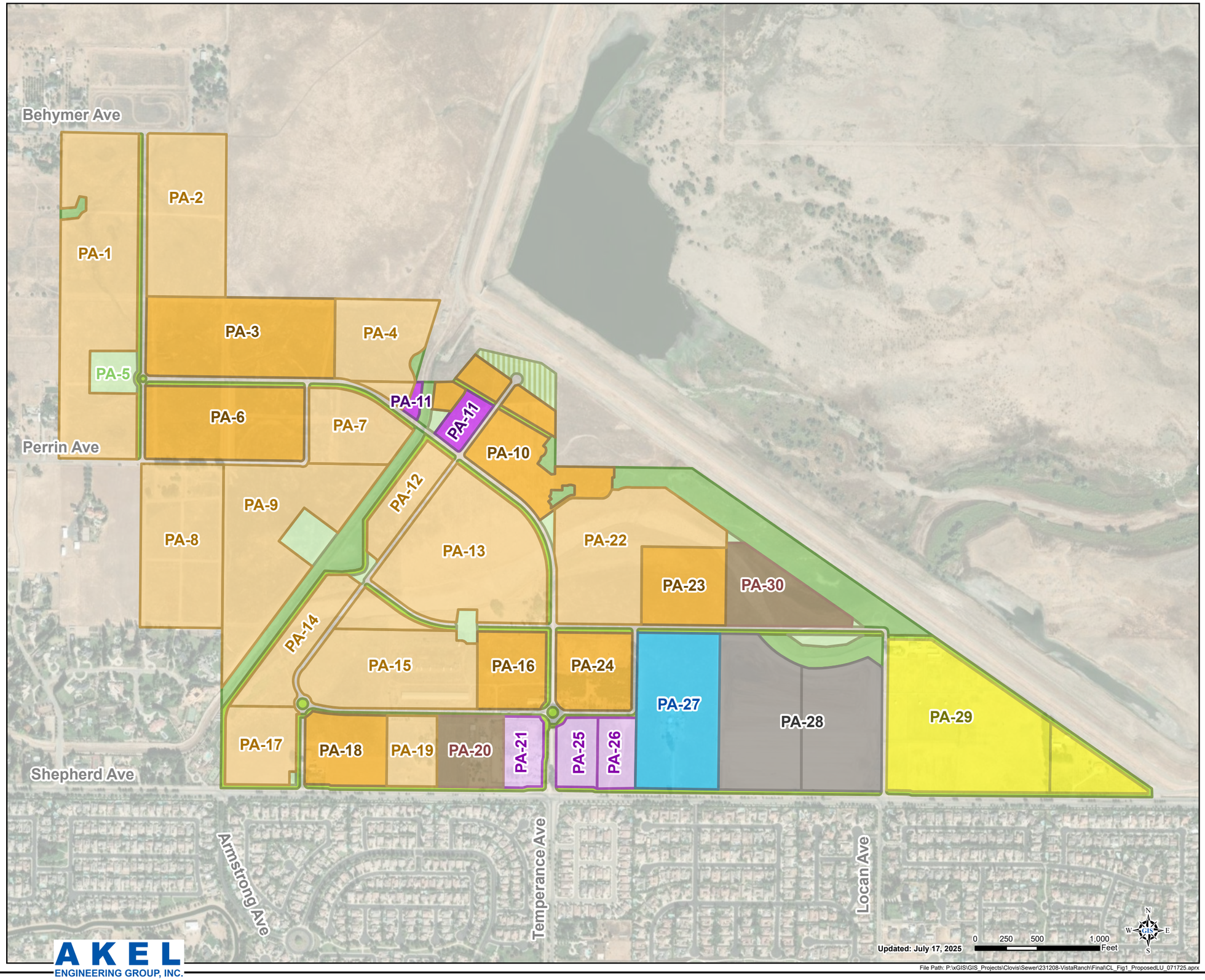
- On-site Lift Station Required
- Construct 600 ft of new off-site 12-inch gravity pipes
- Upsize 6,000 ft of existing 12-inch gravity pipes to 15-inch (Includes Enterprise Canal Crossing)

Alternative B

- Gravity-only System
- Construct 600 ft of new off-site 12-inch gravity pipes
- Construct 4,700 ft of new off-site 12-inch gravity pipes
- Construct 2,400 ft of new off-site 15-inch gravity pipes

It should be noted that there may be competing interest for available wastewater flow capacity in the downstream collection system and including major wastewater facilities. This analysis only evaluates the potential wastewater service implications of the proposed development in the context of the current Master Plan and noted changes in this report. It does not consider the effect of other potential allocations of available wastewater flow capacity, whether temporary or permanent, as may be allowed by the City for other proposed developments or for other purposes.

FIGURES



File Path: P:\xGIS\GIS_Projects\Clovis\Sewer\231208-VistaRanch\Final\CL_Fig1_ProposedLU_071725.aprx

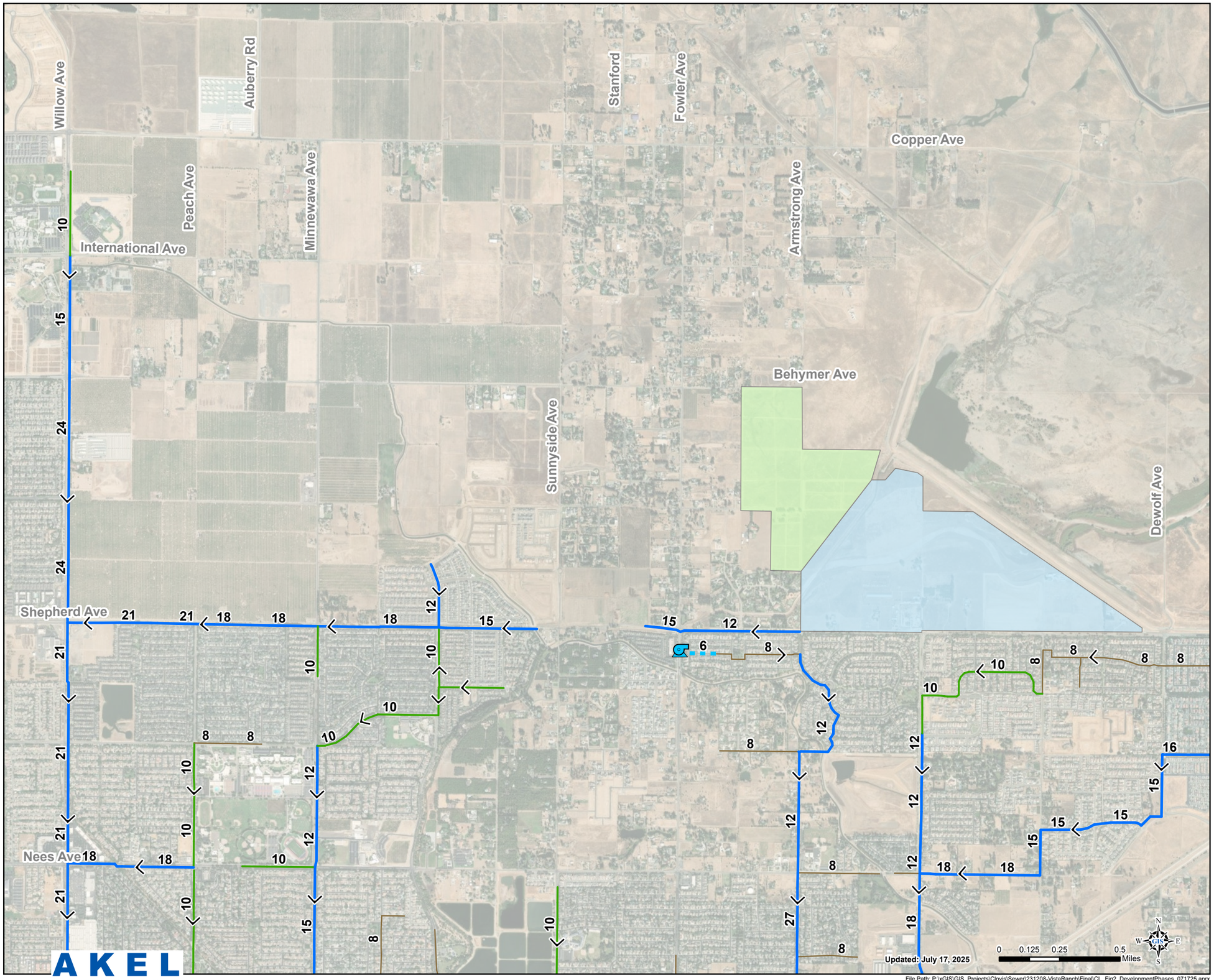
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Proposed Land Uses

- R-1/MPC Low Density Residential
- R-1-MD/MPC Medium Density Residential
- R-2/MPC Medium High Density Residential
- R-4 Very High Density Residential
- R-1-MD/MPC School
- C-1/MPC Gateway Neighborhood Commercial - Mixed Used
- C-R/MPC Community Recreation (Private) - Mixed Use
- M-1/MPC Light Industrial - Mixed Use
- O/MPC Open Space - Park (Public)
- O/MPC Open Space - Park (Private)
- O/MPC Open Space - Trail
- O/MPC Open Space - Passive

Figure 1
Proposed Land Uses
Vista Ranch Wastewater Modeling Study
City of Clovis

AKEL ENGINEERING GROUP, INC.



Legend

Development Areas

- Vista Ranch - Phase 1
- Vista Ranch - Phase 2

Existing System

- Lift Station

Gravity Pipes by Diameter

- 8" or Smaller
- 10"
- 12" or Larger

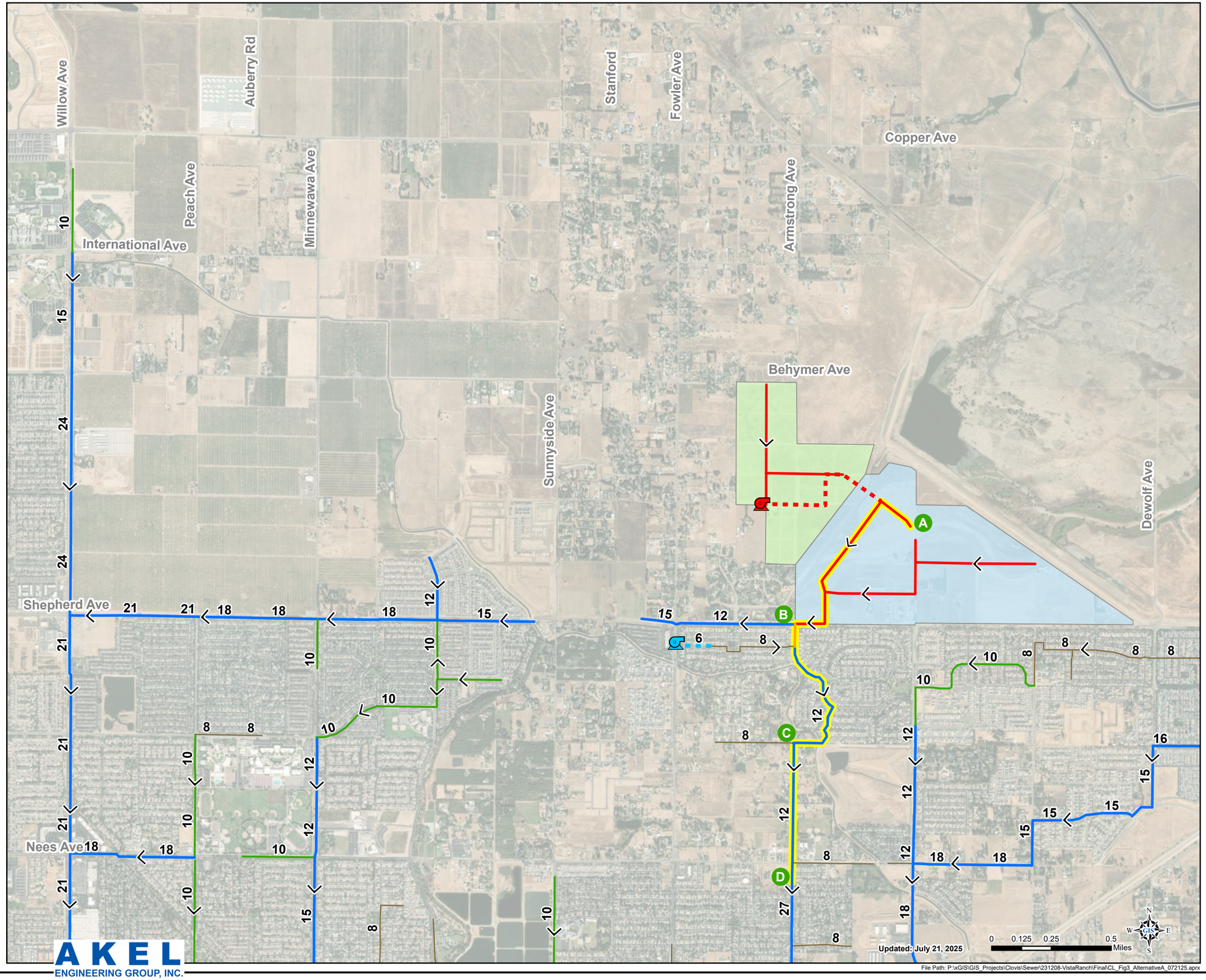
Force Mains by Diameter

- 8" or Smaller
- 12" or Larger

Figure 2
Development Phases

Vista Ranch Wastewater Modeling Study
City of Clovis

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Legend

Proposed Improvements

- Proposed On-Site Lift Station
- HGL Profile Section
- Proposed On-Site Force Mains
- Proposed On-Site Gravity Pipes
- Proposed Off-Site Gravity Pipes

Development Areas

- Vista Ranch - Phase 1
- Vista Ranch - Phase 2

Existing System

- Lift Station

Gravity Pipes by Diameter

- 8" or Smaller
- 10"
- 12" or Larger

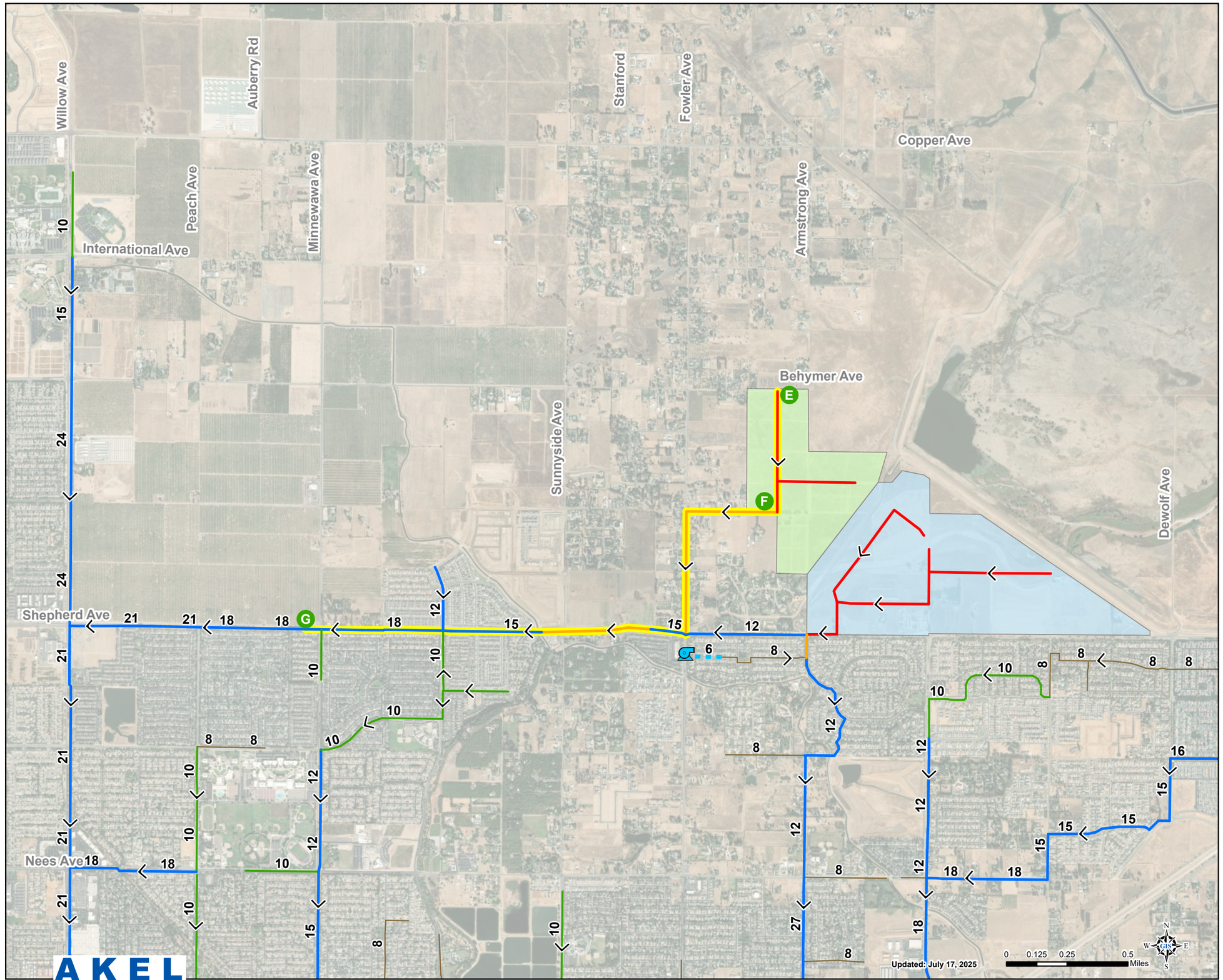
Force Mains by Diameter

- 8" or Smaller
- 12" or Larger

Figure 3
Alternative A

Vista Ranch Wastewater Modeling Study
City of Clovis

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Legend

Proposed Improvements

- HGL Profile Section
- Proposed On-Site Gravity Pipes
- Proposed Off-Site Gravity Pipes

Development Areas

- Vista Ranch - Phase 1
- Vista Ranch - Phase 2

Existing System

- Lift Station

Gravity Pipes by Diameter

- 8" or Smaller
- 10"
- 12" or Larger

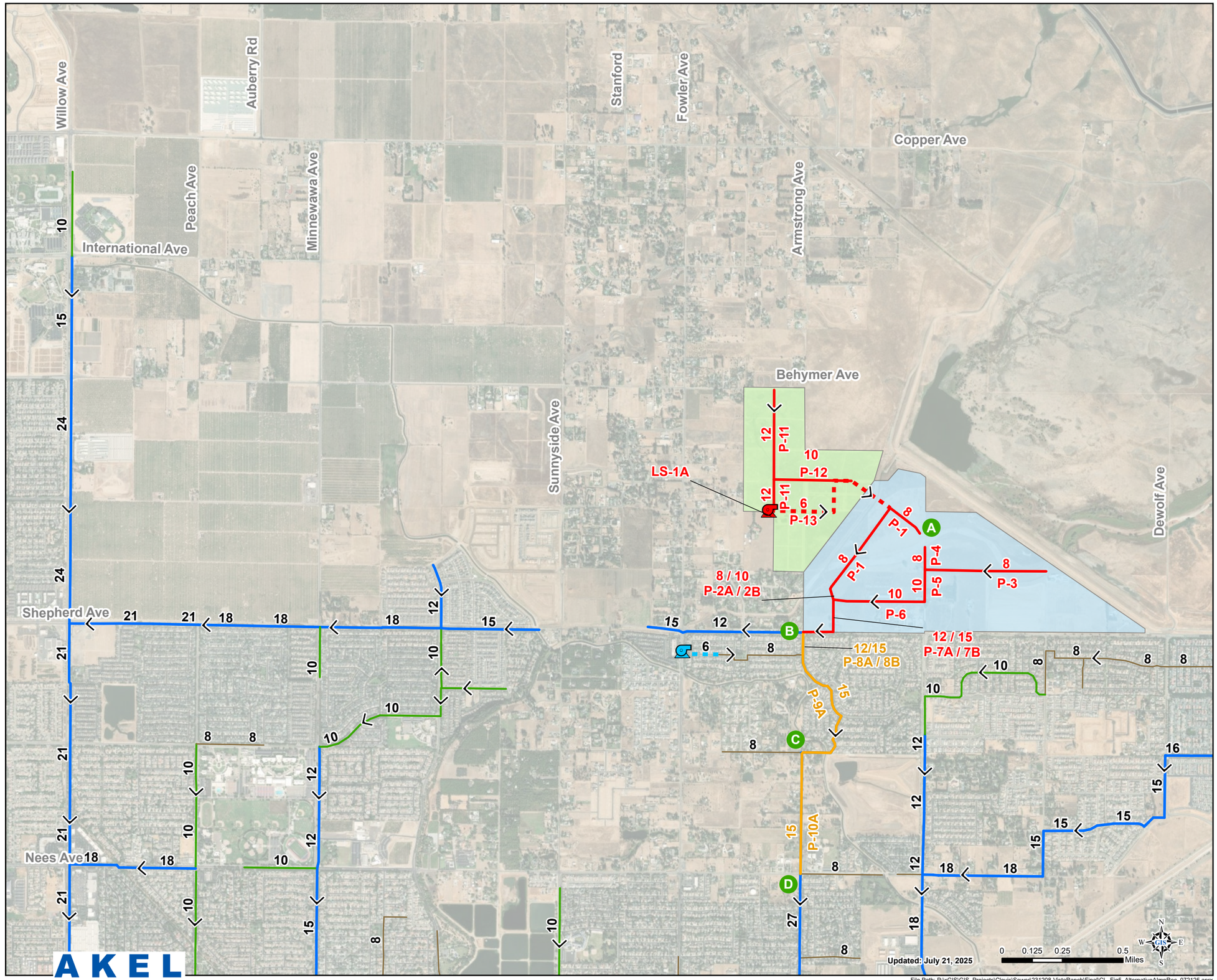
Force Mains by Diameter

- 8" or Smaller
- 12" or Larger

Figure 4
Alternative B

Vista Ranch Wastewater Modeling Study
City of Clovis

AKEL ENGINEERING GROUP, INC.



Legend

Proposed Improvements
- Proposed On-Site Lift Station
- Proposed On-Site Force Mains
- Proposed On-Site Gravity Pipes
- Proposed Off-Site Improvement

Development Areas
- Vista Ranch - Phase 1
- Vista Ranch - Phase 2

Existing System
- Lift Station

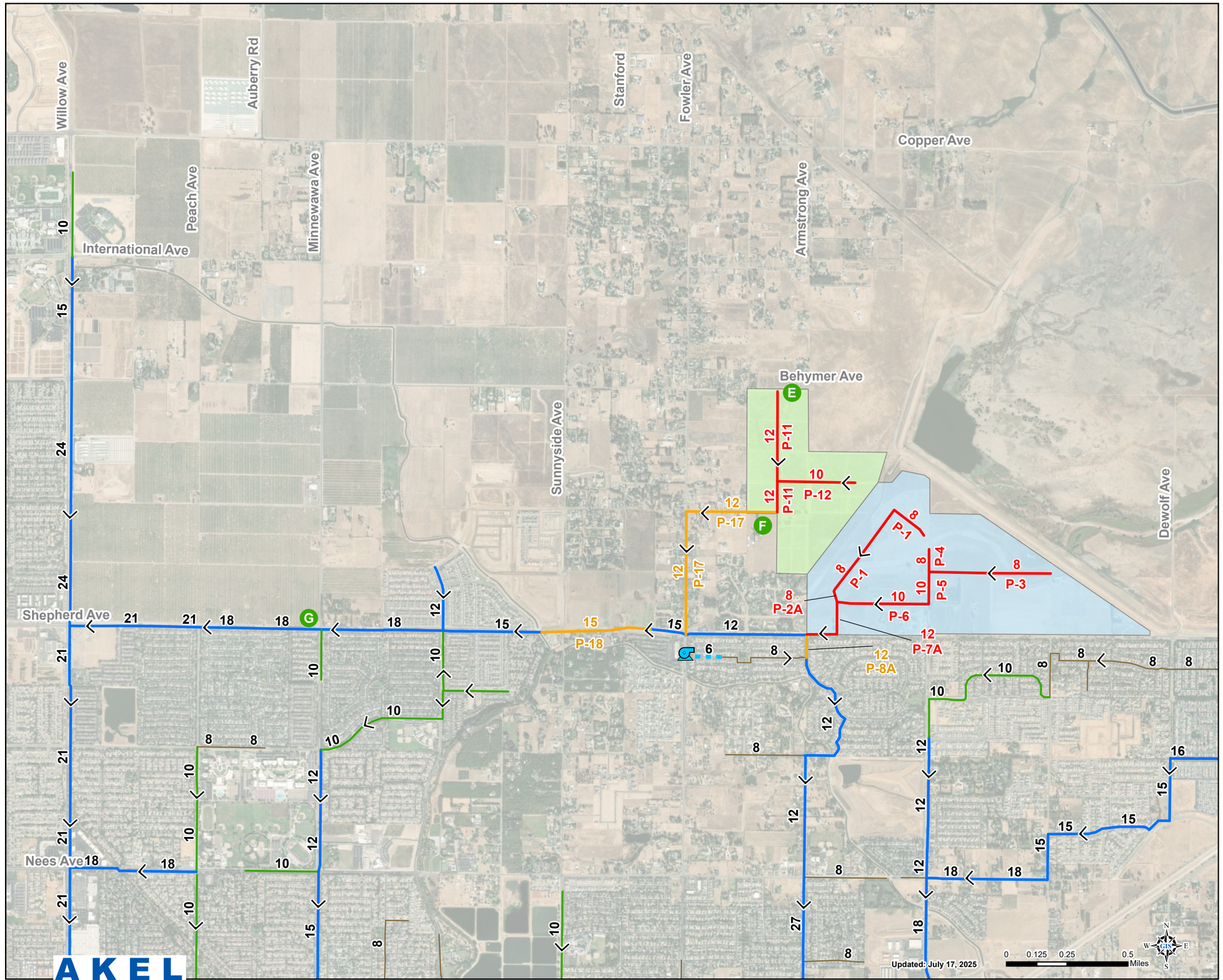
Gravity Mains by Diameter
- 8" or Smaller
- 10"
- 12" or Larger

Force Mains by Diameter
- 8" or Smaller
- 12" or Larger

Figure 5
Alternative A Improvement Recommendations

Vista Ranch Wastewater Modeling Study
City of Clovis

AKEL ENGINEERING GROUP, INC.



Legend

Proposed Improvements

- Proposed On-Site Gravity Pipes
- Proposed Off-Site Gravity Pipes

Development Areas

- Vista Ranch - Phase 1
- Vista Ranch - Phase 2

Existing System

- Lift Station

Gravity Pipes by Diameter

- 8" or Smaller
- 10"
- 12" or Larger

Force Mains by Diameter

- 8" or Smaller
- 12" or Larger

Figure 6
Alternative B Improvement Recommendations
Vista Ranch Wastewater Modeling Study
City of Clovis

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TABLES

Table 1 Average Wastewater Flow Projections

Vista Ranch Wastewater Hydraulic Modeling Study
City of Clovis

Planning Area Details			Development Details						Development Flows
Planning Area [1]	Land Use Designation	Zone Designation	Units	Flexibility [2]	Acerage (acre)	Density (du/acre)	Commercial Square Footage (sf)	FAR	Maximum Development [3] (mgd)
Vista Ranch Proposed Land Uses (Phase 1 and Phase 2)									
PA-1	Medium	R-1-MD	212	0	32.97	6.4	-	-	0.030
PA-2	Medium	R-1-MD	128	56	18.33	7.0	-	-	0.027
PA-3	Medium High	R-2	265	0	21.31	12.4	-	-	0.031
PA-4	Medium	R-1-MD	60	56	11.70	5.1	-	-	0.017
PA-5	Open Space - Park	O / MPC	-	0	3.32	-	12,000	0.10	0.003
PA-6	Medium High	R-2	204	0	17.91	11.4	-	-	0.026
PA-7	Medium	R-1-MD	55	0	9.53	5.8	-	-	0.009
PA-8	Medium	R-1-MD	108	0	20.05	5.4	-	-	0.018
PA-9	Medium	R-1-MD	169	0	24.65	6.9	-	-	0.022
PA-10	Medium High	R-2	166	0	15.09	11.0	-	-	0.022
PA-11	Community Recreation - Mixed Use	C-R	-	0	2.52	-	28,000	0.26	0.002
			-	0	0.53	-	8,000	0.35	0.0005
PA-12	Medium	R-1-MD	35	0	6.14	5.7	-	-	0.005
PA-13	Medium	R-1-MD	190	0	27.95	6.8	-	-	0.025
PA-14	Medium	R-1-MD	46	0	8.84	5.2	-	-	0.008
PA-15	Medium	R-1-MD	142	0	22.58	6.3	-	-	0.020
PA-16	Medium High	R-2	95	0	8.34	11.4	-	-	0.012
PA-17	Medium	R-1-MD	45	0	8.03	5.6	-	-	0.007
PA-18	Medium High	R-2	101	0	8.32	12.1	-	-	0.012
PA-19	Medium	R-1-MD	39	16	5.23	7.5	-	-	0.008
PA-20	Very High	R-4	208	0	6.91	30.1	-	-	0.035
PA-21	Gateway Neighborhood Commercial	C-1	28	0	4.41	6.3	85,000	0.44	0.004
PA-22	Medium	R-1-MD	135	0	21.76	6.2	-	-	0.019
PA-23	Medium High	R-2	109	0	9.58	11.4	-	-	0.014
PA-24	Medium High	R-2	99	0	8.74	11.3	-	-	0.013
PA-25	Gateway Neighborhood Commercial	C-1	-	0	4.08	-	55,000	0.31	0.004
PA-26	Gateway Neighborhood Commercial	C-1	-	0	4.20	-	60,000	0.33	0.004
PA-27	School	R-1-MD	-	118	19.31	-	-	-	0.028
PA-28[4]	Derrel's Mini Storage (Commercial)	M-1	-	0	32.21	-	425,000	0.30	0.000175
PA-29	Low	R-1	137	0	34.17	4.0	-	-	0.019
PA-30	Very High	R-4	264	0	8.78	30.1	-	-	0.044
Total Wastewater Flows									
	Study Area Total		**3,040**	**246**	**427.49**		**673,000**		**0.488**

AKEL ENGINEERING GROUP, INC.

8/15/2025

Notes:

1. These planning areas were received from the Developer on April 3, 2024 and can be cross-referenced with **Figure 1**.
2. Flexibility units account for potential developable intensity that may occur within the planning area. Maximum units represent the sum of units and flexibility columns. In total, the Vista Ranch study area can accommodate 3,040 units with 246 additional flexibility units, totaling for a maximum unit count of 3,286.
3. Maximum development flows assume that the "Flexibility" development units are included in the flow totals, relflecting a buildout of 3,286 units.
4. Area 28 is currently stated to develop as a Derrel's Mini Storage and sewer flows are assumed to be 175 gpd, typical for a single-family residential dwelling unit. This flow assumption was confirmed with City staff on 06/24/2025. If this area redevelops into office space, a capacity evaluation study maybe necessary to assess downstream impact on the collection system.

Table 2 Average and Peak Wastewater Flow Projections By Phases

Vista Ranch Wastewater Hydraulic Modeling Study

City of Clovis

Land Use Designation	Zone Designation	Planning Area [1,7] (acres)	Average Dry Weather Flows [1] (mgd)	Average Dry Weather Flows [1] (gpd)	Equivalent Dwelling Units (EDUs)	Peaking Factor [2]	Peak Dry Weather Flows [3] (mgd)
Phase 1 Vista Ranch - Maximum Development Flows [4]					1 EDU = 175 gpd		
Low Density Residential	R-1	34	0.019	19,204	110	1.9	0.036
Medium Density Residential	R-1-MD	101	0.093	92,924	531	1.9	0.177
Medium High Density Residential	R-2	50	0.073	73,052	417	1.9	0.139
Very High Density Residential	R-4	16	0.079	78,528	449	1.9	0.149
Medium Density Residential / School [5]	R-1-MD	19	0.028	28,173	161	1.9	0.054
Community Recreation - Mixed Use	C-R	3	0.003	2,776	16	1.7	0.005
Gateway Neighborhood Commercial	C-1	13	0.012	11,548	66	1.7	0.020
Derrel's Mini Storage (Commercial)[6]	M-1	32	0.000175	175	1	1.7	0.000
Subtotal Phase 1		**268**	**0.306**	**306,380**	**1,751**		**0.579**
Phase 2 Vista Ranch - Maximum Development Flows [4]							
Medium Density Residential	R-1-MD	117	0.122	121,858	696	1.9	0.232
Medium High Density Residential	R-2	39	0.057	57,222	327	1.9	0.109
Open Space - Park	O / MPC	3	0.003	3,021	17	1.7	0.005
Subtotal Phase 2		**160**	**0.182**	**182,101**	**1,041**		**0.345**
Total Wastewater Flows							
Study Area Total [7]		**427**	**0.488**	**488,481**	**2,791**		**0.925**

AKEL ENGINEERING GROUP, INC.

8/15/2025

Notes:

1. Vista Ranch planning areas and average dry weather flows (Phase 1 and Phase 2) were received from City staff on April 3, 2024.
2. Peaking factor for various land uses were obtained from diurnal patterns in the City's existing wastewater collection system hydraulic model.
3. Peak dry weather flows were calculated by multiplying the peaking factor with the estimated average dry weather flows.
4. Phase 1 and Phase 2 flow projections account for 'Flexibility' units in specific planning areas that can accommodate additional growth. Refer to Table 1 for a count of flexibility units.
5. This planning area consisted of either medium density residential units or a school. The higher flows resulting from the residential units were used in this study.
6. This planning area consists of a Derrel's Storage Facility located northwest of Shepherd Avenue and Locan Avenue.
7. The total acreage for Vista Ranch is 507 acres, where 424 acres is attributed to the wastewater flow generating areas (residential and non-residential), 59 acres is attributed to parks (including 3 acres from PA-5 park, shown as O / MPC - Open Space - Park under Phase 2 on this table) and 24 acres is attributed to roads.

Table 3 Hydraulic Model Scenarios

Vista Ranch Wastewater Hydraulic Modeling Study

City of Clovis

Scenario No.	Description
ALTERNATIVE A - Routing Flows South Along Armstrong Ave	
Scenario 1	Existing Conditions + Phase 1
Scenario 2	Existing Conditions + Phase 1 + Phase 2 (Lift Station and Force Main Required for Phase 2)
ALTERNATIVE B - Routing Flows South Along Armstrong Ave and Southwest Along Shepherd Ave	
Scenario 3	Existing Conditions + Phase 1 - South Along Armstrong Ave Existing Conditions + Phase 2 - Southwest Along Shepherd Ave

AKEL ENGINEERING GROUP, INC.

6/24/2025

Table 4 Design Criteria

Vista Ranch Wastewater Hydraulic Modeling Study
City of Clovis

Gravity Pipe Criteria [1]

Peak Dry Weather Flow

Existing Pipes :	Maximum Depth of Flow to Pipe Diameter (d/D) <= 0.82
New Pipes :	Maximum Depth of Flow to Pipe Diameter (d/D) <= 0.65

Minimum Design Slopes

Pipe Diameter (inches)	Minimum Slope (ft/ft)	Maximum Flow at d/D = 0.65 [2] (mgd)	Half-Full Velocity (ft/s)
6''	0.0040	0.17	1.8
8''	0.0024	0.29	1.7
10''	0.0020	0.48	1.8
12''	0.0014	0.65	1.7
15''	0.0012	1.09	1.8
18''	0.0010	1.62	1.9
21''	0.0010	2.45	2.1
24''	0.0010	3.50	2.3
27''	0.0010	4.79	2.5
30''	0.0010	6.34	2.6
33''	0.0010	8.18	2.8
36''	0.0010	10.31	3.0
39''	0.0010	12.76	3.1
42''	0.0010	15.55	3.3

Lift Station and Force Main Criteria [3]

Lift Station Capacity:	Convey Peak Wet Weather Flow with Largest Pump Out of Service (Firm Capacity)
Maximum Force Main Velocity:	3 to 8 Feet per Second
Hazen Williams C-Factor:	130

AKEL ENGINEERING GROUP, INC.

7/28/2025

Notes:

1. Criteria obtained from the City's 2017 WCSMP.
2. Flow was calculated based on the d/D of 0.65 for new pipes and Manning's n roughness of 0.013.
3. Lift station capacity and maximum force main velocity recommended based on typical industry standards. Hazen Williams C-Factor was obtained from the City's 2017 WCSMP.

Table 5 Alternative A Improvement Recommendations

Vista Ranch Wastewater Hydraulic Modeling Study

City of Clovis

Project ID	On-site / Off-site	Asset Type	Main Alignment and Construction Limits	New / Replace	Existing Diameter (inches)	Proposed Diameter (inches)	Total Length (feet)
Scenario 1 - Existing Conditions + Phase 1							
P-1	On-site	Gravity Pipe	Phase 1 Development Area	New	-	8	3,100
P-2A	On-site	Gravity Pipe	Phase 1 Development Area	New	-	8	300
P-3	On-site	Gravity Pipe	Phase 1 Development Area	New	-	8	2,700
P-4	On-site	Gravity Pipe	Phase 1 Development Area (North of Temperance Ave)	New	-	8	500
P-5	On-site	Gravity Pipe	Phase 1 Development Area (Temperance Ave)	New	-	10	800
P-6	On-site	Gravity Pipe	Phase 1 Development Area	New	-	10	2,000
P-7A	On-site	Gravity Pipe	Phase 1 Development Area (From Phase 1 to Shepherd Ave)	New	-	12	1,400
P-8A	Off-site	Gravity Pipe	Armstrong Ave (From Shepherd Ave to Everglade Ave)	New	-	12	600
			Scenario 1 Total				**11,400**
Scenario 2 - Existing Conditions + Phase 1 + Phase 2							
P-1	On-site	Gravity Pipe	Phase 1 Development Area	New	-	8	3,100
P-2B	On-site	Gravity Pipe	Phase 1 Development Area	New	-	10	300
P-3	On-site	Gravity Pipe	Phase 1 Development Area	New	-	8	2,700
P-4	On-site	Gravity Pipe	Phase 1 Development Area (North of Temperance Ave)	New	-	8	500
P-5	On-site	Gravity Pipe	Phase 1 Development Area (Temperance Ave)	New	-	10	800
P-6	On-site	Gravity Pipe	Phase 1 Development Area	New	-	10	2,000
P-7B	On-site	Gravity Pipe	Phase 1 Development Area (From Phase 1 to Shepherd Ave)	New	-	15	1,400
P-8B	Off-site	Gravity Pipe	Armstrong Ave (From Shepherd Ave to Everglade Ave)	New	-	15	600
P-9A	Off-site	Gravity Pipe	Armstrong Ave (From Everglade Ave to Teague Ave)	Replace	12	15	3,300
P-10A	Off-site	Gravity Pipe	Armstrong Ave (from Teague Ave to Nees Ave)	Replace	12	15	2,700
P-11	On-site	Gravity Pipe	Phase 2 Development Area (North of Perrin Ave)	New	-	12	2,800
P-12	On-site	Gravity Pipe	Phase 2 Development Area (Northeast of Perrin Ave)	New	-	10	1,700
P-13	On-site	Force Main	Phase 2 Development Area (Crossing Spillway)	New	-	6	2,100
LS-1A	On-site	Lift Station	Phase 2 Development Area at Perrin Ave	New lift station with a minimum capacity of 0.34 mgd			
			Scenario 2 Total				**24,000**

Table 6 Alternative B Improvement Recommendations

Vista Ranch Wastewater Hydraulic Modeling Study

City of Clovis

Project ID	On-site / Off-site	Asset Type	Main Alignment and Construction Limits	New / Replace	Existing Diameter (inches)	Proposed Diameter (inches)	Total Length (feet)
Scenario 4 - Existing Conditions + Phase 1 (South) + Phase 2 (Southwest)							
P-1	On-site	Gravity Pipe	Phase 1 Development Area	New	-	8	3,100
P-2A	On-site	Gravity Pipe	Phase 1 Development Area	New	-	8	300
P-3	On-site	Gravity Pipe	Phase 1 Development Area	New	-	8	2,700
P-4	On-site	Gravity Pipe	Phase 1 Development Area (North of Temperance Ave)	New	-	8	500
P-5	On-site	Gravity Pipe	Phase 1 Development Area (Temperance Ave)	New	-	10	800
P-6	On-site	Gravity Pipe	Phase 1 Development Area	New	-	10	2,000
P-7A	On-site	Gravity Pipe	Phase 1 Development Area (Shepherd Ave)	New	-	12	1,400
P-8A	Off-site	Gravity Pipe	Armstrong Ave (From Shepherd Ave to Everglade Ave)	New	-	12	600
P-11	On-site	Gravity Pipe	Phase 2 Development Area (North of Perrin Ave)	New	-	12	2,800
P-12	On-site	Gravity Pipe	Phase 2 Development Area (Northeast of Perrin Ave)	New	-	10	1,700
P-17	Off-site	Gravity Pipe	Perrin Ave, Fowler Ave and Shepherd Ave	New	-	12	4,700
P-18	Off-site	Gravity Pipe	Shepherd Ave (From 800 ft west of Fowler Ave to 500 ft west of Sunnyside Ave)	New	-	15	2,400
				Scenario 4 Total			**23,000**

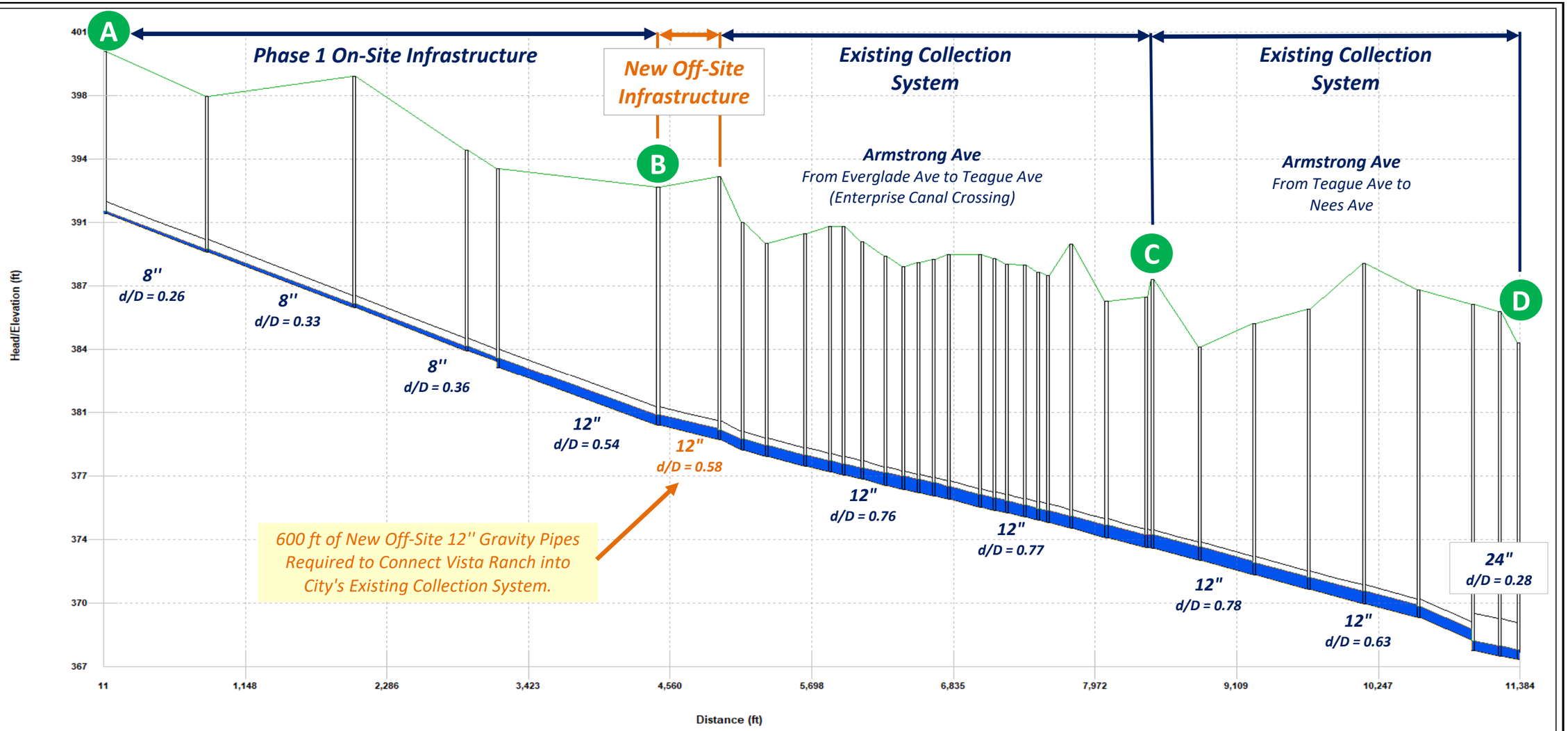
APPENDICES

APPENDIX A

ALTERNATIVE A

CAPACITY EVALUATION RESULTS

(Scenario 1 to 2)



Notes:

1. The HGL profile includes existing plus Phase 1 design flows routed south towards Armstrong Avenue.
2. The capacity evaluation results indicate that the existing system meets the City's Design Criteria.
3. All on-site and off-site pipelines must meet minimum cover requirements specified in the City's Design Guidelines. Any deviation from the guidelines must be approved by the City Engineer.

9/18/2025

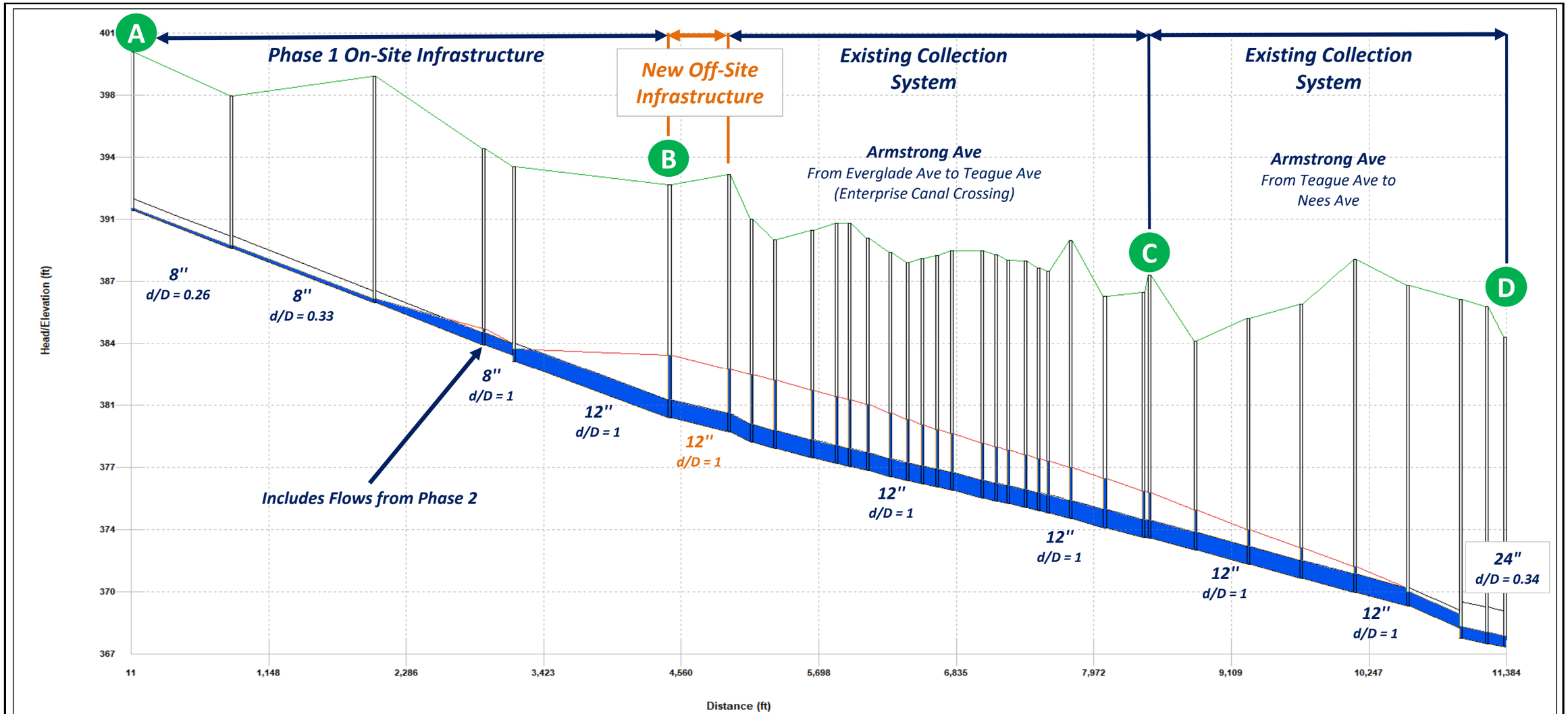
AKEL ENGINEERING GROUP, INC.

Figure A1

Scenario 1

HGL Profile (No Improvements)

Vista Ranch Wastewater
Hydraulic Modeling Study
City of Clovis



Notes:

1. The HGL profile includes existing plus Phase 1 and Phase 2 design flows routed south towards Armstrong Avenue.
2. The capacity evaluation results indicate several gravity pipe deficiencies that do not meet the City's Design Criteria.
3. All on-site and off-site pipelines must meet minimum cover requirements specified in the City's Design Guidelines. Any deviation from the guidelines must be approved by the City Engineer.

9/18/2025

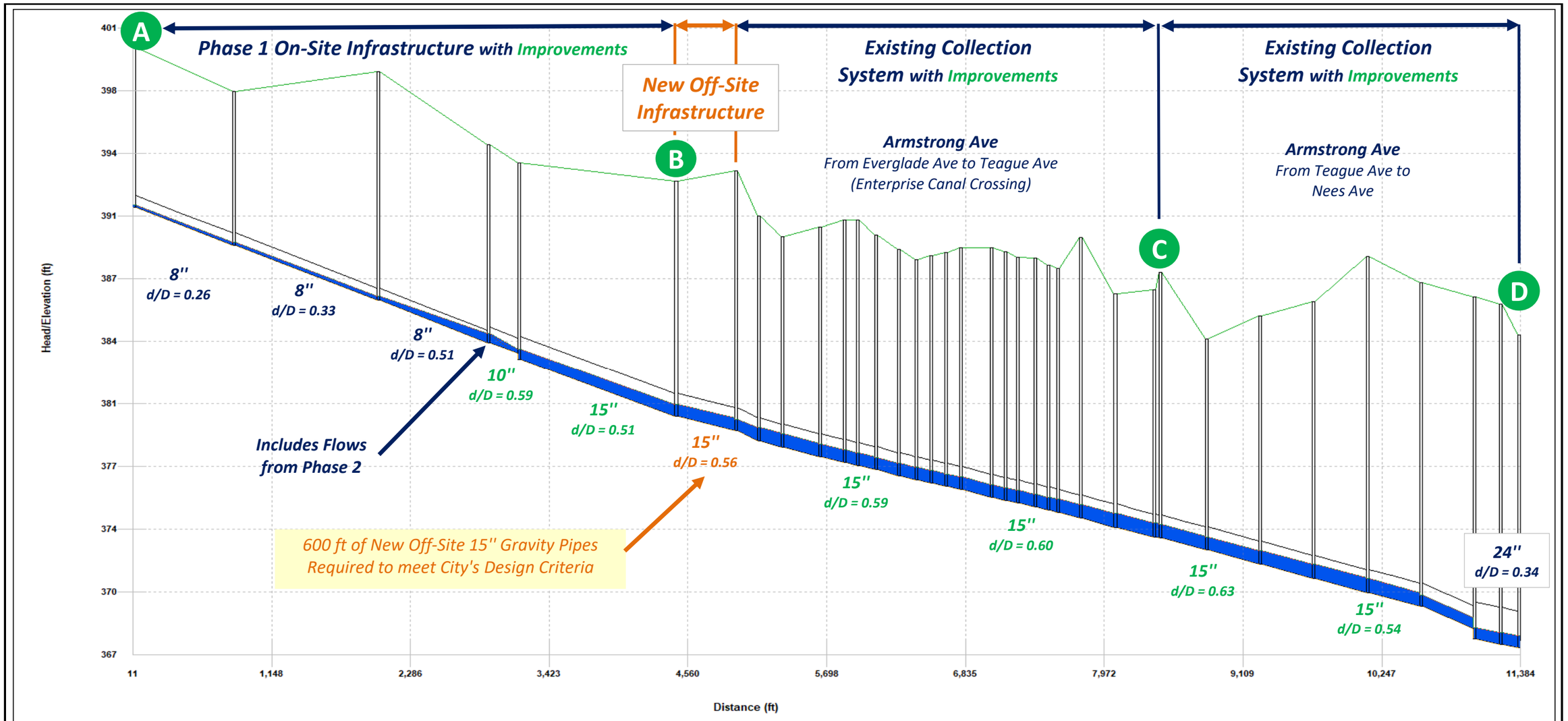
AKEL ENGINEERING GROUP, INC.

Figure A2

Scenario 2

HGL Profile (No Improvements)

Vista Ranch Wastewater
Hydraulic Modeling Study
City of Clovis



Notes:

1. The HGL profile includes existing plus Phase 1 and Phase 2 design flows routed south towards Armstrong Avenue.
2. The capacity evaluation results indicate that the following off-site improvements are required to meet the City's Design Criteria:
   - Construct 600 ft of new 15" gravity pipes along Armstrong Avenue, from Shepherd Avenue to Everglade Avenue.
   - Upsize 3,300 ft of existing 12" gravity pipes to 15" along Armstrong Avenue, from Everglade Avenue to Teague Avenue (Includes Enterprise Canal Crossing).
   - Upsize 2,700 ft of existing 12" gravity pipes to 15" along Armstrong Avenue, from Teague Avenue to Nees Avenue.
3. On-site improvements are also required to meet City's Design Criteria. These improvements include upsizing 8" pipe to 10", and upsizing 12" pipe to 15".
4. All on-site and off-site pipelines must meet minimum cover requirements specified in the City's Design Guidelines. Any deviation from the guidelines must be approved by the City Engineer.

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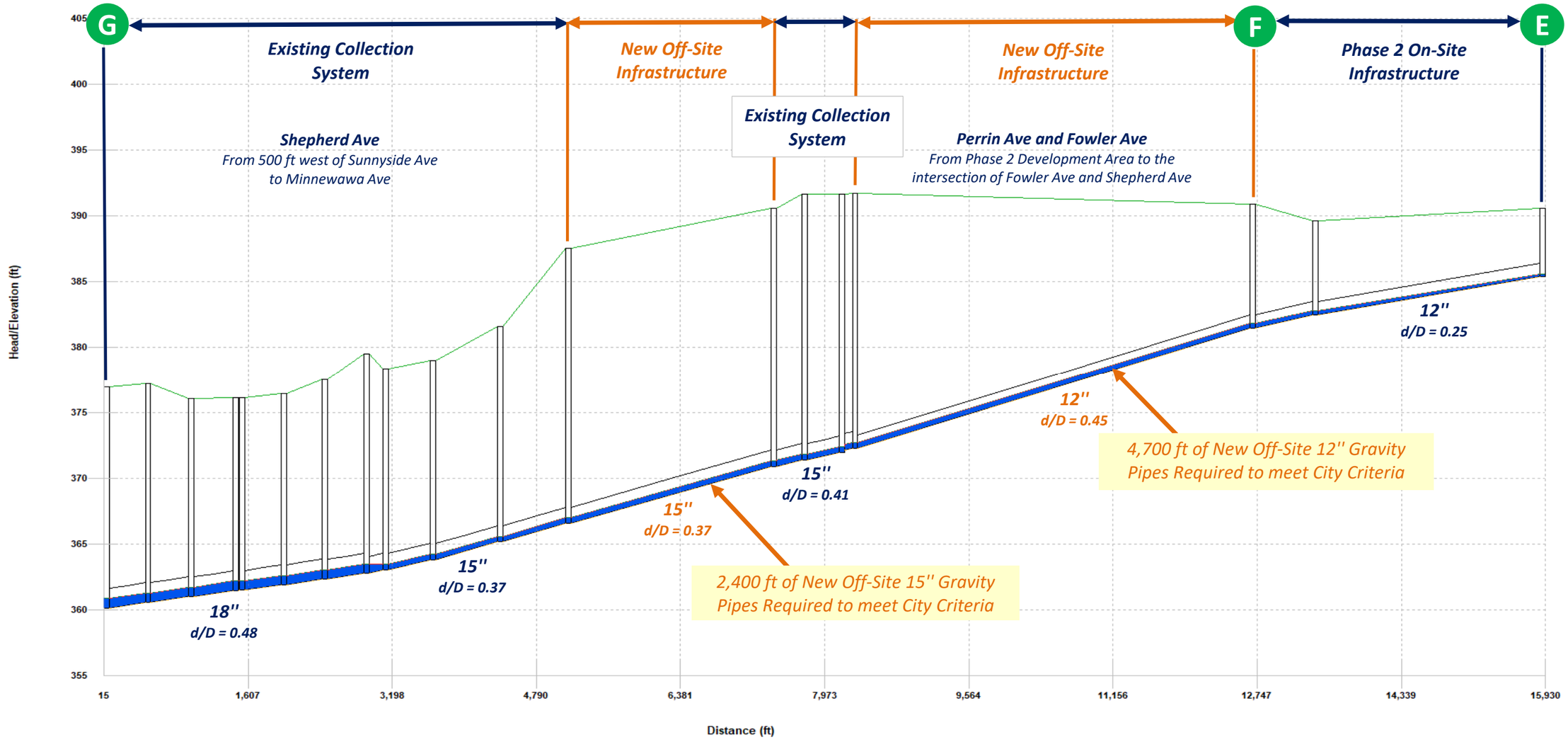
Figure A3
Scenario 2
HGL Profile (With Improvements)
Vista Ranch Wastewater
Hydraulic Modeling Study
City of Clovis

APPENDIX B

ALTERNATIVE B

CAPACITY EVALUATION RESULTS

(Scenario 3)



Notes:

1. The HGL profile includes existing plus Phase 2 design flows routed southwest towards Shepherd Avenue.
2. The capacity evaluation results indicate that the existing system meets City's Design Criteria.
3. New offsite infrastructure required to connect Phase 2 flows to the City's existing collection system are as follows:
   - Construct 4,700 feet of new 12'' gravity pipes along Perrin and Fowler Avenues, from Phase 2 development area to the intersection of Shepherd Avenue and Fowler Avenue.
   - Construct 2,400 feet of new 15'' gravity pipes along Shepherd Avenue, from 800 feet west of Fowler Avenue to 500 feet west of Sunnyside Avenue.
4. All on-site and off-site pipelines must meet minimum cover requirements specified in the City's Design Guidelines. Any deviation from the guidelines must be approved by the City Engineer.

9/18/2025

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Figure B1
Scenario 3
HGL Profile (With Improvements)
Vista Ranch Wastewater
Hydraulic Modeling Study
City of Clovis

APPENDIX C

ESTIMATED GROUNDWATER LEVELS ADJACENT TO BIG DRY CREEK RESERVOIR

Krazan & ASSOCIATES, INC.

GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

December 7, 2023
Updated August 2, 2024

KA Project No. 012-22165

Ms. Goldie Lewis
Wilson Homes
7550 N. Palm Avenue, Suite 102
Fresno, California 93711

RE: GEOTECHNICAL FEASIBILITY EVALUATION
TRIANGLE DEVELOPMENT
SHEPHERD AVENUE AND LOCAN AVENUE
CLOVIS, CALIFORNIA

Dear Ms. Lewis:

In accordance with your request, we have completed a Geotechnical Feasibility Evaluation for the above-referenced property. The purpose of this investigation was to perform a study for the planned development adjacent to the Big Dry Creek Reservoir Dam to evaluate the on-site soil conditions, groundwater elevations, permeability characteristics, and liquefaction potential. Prior to commencing our investigation, it was relayed to Krazan & Associates, Inc. there was a 500 foot minimum setback from the levee. We were told this setback was based on potential surface disruptions within this zone and potential surface water collection. No documentation was made available to Krazan to justify any proposed setback, including the 500' minimum imposed by the District. In order to evaluate the potential for surface disruptions, borings were drilled at distances of 150 and 250 feet horizontally from the levee. These borings were drilled approximately every 250 feet parallel to the reservoir during Phases 2 and 3, and 500 feet during Phase 1. The data obtained from this investigation was used to determine a minimum setback for the planned residential structures. A liquefaction evaluation was performed at each boring location based on a high groundwater condition to evaluate the potential for surface disruptions.

SITE DESCRIPTION

The proposed Vista Ranch Project area consists primarily of non-native annual grasslands, degraded pasture, and the Big Dry Creek Reservoir Spillway canal. An abandoned section of Dry Creek, a local seasonal creek, crosses the southeast portion of the site. This section was abandoned when the Big Dry Creek Reservoir was constructed in 1948 and the creek re-routed through the reservoir and current spillway canal which rejoins the original creek channel just off the site about 2,200 feet below the spillway. There are some rural homes sites in the southeast of the site and a few dirt access roads. The site has mostly level to gentle terrain with the most pronounced topography in the northwest. Elevation ranges from about 380 to 413 feet with slopes generally running south and southwest in the south and east of the site and west in the northwest of the site.

Much of the northwest and southeast of the site consists of non-native annual grasslands. These areas appear to be minimally or not currently grazed and support a mix of mostly non-native annual grasses and herbs including invasive weeds. Scattered depressional wetlands occur within these grasslands, especially in the northeast within a series of apparently remnant floodplain swales on the north side of the abandoned channel of Dry Creek. There are also three created stockponds within the grasslands in the northwest of the site.

An approximately 1.129-acre triangular agricultural tailwater pond was excavated as part of the system in the southwest edge of the field, adjacent to the spillway canal. This pond was designed to recapture and recirculate irrigation tailwater. There is no active flood irrigation being practiced at this time.

The Big Dry Creek Dam and Reservoir, constructed in 1948, are flood control structures located on Dry Creek, immediately northeast of the study area. The dam consists of a zoned earth fill embankment, which impounds flows from Dry Creek and its tributaries. Due to safety concerns regarding seepage, the reservoir is limited to approximately ⅓ of its total capacity and is limited to a 90-day duration of storage (BOR, CDWR & CBDA, 2003). Construction of the dam and reservoir involved a re-alignment of Dry Creek and abandonment of a section of the original channel. Dry Creek is now routed into the reservoir basin and then though the spillway and down a canal below the spillway, rejoining the original Dry Creek channel approximately 2,200 feet below the spillway. The abandoned channel traverses the southwest portion of the site. The spillway runs diagonally across the center of the site, from the northeast to southwest. Within the study area, it consists of a constructed earthen channel with raised berms along both sides.

PROPOSED CONSTRUCTION

We understand that design of the proposed development is currently underway; structural load information and other final details pertaining to the structures are unavailable. On a preliminary basis, it is understood that the development will include approximately 165 acres adjacent to the dam to be developed into a master planned community including single- and multi-family residential developments and ancillary uses. It is anticipated that the structures will include single- to three-story wood-framed buildings supported on conventional shallow footings and utilizing concrete slab-on-grade construction. Foundation loads are anticipated to be light to moderately heavy. On-site paved areas and underground utilities are also planned.

SOIL PROFILE AND SUBSURFACE CONDITIONS

Subsurface soil conditions were explored by drilling 32 borings to depths of approximately 8 to 50 feet below existing site grade, utilizing a truck-mounted drill rig. Boring Nos. 21-32 were terminated due to auger refusal in very dense weathered rock. The initial borings (B1-B6) were drilled at distances of 150 and 300 feet southwest of the property line. Boring Nos. B7-B26 were drilled near the property line and 150 feet southwest of the property line. Boring Nos. B27-B32 were drilled near the property line and 150 feet west of the spillway. The approximate boring locations are shown on the site plan. During drilling operations, penetration tests were performed at regular intervals to evaluate the soil consistency and to obtain information regarding the engineering properties of the subsoils. Soil samples were retained for

laboratory testing. The soils encountered were continuously examined and visually classified in accordance with the Unified Soil Classification System. A more detailed description of the field investigation is presented in Appendix A.

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. Details of the laboratory test program and results of the laboratory tests are summarized in Appendix A. This information, along with the field observations, was used to prepare the final boring logs in Appendix A.

In general, the upper soils within the site consist of approximately 6 to 12 inches of very loose silty sand, clayey sand, sandy clay and silty sand with trace clay. These soils are disturbed, have low strength characteristics, and are highly compressible when saturated.

Below the loose surface soils within the area southwest of the reservoir, approximately 8 to 17 feet of loose to very dense silty sand, sandy silt/sandy clay, silty sand/sandy silt, sandy silt, silty sand/sand, silty sand/clayey sand, clayey silty sand, clayey sand/sandy clay, clayey sand and clayey sandy silt or very stiff to hard sandy clay were encountered. Some of these soils contained traces of clay and gravel. Field and laboratory tests suggest that these soils are moderately strong and slightly compressible. Penetration resistance ranged from 5 blows per foot to over 50 blows per 6 inches. Dry densities ranged from 71 to 129 pcf.

Below 8½ to 18 feet, layers of loose to very dense clayey silty sand, silty sand/sandy silt, clayey sand/sandy clay, clayey sand, silty sand, silty sand/sand, sand, clayey sandy silt, silty sand/clayey sand, sandy clayey silt and sandy silt or very stiff to hard sandy clay were encountered. Some of these soils included traces of clay and gravel. These soils had similar strength characteristics as the upper soils. Penetration resistance ranged from 9 blows per foot to over 50 blows per 6 inches. Dry densities ranged from 80 to 130 pcf. These soils extended to the termination depth of our borings. Boring Nos. B21-B26 were terminated in very dense metamorphic rock at depths of 27½ to 40½ feet below existing site grade.

Below the loose surface soils in the area west of the spillway (Boring Nos. B27-B32), approximately 4 to 9½ feet of medium dense to very dense silty sand, silty sand with clay, clayey sand/sandy clay and clayey sand or firm sandy clay were encountered. Field and laboratory tests suggest that these soils are moderately strong and slightly compressible. Penetration resistance ranged from 22 blows per foot to over 50 blows per 6 inches. Dry densities ranged from 79 to 130 pcf.

Below 5 to 14½ feet, predominately very dense highly to slightly weathered metamorphic rock was encountered. These soils had higher strength characteristics than the upper soils. Penetration resistance was greater than 50 blows per 6 inches. Dry densities ranged from 83 to 115 pcf. These soils extended to the termination depth of our borings. The borings were terminated due to auger refusal at depths of 8 to 17 feet.

For additional information about the soils encountered, please refer to the attached logs of the borings.

PERMEABILITY TESTING

Seventeen permeability tests were conducted on undisturbed soil samples collected from depths of 5 to 41 feet below existing site grade. The permeability tests were performed in accordance with ASTM Test Method D2434. The test results are as follows:

Test No.	Depth (feet)	Coefficient of Permeability (cm/second)	Soil Type
B1	12-13	7.9×10^{-6}	Silty Sand/Sandy Silt (SM/ML)
B1	25-26	2.2×10^{-5}	Silty Sand (SM)
B1	35-36	9.0×10^{-7}	Clayey Sand/Sandy Clay (SC/CL)
B2	20-21	4.0×10^{-5}	Silty Sand (SM)
B3	10-11	2.3×10^{-5}	Silty Sand (SM)
B3	17-18	1.1×10^{-4}	Silty Sand/Sand (SM/SP)
B3	20-21	1.7×10^{-5}	Clayey Sand (SC)
B3	25-26	8.3×10^{-5}	Silty Sand (SM)
B3	35-36	4.6×10^{-5}	Silty Sand (SM)
B4	5-6	9.1×10^{-6}	Clayey Silty Sand (SM/SC)
B4	10-11	9.0×10^{-7}	Clayey Sand/Sandy Clay (SC/CL)
B4	15-16	2.6×10^{-5}	Silty Sand (SM)
B4	25-26	6.3×10^{-6}	Clayey Sand (SC)
B4	40-41	3.3×10^{-5}	Silty Sand (SM)
B5	30-31	7.5×10^{-6}	Clayey Sand (SC)
B6	30-31	6.4×10^{-5}	Silty Sand (SM)
B6	40-41	3.5×10^{-5}	Silty Sand (SM)

The test results indicate that the soils tested have fair to poor absorption characteristics.

PERCOLATION TESTING

Two percolation tests were performed within the site to evaluate the soils absorption characteristics. The percolation tests were performed inside test holes drilled near the borings. The percolation tests were performed at depths of 15 and 20 feet below the existing ground surface. Results of the tests are as follows:

Test No.	Depth (ft)	Percolation Rate (min/in)	Soil Type
1	20	60	Silty Sand (SM)
2	15	90	Silty Sand/Sandy Silt (SM/ML)

The test results indicate that the soils tested have fair absorption characteristics. The test results do not include a factor of safety. The percolation rates given are based on 1 inch of fall within a 6-inch diameter hole with a 12-inch head of water.

HISTORIC BIG DRY CREEK RESERVOIR STORAGE

The historic levels of water storage in the Big Dry Creek Reservoir were obtained from data available from the US Army Corps of Engineers website (www.spk-wc.usace.army.mil/plots/california.html). The data from after 2013 also provided the elevation of the water stored in the levee. The table below provides the maximum volume of water stored in the reservoir each year since 2006. Where available, the surface water elevation is also provided.

Year	Maximum Volume Stored (acre-ft)	Surface Water Elevation
2006	9,588	Not Published
2007	188	Not Published
2008	525	Not Published
2009	188	Not Published
2010	2,498	Not Published
2011	8,437	Not Published
2012	792	Not Published
2013	188	400.00
2014	188	400.00
2015	188	400.00
2016	1675	408.77
2017	11,197	421.42
2018	2096	410.00
2019	3375	412.65
2020	188	400.00
2021	188	400.00
2022	188	400.00
2023	10,457	420.81

GROUNDWATER

The test boring locations were checked for the presence of groundwater during and immediately following the drilling operations. During our initial field investigation performed in August 2022, free groundwater was encountered at approximately 26 to 39 feet below existing site grade. The initial water

level was approximately 29 to 39 feet and rose to depths of 24 to 34 feet after 24 hours. During our field investigations performed in February and April 2023, free groundwater was initially encountered at depths of 7 to 30 feet below existing site grade. The depth to groundwater was measured at depths of 3 to 23 feet below existing site grade after 24 hours. A table showing the initial and final groundwater elevations is provided below.

Boring No.	Date	Initial Depth to Groundwater	Final Depth to Groundwater
1	8-29-22	35	26
2	8-29-22	32	26
3	8-30-22	24	24
4	8-30-22	35	27
5	8-31-22	39	34
6	8-31-22	32	27
7	2-14-23	15	23
8	2-14-23	25	23
9	2-16-23	20	17
10	2-16-23	11	9
11	2-17-23	10	8
12	2-17-23	15	11
13	4-11-23	11	9½
14	4-11-23	13	15
15	4-11-23	15	20
16	4-12-23	12½	7
17	4-12-23	12½	6
18	4-13-23	7	3
19	4-13-23	15	4
20	4-14-23	10	10
21	4-17-23	7	3
22	4-17-23	25	4
23	4-18-23	22	3
24	4-18-23	30	3
25	4-18-23	20	4
26	4-19-23	7	10
27	7-7-23	NA	NA

28	7-7-23	NA	NA
29	7-7-23	NA	NA
30	7-7-23	NA	NA
31	7-7-23	NA	NA
32	7-7-23	NA	NA

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, amount of water stored in the reservoir, and climatic conditions, as well as other factors. During the recent period of high-water storage in the reservoir, the hydrostatic pressure of the water associated with the reservoir resulted in much shallower water levels than during the period with little or no storage in the reservoir. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project.

SOIL LIQUEFACTION

Soil liquefaction is a state of soil particle suspension, caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs in soils, such as sands, in which the strength is purely frictional. However, liquefaction has occurred in soils other than clean sands. Liquefaction usually occurs under vibratory conditions, such as those induced by seismic events.

To evaluate the liquefaction potential of the site, the following items were evaluated:

1) Soil type

2) Relative density

3) Initial confining pressure

4) Intensity and duration of groundshaking

The predominate soils encountered in our soil borings advanced within the project site consist of silty sands, sandy silts, clayey sands, clayey silts, sandy clays and sands. Groundwater was encountered at depths of 3 to 39 feet below existing site grade during our exploratory drilling.

The potential for soil liquefaction during a seismic event was evaluated on each boring using the "LiquefyPro" computer program (version 5) developed by CivilTech Software. For the analysis, a maximum earthquake magnitude of 6.15 was used. A peak horizontal ground surface acceleration of 0.307g was used for the liquefaction analysis. To model a worst-case scenario, a groundwater depth of 2 feet was used for the analysis. The analysis indicates that soils above a depth of 2 feet are non-liquefiable due to the absence of groundwater. The soils below a depth of 2 feet have a very low to moderate potential for liquefaction under seismic shaking.

The evaluation performed by Krazan & Associates, Inc. indicates the subsurface soils beneath the site have a low potential for liquefaction under seismic conditions. The estimated seismic induced total and differential settlements are indicated to be less than 1 inch and ⅔ inch, respectively. A table is provided below showing the estimated seismic settlement at each boring location. The data used to determine the liquefaction potential and settlement was derived from the Standard Penetration Tests (SPT) performed at 2½ foot intervals in the upper 20 feet and 5 foot intervals between 20 and 50 feet.

Boring No.	Total Seismic Settlement	Differential Seismic Settlement
B1	0.18	0.12
B2	0.00	0.00
B3	0.00	0.00
B4	0.00	0.00
B5	0.16	0.11
B6	0.45	0.30
B7	0.80	0.54
B8	0.59	0.40
B9	0.77	0.52
B10	0.66	0.44
B11	0.71	0.48
B12	0.87	0.58
B13	0.11	0.08
B14	0.04	0.03
B15	0.36	0.24
B16	0.04	0.03
B17	0.87	0.58
B18	0.28	0.19
B19	0.00	0.00
B20	0.00	0.00
B21	0.04	0.03
B22	0.00	0.00
B23	0.16	0.11

GROUNDWATER AND SURFACE WATER CONSIDERATIONS

Surface water runoff associated with the existing reservoir levee is the predominate concern for the planned development. During the recent period of high-water storage in the reservoir, the toe drain for the levee was not able to handle the high volume of water. This resulting in piping of soil on the FMFCD property near the property line which resulted in surface water collecting on the parcels planned for development. Based on the historical storage volumes obtained from the US Army Corps of Engineers, it appears these high water levels have occurred 4 out of the last 18 years or 22 percent of the time. Within the eastern portion of the planned development located adjacent to the Big Dry Creek Reservoir levee, surface water has ponded on the site. Based on our observations in the field, this surface water is directly related to the water piping out of the soil immediately adjacent to the west side of the reservoir. The inadequacy of the toe drain has resulted in impacts to the subject property that will preclude development of a portion of the property and additional improvements to collect and drain water resulting from the reservoir onto this property. In order to intercept this water from the areas of planned construction, it is recommended interceptor trenches be installed at a distance of approximately 250 feet southwest of the property line adjacent to the levee and near the property line adjacent to the spillway.

The interceptor trench should be 2 feet wide and at least 10 feet deep. The trench sidewalls should be raked to reduce the effects of soil smearing, which may occur during construction and adversely affect soil permeability. A geotextile filter fabric should be installed along the trench walls. A Schedule 40 perforated pipe should be placed no higher than 6 inches above the bottom of the trench. The pipe should be at least 4 inches in diameter and of sufficient strength to resist applied soil pressure and external loads. The perforated drain pipe should be installed at a gradient of at least 1 percent and should discharge to a suitable project drainage system. A detail of the interceptor trench is shown in Figure 2.

The trench shall be backfilled with 9 feet of 1½-inch round river gravel or crushed rock. The gravel/rock backfill should be wrapped in a filter fabric similar to Mirafi 140N to prevent migration of fine materials into the gravel. Native backfill soils should then be backfilled over the filter fabric. The backfill material should be placed in 6-inch lifts and compacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557.

Failure of the reservoir levee is outside of the scope of our evaluation.

CONCLUSION

Based on our evaluation, liquefaction and sand boils do not appear to be a geologic hazard at the site. In addition, the depth to naturally occurring groundwater is not a problem at the site. The primary concern for the development is water runoff resulting from the toe drain not properly collecting the water associated with the reservoir and resulting in piping of water out of the soil immediately west of the reservoir. This water associated with the reservoir results in ponding of water on the eastern edge of the project planned for development. Provided the groundwater interceptor is constructed as described above, our investigation indicates the setback for the residential structures can be reduced from 500 feet to 250 feet southwest of the levee. No minimum setback is required west of the spillway. Figures 3 through 7 show the estimated location of the interceptor trench.

LIMITATIONS

Soils Engineering is one of the newest divisions of Civil Engineering. This branch of Civil Engineering is constantly improving as new technologies and understanding of earth sciences advance. Although your site was analyzed using the most appropriate and most current techniques and methods, undoubtedly there will be substantial future improvements in this branch of engineering. In addition to advancements in the field of Soils Engineering, physical changes in the site, either due to excavation or fill placement, new agency regulations, or possible changes in the proposed structure after the soils report is completed, may require the soils report to be professionally reviewed. In light of this, the owner should be aware that there is a practical limit to the usefulness of this report without critical review. Although the time limit for this review is strictly arbitrary, it is suggested that 2 years be considered a reasonable time for the usefulness of this report.

Foundation and earthwork construction is characterized by the presence of a calculated risk that soil and groundwater conditions have been fully revealed by the original foundation investigation. This risk is derived from the practical necessity of basing interpretations and design conclusions on limited sampling of the earth. The recommendations made in this report are based on the assumption that soil conditions do not vary significantly from those disclosed during our field investigation. If any variations or undesirable conditions are encountered during construction, the Soils Engineer should be notified so that supplemental recommendations may be made.

This report is a Soil Liquefaction Evaluation with the purpose of evaluating the soil conditions in terms of foundation design. The scope of our services did not include any Environmental Site Assessment for the presence or absence of hazardous and/or toxic materials in the soil, groundwater, or atmosphere; or the presence of wetlands. Any statements, or absence of statements, in this report or on any boring log regarding odors, unusual or suspicious items, or conditions observed, are strictly for descriptive purposes, and are not intended to convey engineering judgment regarding potential hazardous and/or toxic assessment.

The geotechnical information presented herein is based upon professional interpretation utilizing standard engineering practices and a degree of conservatism deemed proper for this project. It is not warranted that such information and interpretation cannot be superseded by future geotechnical developments. We emphasize that this report is valid for the project outlined above, and should not be used for any other site.

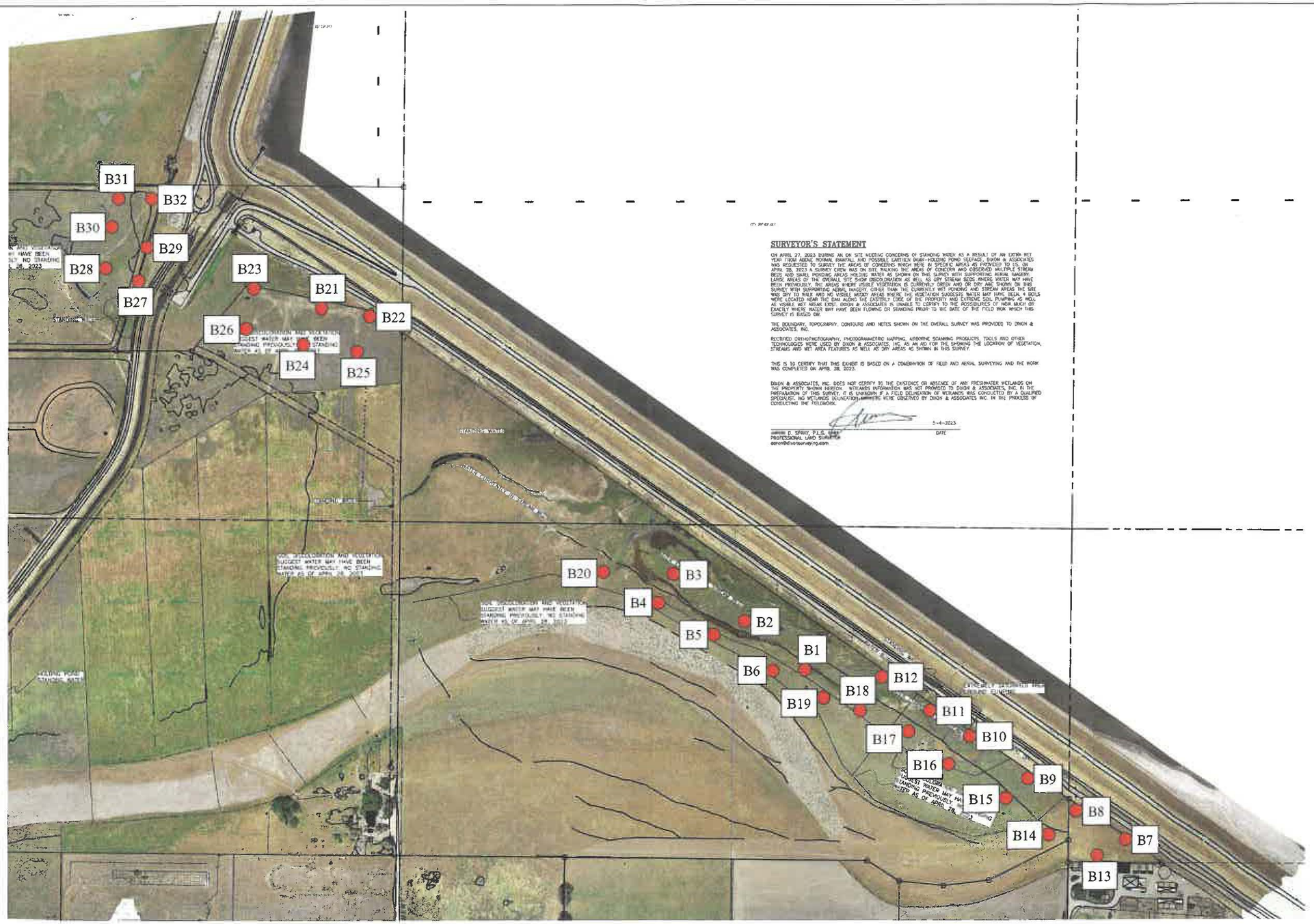
If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (559) 348-2200.

Respectfully submitted,
KRAZAN & ASSOCIATES, INC.



David R. Jarosz, II
Managing Engineer
RCE No. 60185/RGE No. 2698

DRJ:ht



SURVEYOR'S STATEMENT

ON APRIL 27, 2023 DURING AN ON SITE MEETING CONCERNS OF STANDING WATER AS A RESULT OF AN EXTRA WET YEAR FROM ABOVE NORMAL RAINFALL AND POSSIBLE EARTHEN BASIN-HOLDING POND SEEPAGE, DIXON & ASSOCIATES, WAS REQUESTED TO SURVEY THE AREAS OF CONCERNS WHICH WERE IN SPECIFIC AREAS AS PROVIDED TO US. ON APRIL 28, 2023 A SURVEY CREW WAS ON SITE TALKING THE AREAS OF CONCERN AND OBSERVED MULTIPLE STREAM BEDS AND SMALL PONDING AREAS HOLDING WATER AS SHOWN ON THIS SURVEY WITH SUPPORTING AERIAL IMAGERY. LARGE AREAS OF THE OVERALL SITE SHOW DISCOLORATION AS WELL AS DRY STREAM BEDS WHERE WATER MAY HAVE BEEN PREVIOUSLY. INC AREAS WHERE USABLE VEGETATION IS CURRENTLY GREEN AND OR DRY ARE SHOWN ON THIS SURVEY WITH SUPPORTING AERIAL IMAGERY. OTHER THAN THE CURRENTLY WET PONDING AND STREAM AREAS THE SITE WAS DRY TO WALK AND NO VISIBLE MUDDY AREAS WHERE THE VEGETATION SUGGESTS WATER MAY HAVE BEEN. 4 BOILS WERE LOCATED NEAR THE EMA ALONG THE EASTERLY EDGE OF THE PROPERTY AND EXTREME SOIL PUMPING AS WELL AS VISIBLE WET AREAS EXIST. DIXON & ASSOCIATES IS UNABLE TO CERTIFY TO THE POSSIBILITIES OF NOW MUDDY OR EXACTLY WHERE WATER MAY HAVE BEEN FLOWING OR STANDING PRIOR TO THE DATE OF THE FIELD WORK WHICH THIS SURVEY IS BASED ON.

THE BOUNDARY, TOPOGRAPHY, CONTOURS AND NOTES SHOWN ON THE OVERALL SURVEY WAS PROVIDED TO DIXON & ASSOCIATES, INC.

RECTIFIED ORTHOPHOTOGRAPHY, PHOTOGRAMMETRIC MAPPING, AIRBORNE SCANNING PRODUCTS, TOOLS AND OTHER TECHNOLOGIES WERE USED BY DIXON & ASSOCIATES, INC. AS AN AID FOR THE SHOWING THE LOCATION OF VEGETATION, STREAMS AND WET AREA FEATURES AS WELL AS DRY AREAS AS SHOWN IN THIS SURVEY.

THIS IS TO CERTIFY THAT THIS EXHIBIT IS BASED ON A COMBINATION OF FIELD AND AERIAL SURVEYING AND THE WORK WAS COMPLETED ON APRIL 28, 2023.

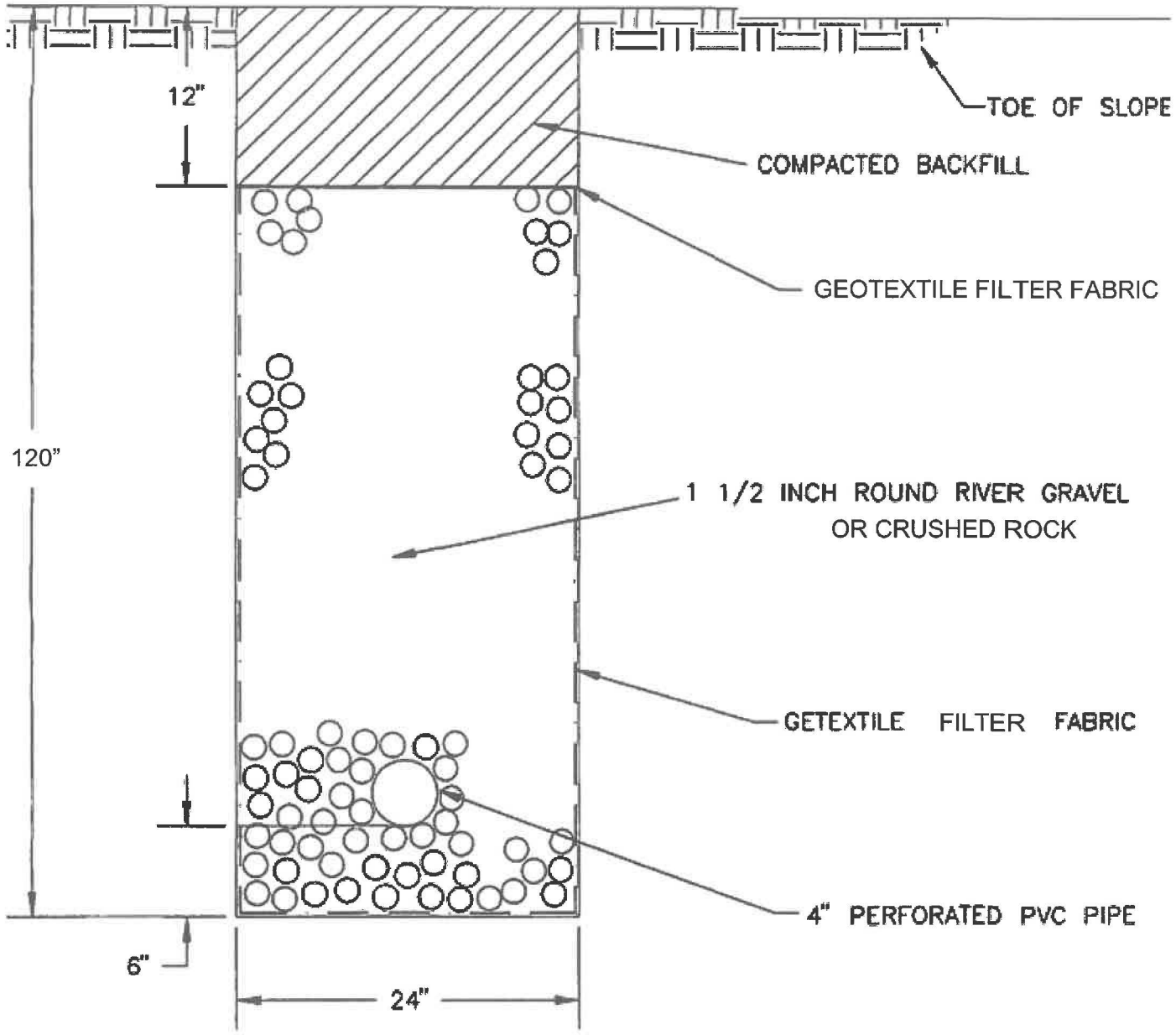
DIXON & ASSOCIATES, INC. DOES NOT CERTIFY TO THE EXISTENCE OR ABSENCE OF ANY FRESHWATER WETLANDS ON THE PROPERTY SHOWN HEREON. WETLANDS INFORMATION WAS NOT PROVIDED TO DIXON & ASSOCIATES, INC. IN THE PREPARATION OF THIS SURVEY. IT IS UNKNOWN IF A FIELD DELINEATION OF WETLANDS WAS CONDUCTED BY A QUALIFIED SPECIALIST. NO WETLANDS DELINEATION MARKERS WERE OBSERVED BY DIXON & ASSOCIATES INC. IN THE PROCESS OF CONDUCTING THE FIELDWORK.

5-4-2023
DATE

DARREN D. SPRAY, P.L.S. 9161
PROFESSIONAL LAND SURVEYOR
darren@dixonsurveying.com

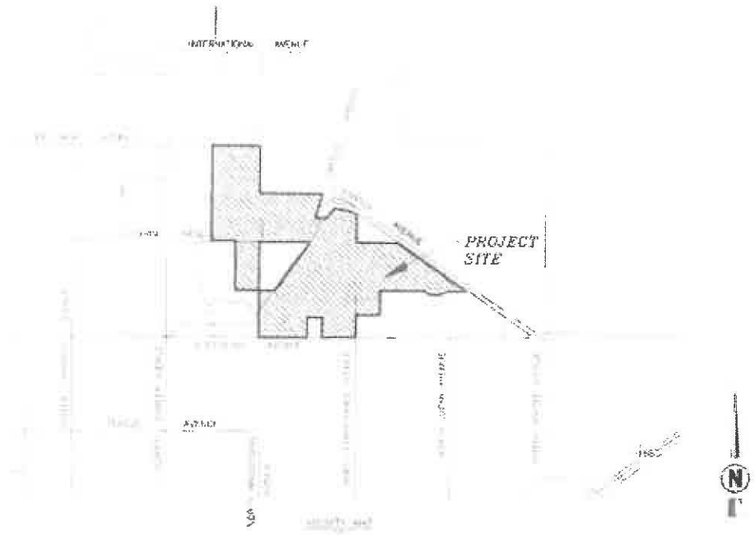
APPROXIMATE BORING LOCATION

SITE MAP	**Scale:** NTS	**Date:** August 2023	Krazan GEOTECHNICAL ENGINEERING
Triangle Development **Shepherd Avenue and Locan Avenue** **Clovis, California**	**Drawn by:** HT	**Approved by:** DJ	
	Project No. 012-22165	**Figure No.** 1	



GROUND WATER INTERCEPTOR DETAIL

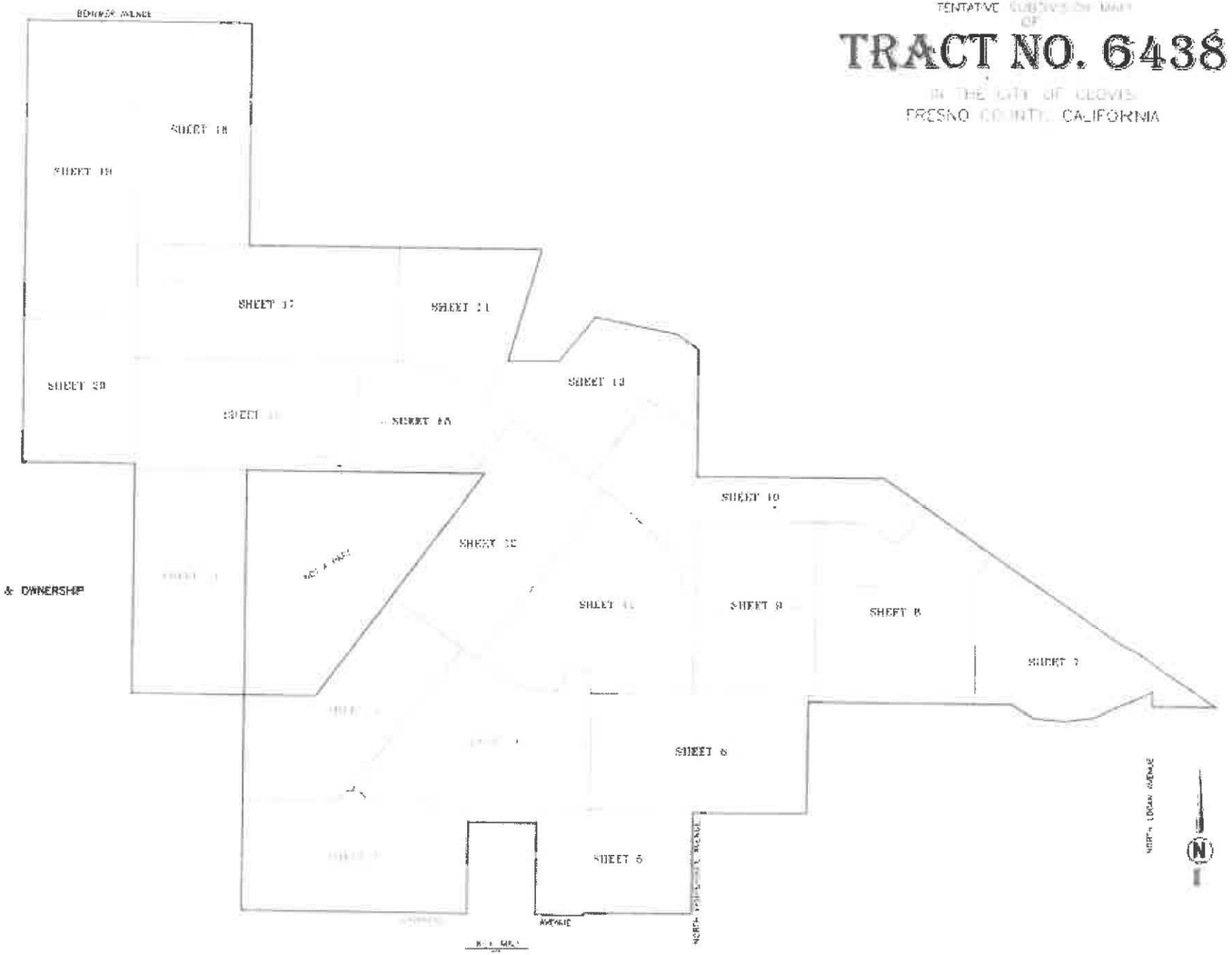
INTERCEPTOR DETAIL	**Scale:** NTS	**Date:** Sep. 2023	Krazan GEOTECHNICAL ENGINEERING
Triangle Development **Shepherd Avenue and Locan Avenue** **Clovis, California**	**Drawn by:** As Shown	**Approved by:** DJ	
	Project No. 012-22165	**Figure No.** 2	



TENTATIVE [illegible] MAP OF

TRACT NO. 6438

IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



LEGAL DESCRIPTION:

ASSESSOR'S PARCEL NUMBER, SITE ADDRESS, USE & OWNERSHIP

GROUNDWATER INTERCEPTOR LOCATION	Scale: NTS	Date: September 2023	Krazan GEOTECHNICAL ENGINEERING
Triangle Development Shepherd Avenue and Locan Avenue Clovis, California	Drawn by: HT	Approved by: DJ	
	Project No. 012-22165	Figure No. 3	

OUTLOT SCHEDULE

SECTION A–A

SECTION B–B

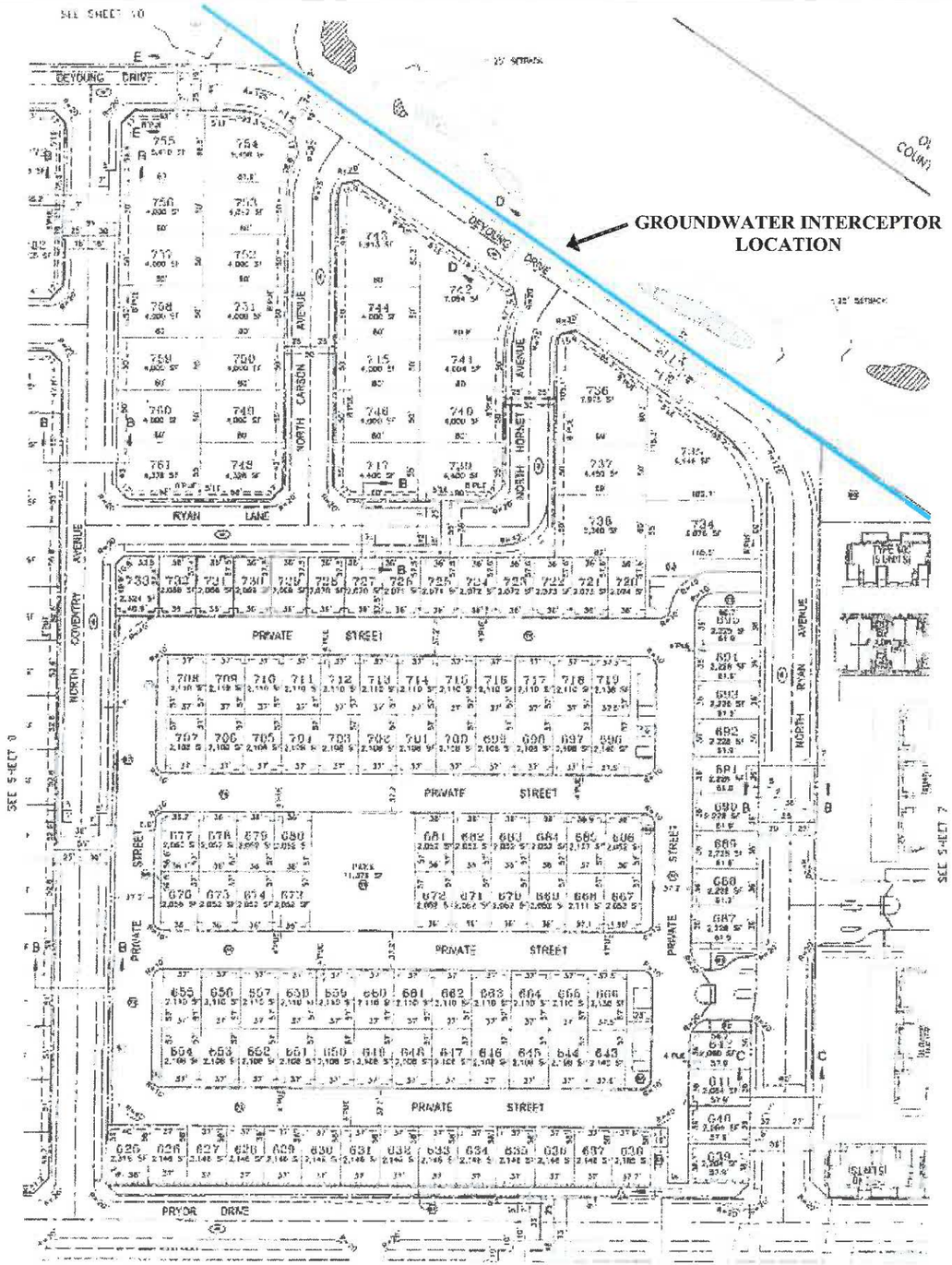
SECTION C–C

SECTION D–D

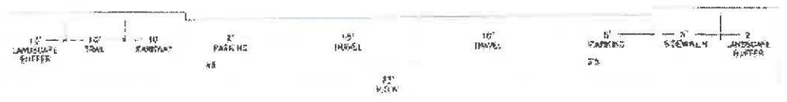
GROUNDWATER INTERCEPTOR LOCATION

KEY MAP

GROUNDWATER INTERCEPTOR LOCATION	**Scale:** NTS	**Date:** September 2023	Krazan GEOTECHNICAL ENGINEERING
Triangle Development **Shepherd Avenue and Locan Avenue** **Clovis, California**	**Drawn by:** HT	**Approved by:** DJ	
	Project No. 012-22165	**Figure No.** 4	

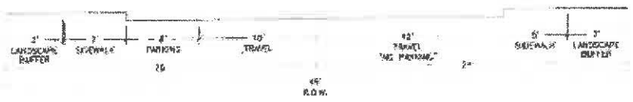


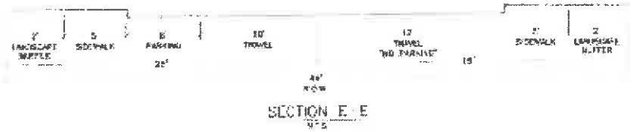












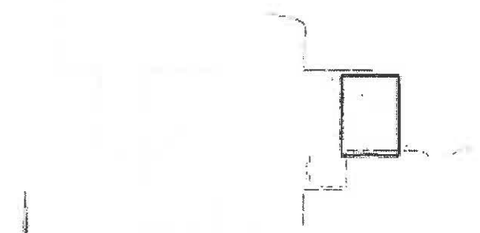
OUTLOT SCHEDULE:

- OUTLOTS 12, 39, 48, 74, 102, 103, 165, 178, 186 & 187 ARE FOR PRIVATE STREET AND PUBLIC UTILITY PURPOSES.
- OUTLOT 10 IS FOR PRIVATE STREET, PRIVATE PARKING, PRIVATE LANDSCAPE, & PUBLIC UTILITY PURPOSES.
- OUTLOTS 8, 22, 54, 76, 177 & 183 ARE FOR PRIVATE PARK AREA AND PUBLIC UTILITY PURPOSES.
- OUTLOTS 21, 36, 171 & 172 ARE FOR PUBLIC PARK SPACE.
- OUTLOTS 3, 6, 30, 34, 45, 70, 72, 90, 91, 94, 95, 97, 145, 147, 148, 149, 150, 151, 152, 154, 159, 160, 162, 163, 184 & 185 ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE AND PUBLIC UTILITY.
- OUTLOT 2, 9, 18, 26, 27, 43, 53, 61, 68, 69, 81, 83, 134, 136, 142, 167 & 176 ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN AND PUBLIC UTILITY PURPOSES.
- OUTLOTS 1, 4, 7, 8, 11, 20, 23, 28, 29, 31, 33, 38, 39, 40, 42, 49, 55, 57, 58, 59, 60, 62, 63, 64, 65, 66, 67, 68, 69, 71, 73, 75, 78, 82, 84, 85, 86, 87, 88, 89, 92, 93, 96, 97, 98, 99, 100, 101, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 135, 137, 138, 139, 140, 141, 143, 144, 146, 153, 155, 157, 158, 161, 166, 168, 169, 170, 173, 174, 175, 176, 179, 180, 181, 182, 183, 184, 185 & 186 ARE FOR PRIVATE LANDSCAPE AND PUBLIC UTILITY PURPOSES.
- OUTLOTS 13, 14, 15, 16, 19, 24, 25, 35, 41, 44, 46, 47, 50, 52, 56, 60, 64, 77, 80, 156, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185 & 186 ARE FOR PRIVATE LANDSCAPE AND PUBLIC UTILITY PURPOSES.
- OUTLOT 10 IS FOR PUBLIC TRAIL PURPOSES.
- OUTLOTS 17 & 158 ARE FOR CANAL PURPOSES.
- OUTLOTS 35, 79, 94 & 98 ARE FOR FUTURE DEVELOPMENT PURPOSES.

LEGEND:

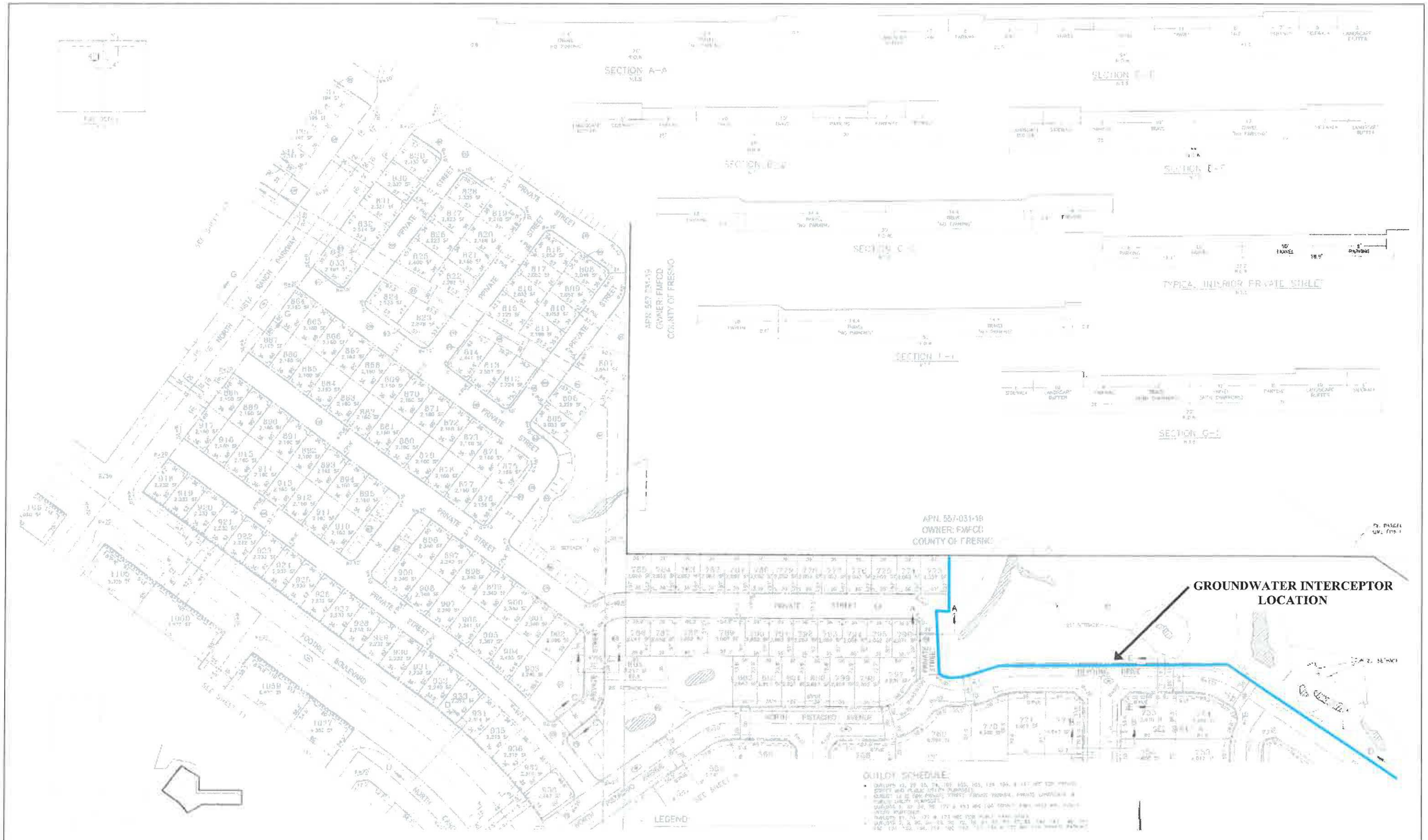
- PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
- LANDSCAPE EASEMENT NOW OFFERED FOR



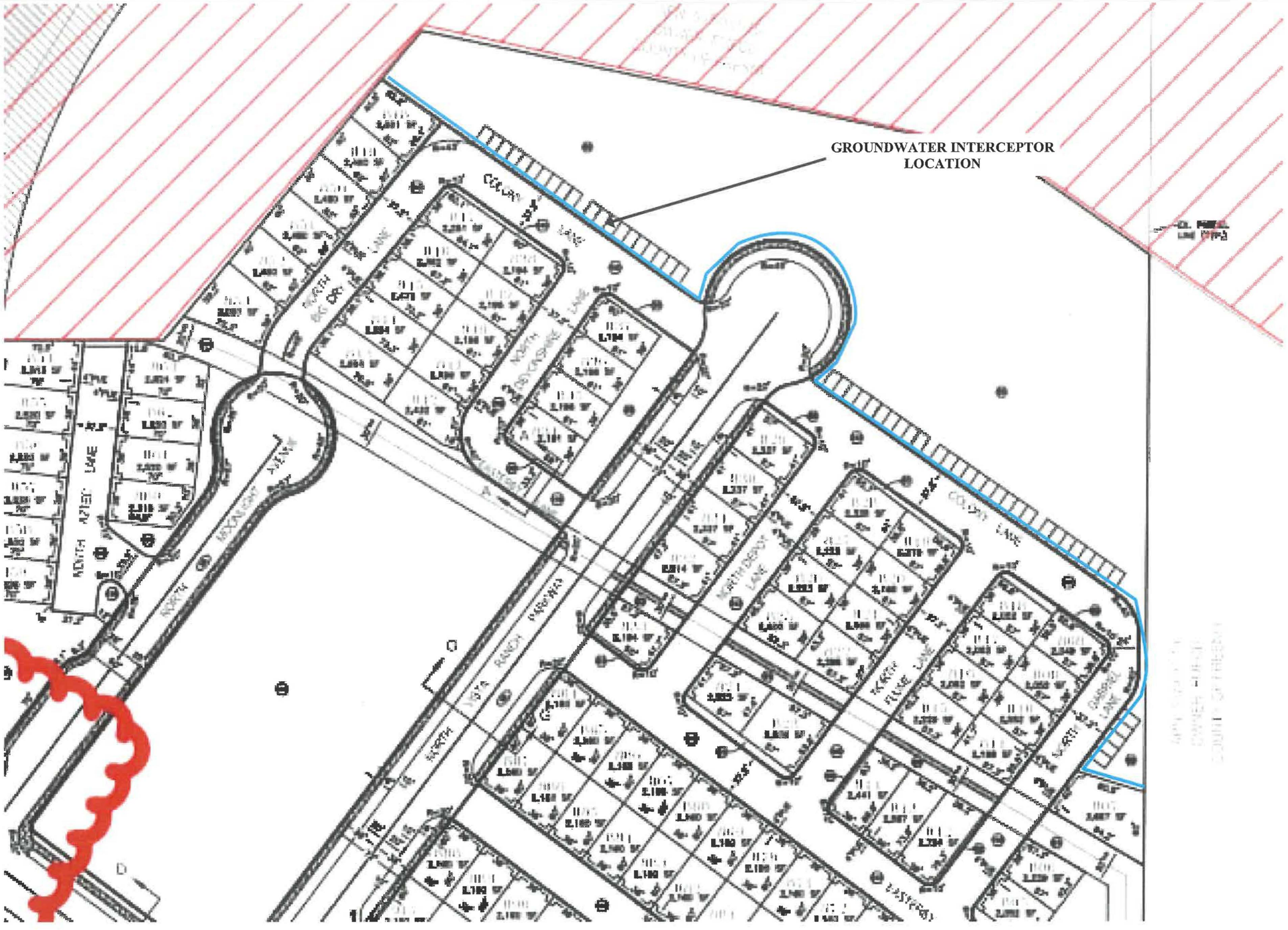


TENTATIVE TRACT MAP

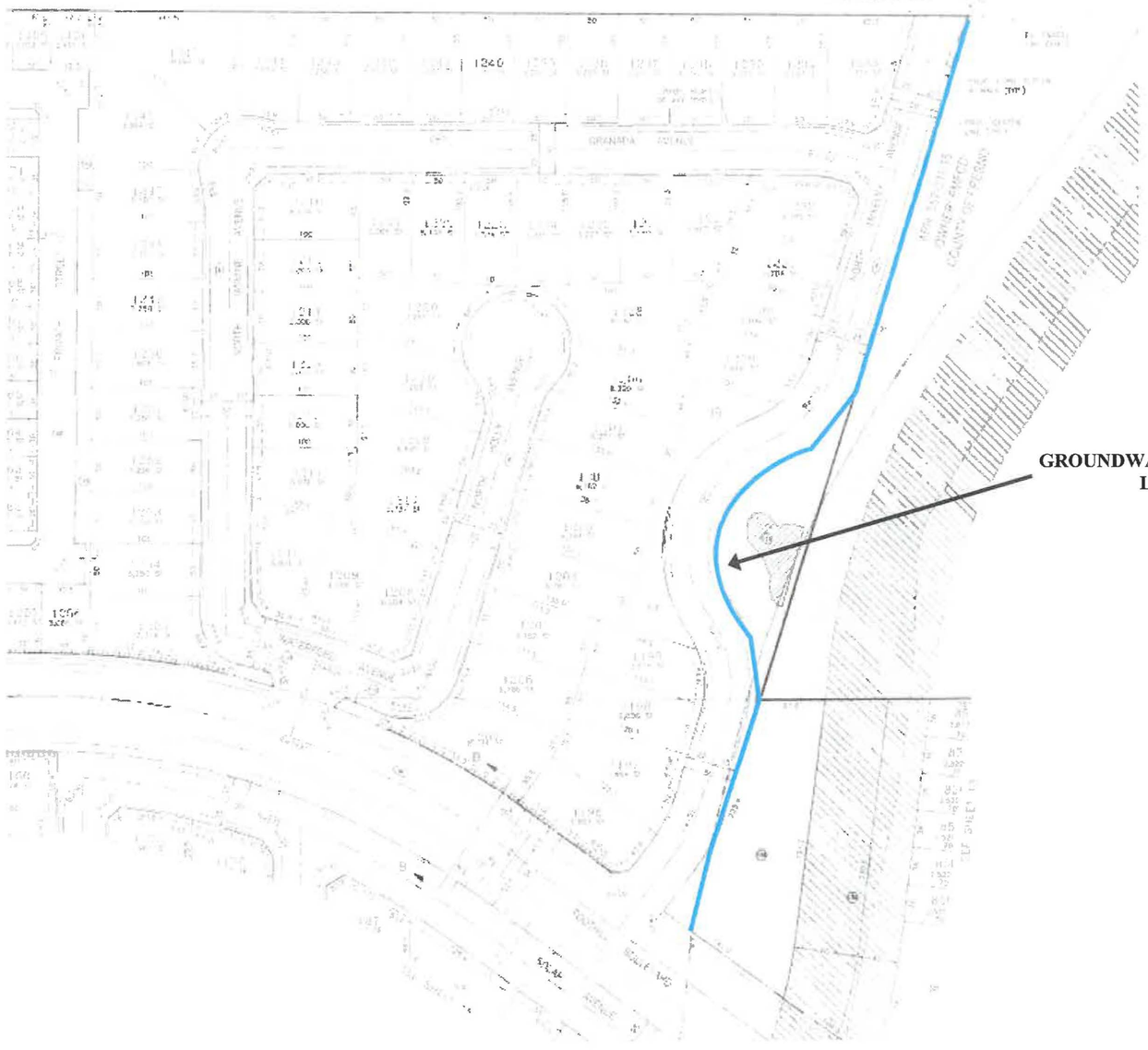
GROUNDWATER INTERCEPTOR LOCATION	**Scale:** NTS	**Date:** September 2023	Krazan GEOTECHNICAL ENGINEERING
Triangle Development **Shepherd Avenue and Locan Avenue** **Clovis, California**	**Drawn by:** HT	**Approved by:** DJ	
	Project No. 012-22165	**Figure No.** 5	



GROUNDWATER INTERCEPTOR LOCATION	**Scale:** NTS	**Date:** September 2023	Krazan GEOTECHNICAL ENGINEERING
Triangle Development **Shepherd Avenue and Locan Avenue** **Clovis, California**	**Drawn by:** HT	**Approved by:** DJ	
	Project No. 012-22165	**Figure No.** 6	



GROUNDWATER INTERCEPTOR LOCATION	**Scale:** NTS	**Date:** August 2024	Krazan GEOTECHNICAL ENGINEERING
Triangle Development **Shepherd Avenue and Locan Avenue** **Clovis, California**	**Drawn by:** HT	**Approved by:** DJ	
	Project No. 012-22165	**Figure No.** 7	





GROUNDWATER INTERCEPTOR LOCATION	**Scale:** NTS	**Date:** August 2024	Krazan GEOTECHNICAL ENGINEERING
Triangle Development **Shepherd Avenue and Locan Avenue** **Clovis, California**	**Drawn by:** HT	**Approved by:** DJ	
	Project No. 012-22165	**Figure No.** 8	

FIELD AND LABORATORY INVESTIGATIONS

Field Investigation

The field investigation consisted of a surface reconnaissance and a subsurface exploratory program. Thirty-two 4½-inch exploratory borings were advanced. The boring locations are shown on the site plan.

The soils encountered were logged in the field during the exploration and, with supplementary laboratory test data, are described in accordance with the Unified Soil Classification System.

Modified standard penetration tests and standard penetration tests were performed at selected depths. These tests represent the resistance to driving a 2½-inch and 1½-inch diameter split barrel sampler, respectively. The driving energy was provided by a hammer weighing 140 pounds falling 30 inches. Relatively undisturbed soil samples were obtained while performing this test. Bag samples of the disturbed soil were obtained from the auger cuttings. The modified standard penetration tests are identified in the sample type on the boring logs with a full shaded in block. The standard penetration tests are identified in the sample type on the boring logs with half of the block shaded. All samples were returned to our Clovis laboratory for evaluation.

Laboratory Investigation

The laboratory investigation was programmed to determine the physical and mechanical properties of the foundation soil underlying the site. Test results were used as criteria for determining the engineering suitability of the surface and subsurface materials encountered.

In situ moisture content, dry density, sieve analysis, Atterberg limits and permeability tests were determined for the undisturbed samples representative of the subsurface material. These tests, supplemented by visual observation, comprised the basis for our evaluation of the site material.

The logs of the exploratory borings and laboratory determinations are presented herein.

UNIFIED SOIL CLASSIFICATION SYSTEM

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

COARSE-GRAINED SOILS (more than 50% of material is larger than No. 200 sieve size.)			
GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size	Clean Gravels (Less than 5% fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
	Gravels with fines (More than 12% fines)	GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
SANDS 50% or more of coarse fraction smaller than No. 4 sieve size	Clean Sands (Less than 5% fines)	SW	Well-graded sands, gravelly sands, little or no fines
		SP	Poorly graded sands, gravelly sands, little or no fines
	Sands with fines (More than 12% fines)	SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (50% or more of material is smaller than No. 200 sieve size.)			
SILTS AND CLAYS Liquid limit less than 50%		ML	Inorganic silts and very fine sands, rock flour, silty of clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS Liquid limit 50% or greater		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils

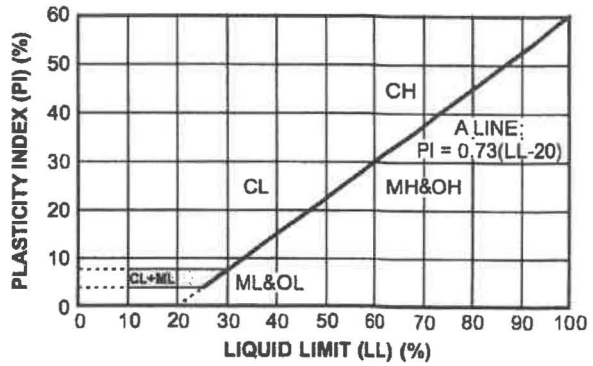
CONSISTENCY CLASSIFICATION

Description	Blows per Foot
Granular Soils	
Very Loose	< 5
Loose	5 – 15
Medium Dense	16 – 40
Dense	41 – 65
Very Dense	> 65
Cohesive Soils	
Very Soft	< 3
Soft	3 – 5
Firm	6 – 10
Stiff	11 – 20
Very Stiff	21 – 40
Hard	> 40

GRAIN SIZE CLASSIFICATION

Grain Type	*Standard Sieve Size*	*Grain Size in Millimeters*
Boulders	Above 12 inches	Above 305
Cobbles	12 to 13 inches	305 to 76.2
Gravel	3 inches to No. 4	76.2 to 4.76
Coarse-grained	3 to ¾ inches	76.2 to 19.1
Fine-grained	¾ inches to No. 4	19.1 to 4.76
Sand	No. 4 to No. 200	4.76 to 0.074
Coarse-grained	No. 4 to No. 10	4.76 to 2.00
Medium-grained	No. 10 to No. 40	2.00 to 0.42
Fine-grained	No. 40 to No. 200	0.42 to 0.074
Silt and Clay	Below No. 200	Below 0.074

PLASTICITY CHART



Log of Boring B1

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-1

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 35 Feet **At Completion:** 26 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained; brown, damp, drills easily Loose below 12 inches Medium dense below 2 feet				
2				7.9		16
4		Percent passing No. 200 - 43.6%				
6			105.5	7.2		24
6		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained with CLAY; reddish-brown, damp, drills easily Percent passing No. 200 - 17.5%				
8			120.7	4.4		28
8		***SANDY SILT/SANDY CLAY (ML/CL)*** Very stiff, fine- to medium-grained; reddish-brown, damp, drills easily Percent passing No. 200 - 64.1%				
10			117.1	14.0		15
12		***SILTY SAND/SANDY SILT (SM/ML)*** Medium dense, fine- to medium-grained; brown, moist, drills easily Percent passing No. 200 - 52.9%	105.5	19.6		25
14		***CLAYEY SILTY SAND (SM/SC)*** Medium dense, fine- to medium-grained; brown, moist, drills easily Percent passing No. 200 - 40.1%	111.6	16.0		17
16			110.7	17.2		20
18		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; brown, moist, drills easily Percent passing No. 200 - 26.9%				
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Date: 8-29-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B1

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-1

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 35 Feet **At Completion:** 26 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
20		Dense below 20 feet	113.9	9.5		31
22						
24						
26		▼ Medium dense below 25 feet Percent passing No. 200 - 44.2% Saturated below 26 feet	110.7	17.6		26
28						
30		***SILTY SAND/SANDY SILT (SM/ML)*** Dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 49.8%	111.8	17.2		30
32						
34		▽				
36		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 52.3%	80.4	36.2		16
38						
40						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Date: 8-29-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B1

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-1

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 35 Feet **At Completion:** 26 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 35.9%	110.9	16.2		24
44						
46		Very dense below 45 feet Percent passing No. 200 - 38.5%	109.4	17.3		22
48						
50		End of Borehole				
52						
54						
56						
58						
60						

SUBSURFACE PROFILE

SAMPLE

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 8-29-22

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B2

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

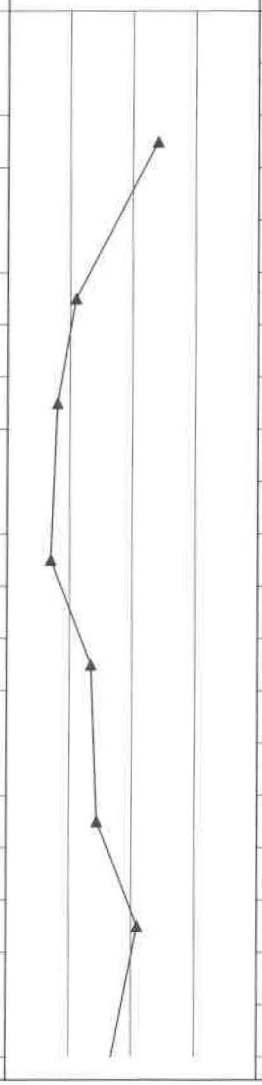
Figure No.: A-2

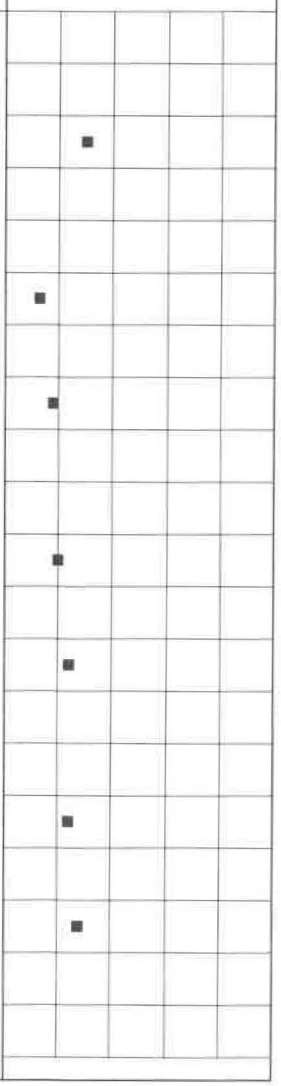
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 32 Feet **At Completion:** 26 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained; brown, damp, drills easily Loose below 12 inches				
2		***SANDY SILT (ML)*** Very dense, fine- to medium-grained; brown, damp, drills firmly	108.4	15.1		48
4						
6		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained with CLAY; brown, damp, drills easily Percent passing No. 200 - 27.9%	116.7	6.4		22
8		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; brown, damp, drills easily	118.0	9.1		16
10			115.3	10.1		14
12		Percent passing No. 200 - 43.4%	123.5	12.2		27
14		***SILTY SAND/SANDY SILT (SM/ML)*** Medium dense, fine- to medium-grained; brown, moist, drills easily Percent passing No. 200 - 48.9%	117.0	12.2		29
16		Dense below 17 feet	118.1	14.0		42
18						
20		Percent passing No. 200 - 34.5%				





Drill Method: Hollow Stem

Drill Date: 8-29-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B2

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-2

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 32 Feet **At Completion:** 26 Feet

Depth (ft)	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22	***SILTY SAND (SM)*** Dense, fine- to medium-grained; brown, damp, drills easily	109.2	15.7		32
24	***CLAYEY SAND (SC)*** Dense, fine- to medium-grained with thin lenses of SILTY SAND; reddish-brown, damp, drills easily				
26	Percent passing No. 200 - 39.7%	113.1	16.8		35
28					
30	Percent passing No. 200 - 34.6%	114.3	16.1		40
32	Saturated below 32 feet ▽				
34	***CLAYEY SILTY SAND (SM/SC)*** Dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 26.4%	120.8	13.6		36
36					
38	***SILTY SAND (SM)*** Dense, fine- to medium-grained; brown, moist, drills easily Percent passing No. 200 - 33.0%				
40					

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 8-29-22

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B2

Project: Triangle Development

Project No: 012-22165

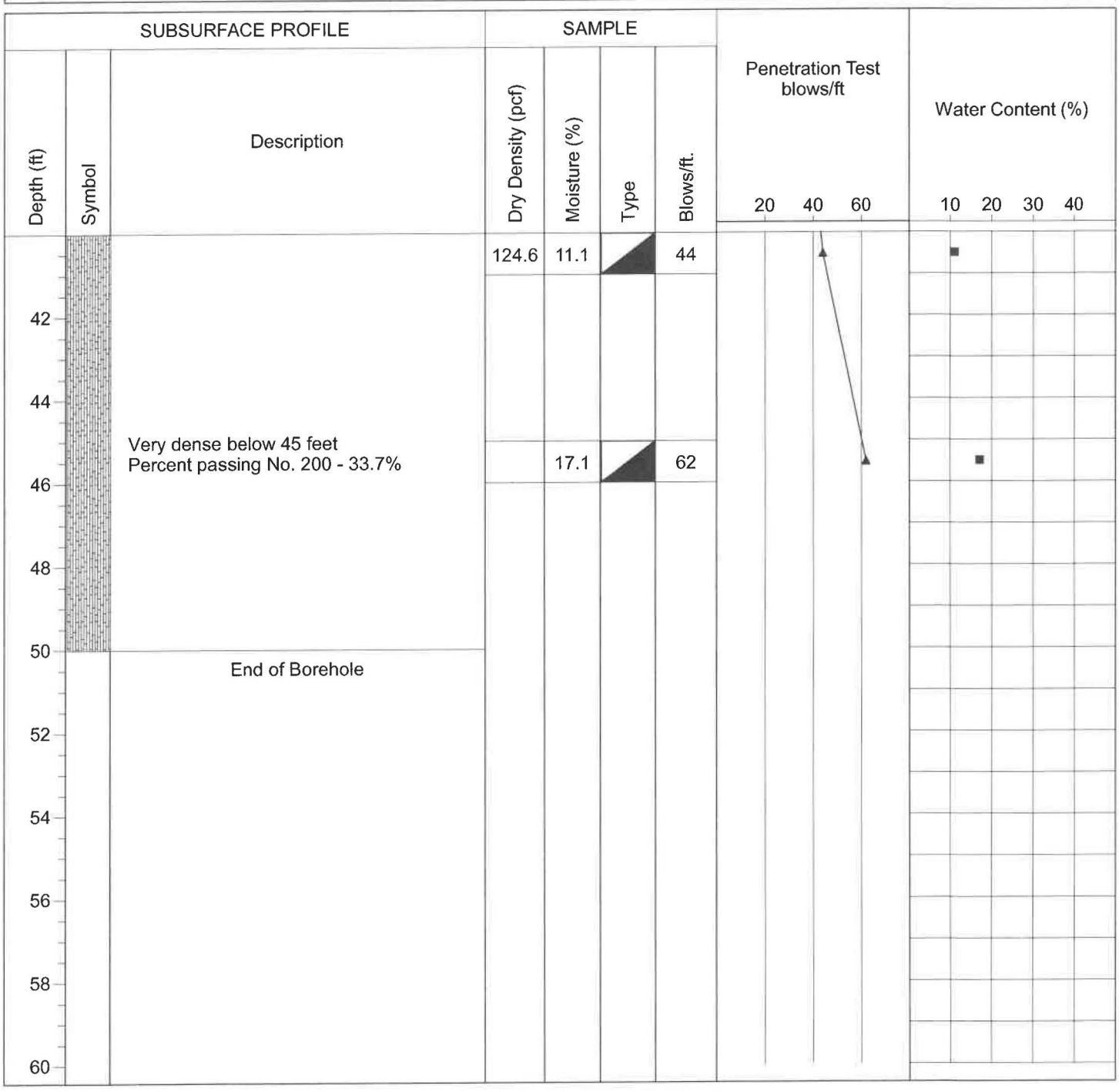
Client: Wilson Homes

Figure No.: A-2

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 32 Feet **At Completion:** 26 Feet



Drill Method: Hollow Stem

Drill Date: 8-29-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Sheet: 3 of 3

Log of Boring B3

Project: Triangle Development

Project No: 012-22165

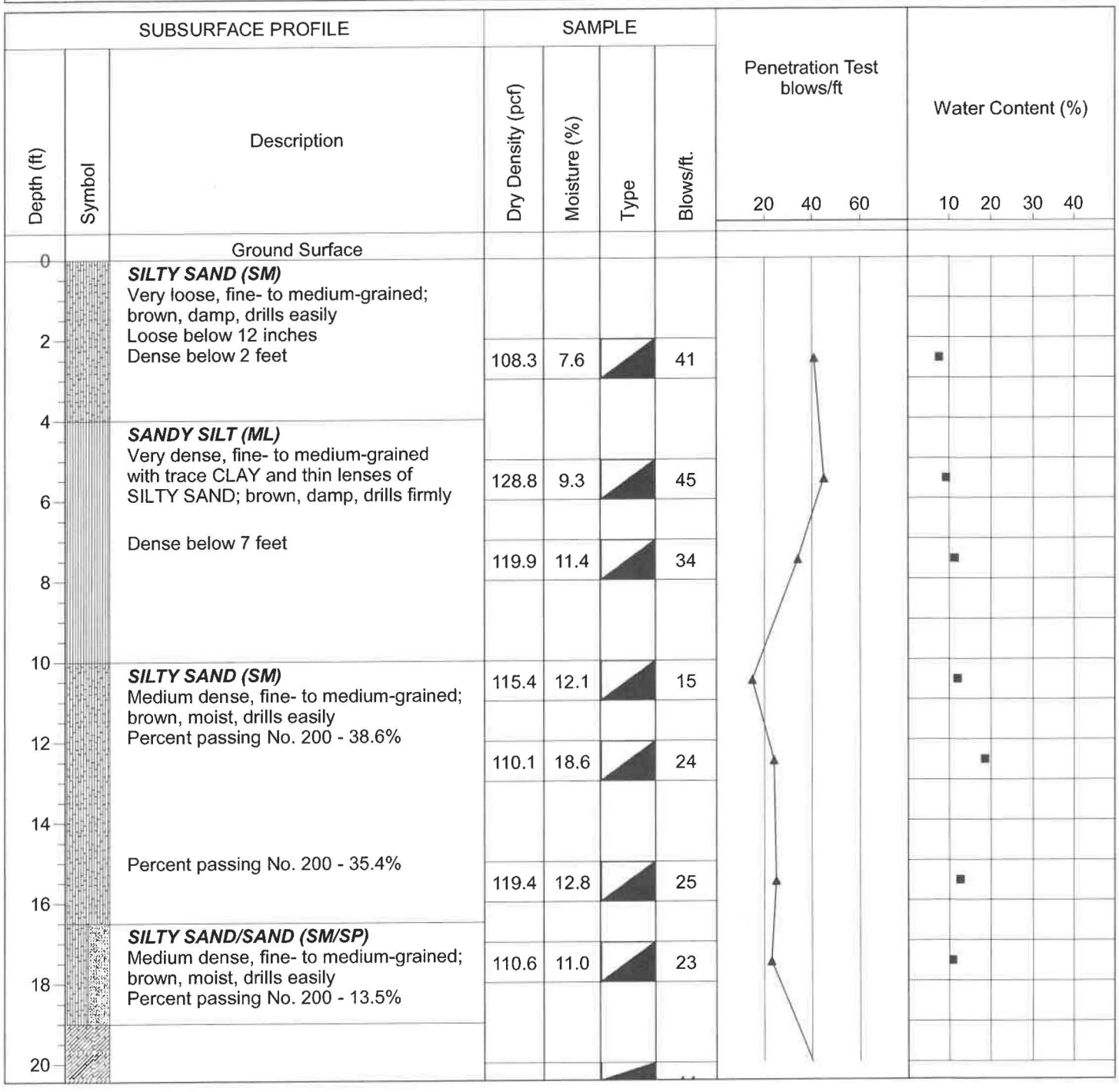
Client: Wilson Homes

Figure No.: A-3

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 29 Feet **At Completion:** 24 Feet



Drill Method: Hollow Stem

Drill Date: 8-30-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B3

Project: Triangle Development

Project No: 012-22165

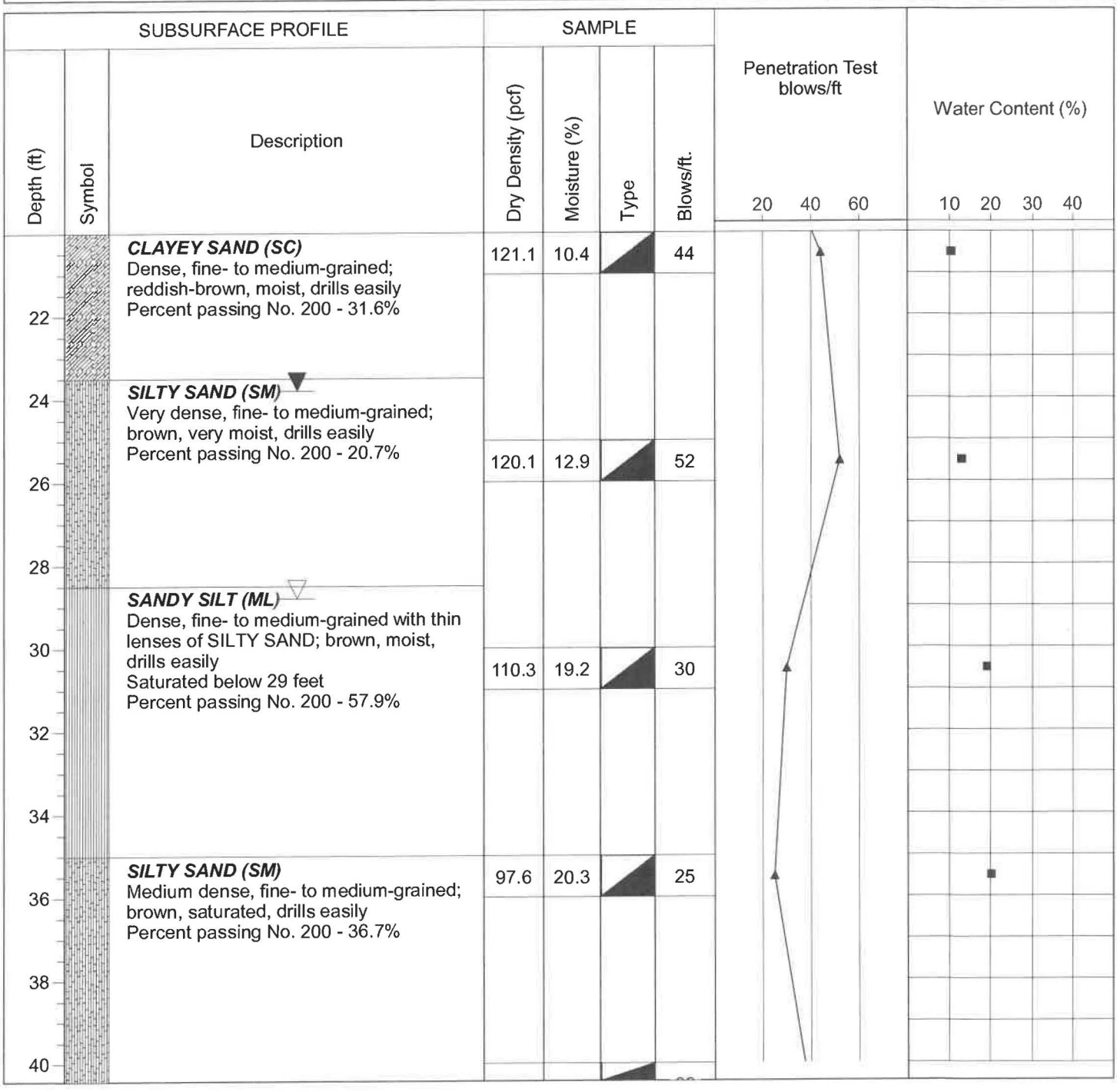
Client: Wilson Homes

Figure No.: A-3

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 29 Feet **At Completion:** 24 Feet



Drill Method: Hollow Stem

Drill Date: 8-30-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B3

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

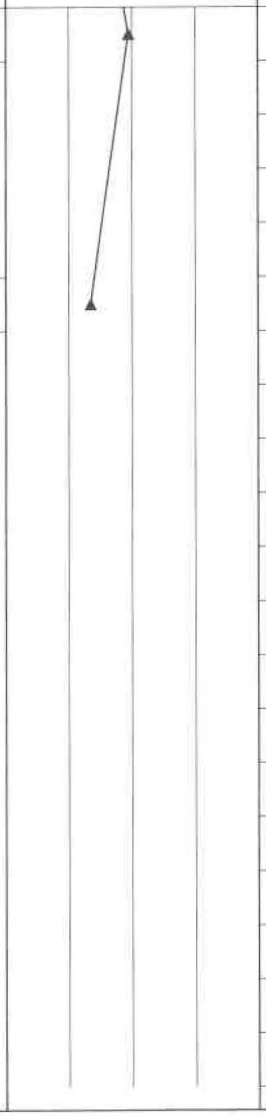
Figure No.: A-3

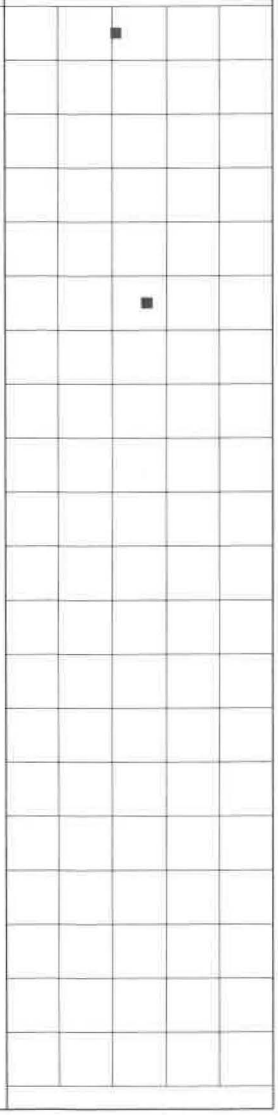
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 29 Feet **At Completion:** 24 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		Percent passing No. 200 - 44.8%	104.5	20.8		39
44						
46		***SILTY SAND/SANDY SILT (SM/ML)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 52.2%	90.1	26.6		27
48						
50		End of Borehole				
52						
54						
56						
58						
60						





Drill Method: Hollow Stem

Drill Date: 8-30-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B4

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

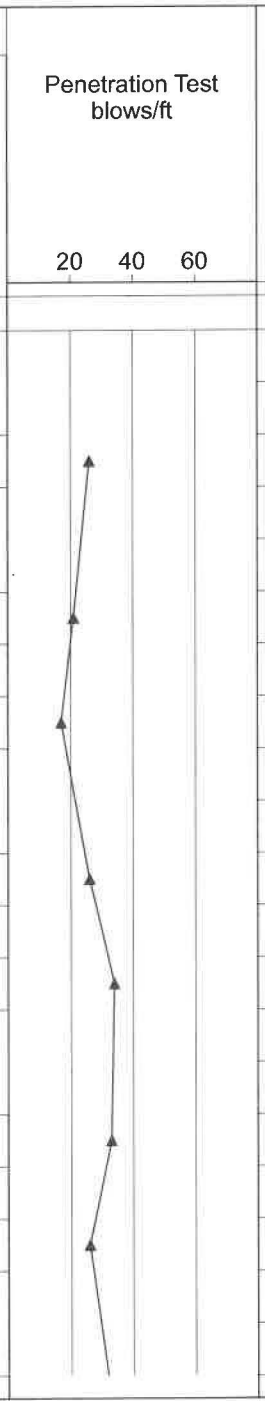
Figure No.: A-4

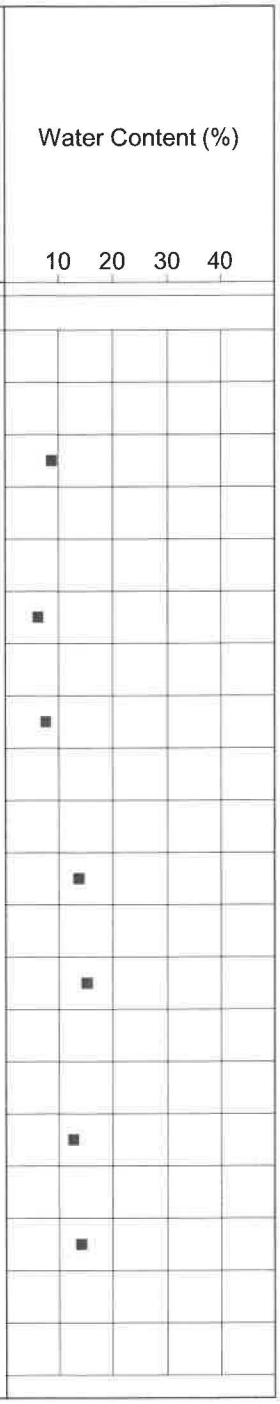
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 35 Feet **At Completion:** 27 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained; brown, damp, drills easily Loose below 12 inches Medium dense below 2 feet				
2			99.4	8.8		26
4		***CLAYEY SILTY SAND (SM/SC)*** Medium dense, fine- to medium-grained; brown, damp, drills easily Percent passing No. 200 - 43.8%				
6			123.9	6.1		21
			122.8	7.6		17
8		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Medium dense, fine- to medium-grained; reddish-brown, damp, drills easily Percent passing No. 200 - 46.2%				
10			119.9	13.9		26
12		***CLAYEY SAND (SC)*** Dense, fine- to medium-grained; brown, moist, drills easily Percent passing No. 200 - 39.6%	116.3	15.4		34
14		***SILTY SAND (SM)*** Dense, fine- to medium-grained; brown, damp, drills easily Percent passing No. 200 - 29.4% Medium dense below 17 feet	118.0	12.9		33
16			115.1	14.4		26
18						
20		Dense below 20 feet				





Drill Method: Hollow Stem

Drill Date: 8-30-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B4

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

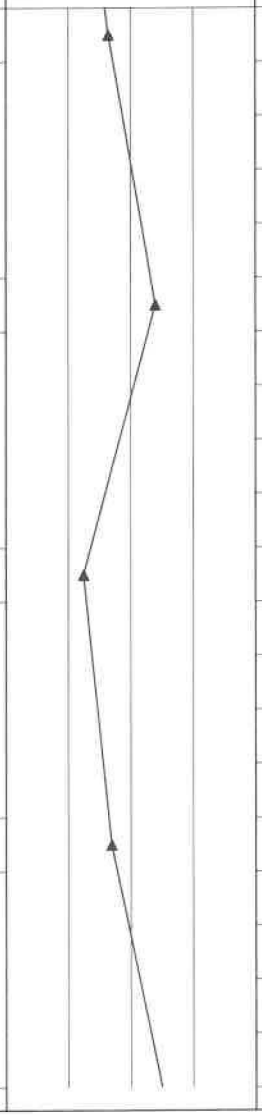
Figure No.: A-4

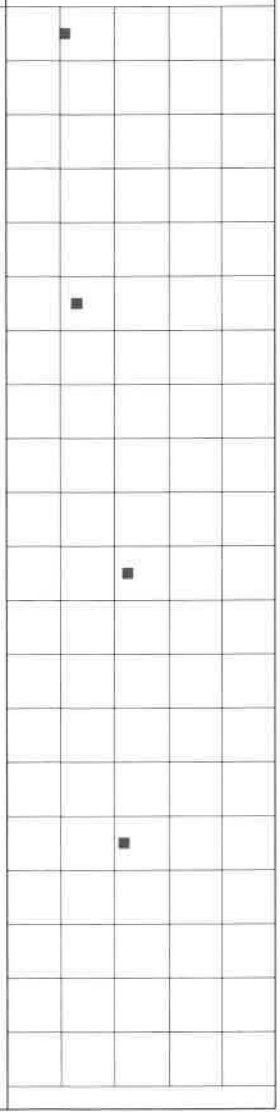
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 35 Feet **At Completion:** 27 Feet

Depth (ft)	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22	Percent passing No. 200 - 28.2%	113.0	10.9		33
24	***CLAYEY SAND (SC)*** Very dense, fine- to medium-grained; brown, damp, drills firmly Percent passing No. 200 - 37.3%				
26		97.9	13.1		48
28					
30	***SANDY CLAY (CL)*** Very stiff, fine- to medium-grained; reddish-brown, moist, drills easily Percent passing No. 200 - 55.7%	97.0	22.5		25
32					
34	***SILTY SAND (SM)*** Dense, fine- to medium-grained with trace CLAY and thin lenses of SANDY SILT; brown, very moist, drills easily Saturated below 35 feet Percent passing No. 200 - 33.2%				
36		105.2	21.8		34
38					
40	Very dense and drills hard below 40 feet				





Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 8-30-22

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B4

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-4

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 35 Feet **At Completion:** 27 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
42		Percent passing No. 200 - 44.4%	98.3	24.3		52		
44		Percent passing No. 200 - 22.0%	120.8	11.2		51		
46								
48								
50		End of Borehole						
52								
54								
56								
58								
60								

Drill Method: Hollow Stem

Drill Date: 8-30-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B5

Project: Triangle Development

Project No: 012-22165

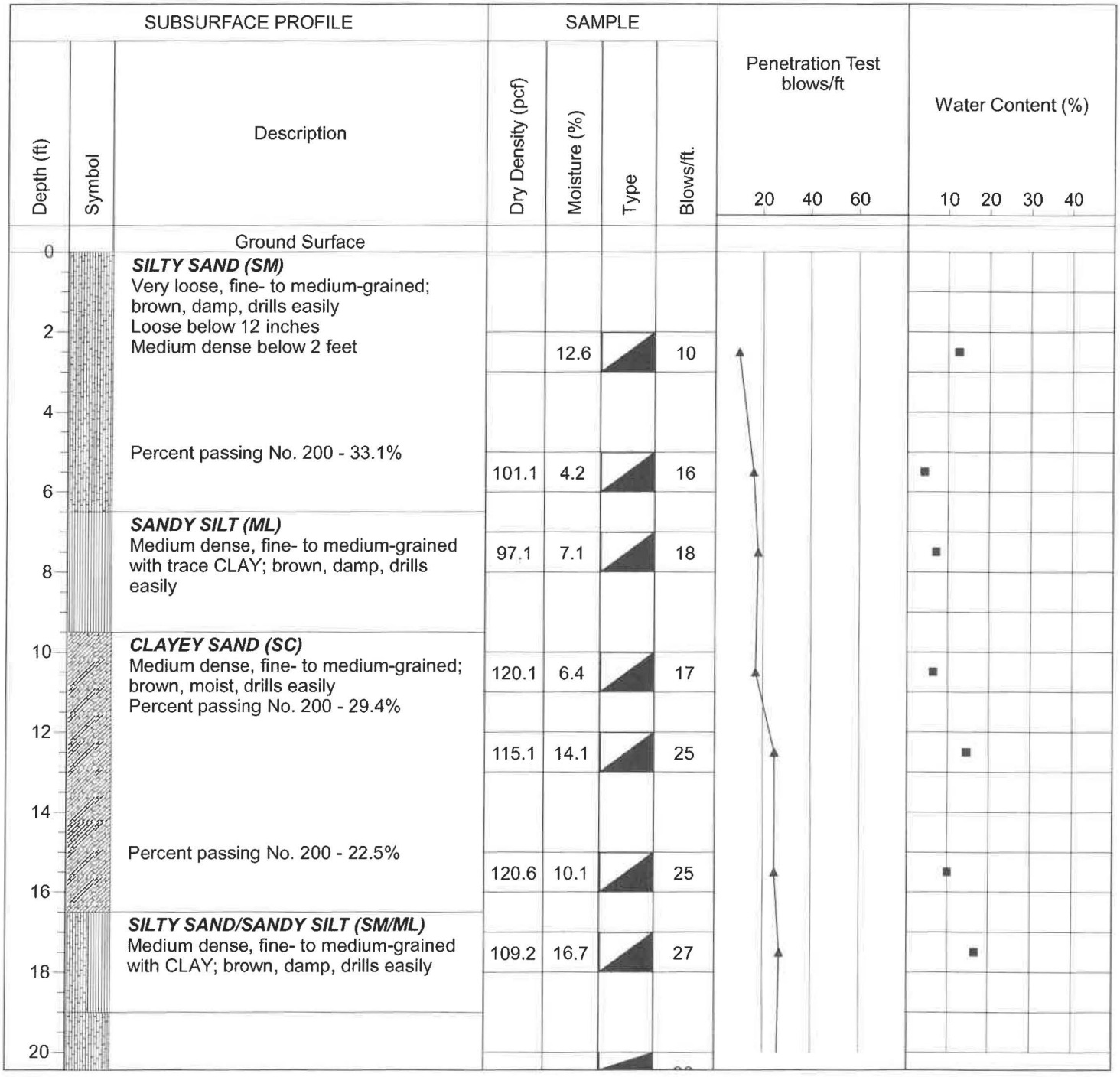
Client: Wilson Homes

Figure No.: A-5

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 39 Feet **At Completion:** 34 Feet



Drill Method: Hollow Stem

Drill Date: 8-31-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B5

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-5

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 39 Feet **At Completion:** 34 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; brown, moist, drills easily Percent passing No. 200 - 36.7%	112.8	15.3		26
24						
26		Percent passing No. 200 - 36.3%	107.9	20.0		21
28		***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, moist, drills easily				
30		Percent passing No. 200 - 42.7%	115.8	16.6		21
32						
34		▼				
36		Very moist below 35 feet Percent passing No. 200 - 44.4%	107.9	17.6		19
38		▽				
40						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 8-31-22

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B5

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

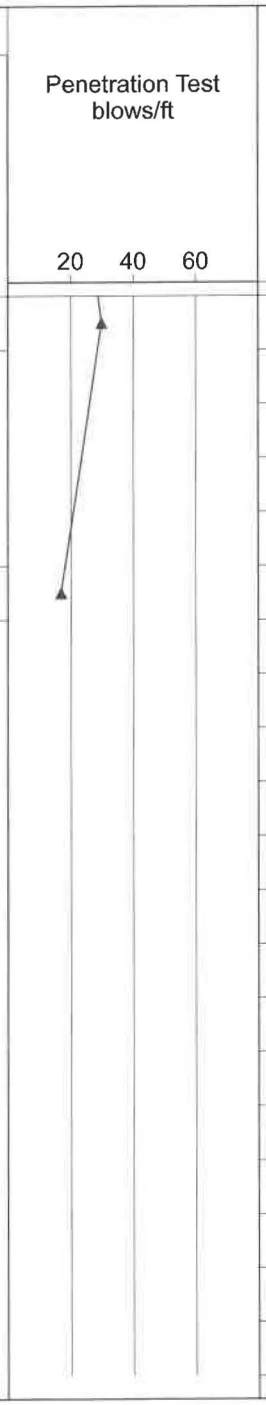
Figure No.: A-5

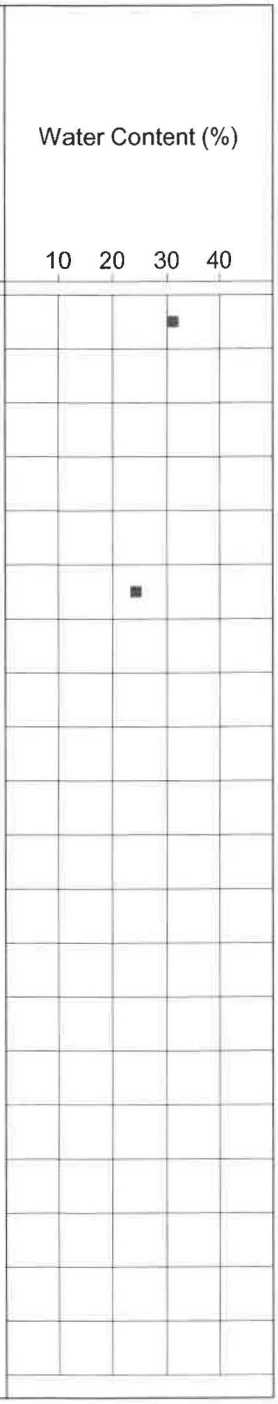
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 39 Feet **At Completion:** 34 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		***SILTY SAND (SM)*** Dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 37.3%	85.1	31.2		30
44		***SILTY SAND/SANDY SILT (SM/ML)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 45.7%	94.7	24.5		17
46						
48						
50		End of Borehole				
52						
54						
56						
58						
60						





Drill Method: Hollow Stem

Drill Date: 8-31-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B6

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-6

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 32 Feet **At Completion:** 27 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
2		***SILTY SAND (SM)*** Very loose, fine- to medium-grained; brown, damp, drills easily Loose below 12 inches Medium dense below 2 feet Percent passing No. 200 - 43.5%	76.9	10.3		12
4						
6			88.9	8.1		13
8		***CLAYEY SANDY SILT (ML)*** Medium dense, fine- to medium-grained; brown, damp, drills easily	115.6	10.1		18
10		***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, damp, drills easily Percent passing No. 200 - 26.0%	112.2	5.6		26
12		Percent passing No. 200 - 43.5%	116.7	14.5		26
14						
16			111.5	12.9		25
18		***SANDY CLAY (CL)*** Very stiff, fine- to medium-grained; brown, moist, drills easily	105.3	14.4		17
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Date: 8-31-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B6

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-6

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 32 Feet **At Completion:** 27 Feet

Depth (ft)	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22	Stiff below 20 feet Percent passing No. 200 - 84.2%	95.3	26.4		13
24	***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, moist, drills easily Percent passing No. 200 - 39.0%	115.2	15.3		24
26	▼ Saturated below 27 feet				
28					
30	***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 33.1%	108.9	19.0		27
32	▽				
34	***SILTY SAND/SANDY SILT (SM/ML)*** Medium dense, fine- to medium-grained; gray, saturated, drills easily. Percent passing No. 200 - 47.7%	100.7	23.0		14
36					
38					
40					

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 8-31-22

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B6

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-6

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 32 Feet **At Completion:** 27 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
42		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 39.2%		19.6		15		
44		Percent passing No. 200 - 42.1%	98.9	22.9		27		
46								
48								
50		End of Borehole						
52								
54								
56								
58								
60								

Drill Method: Hollow Stem

Drill Date: 8-31-22

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B32

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-32

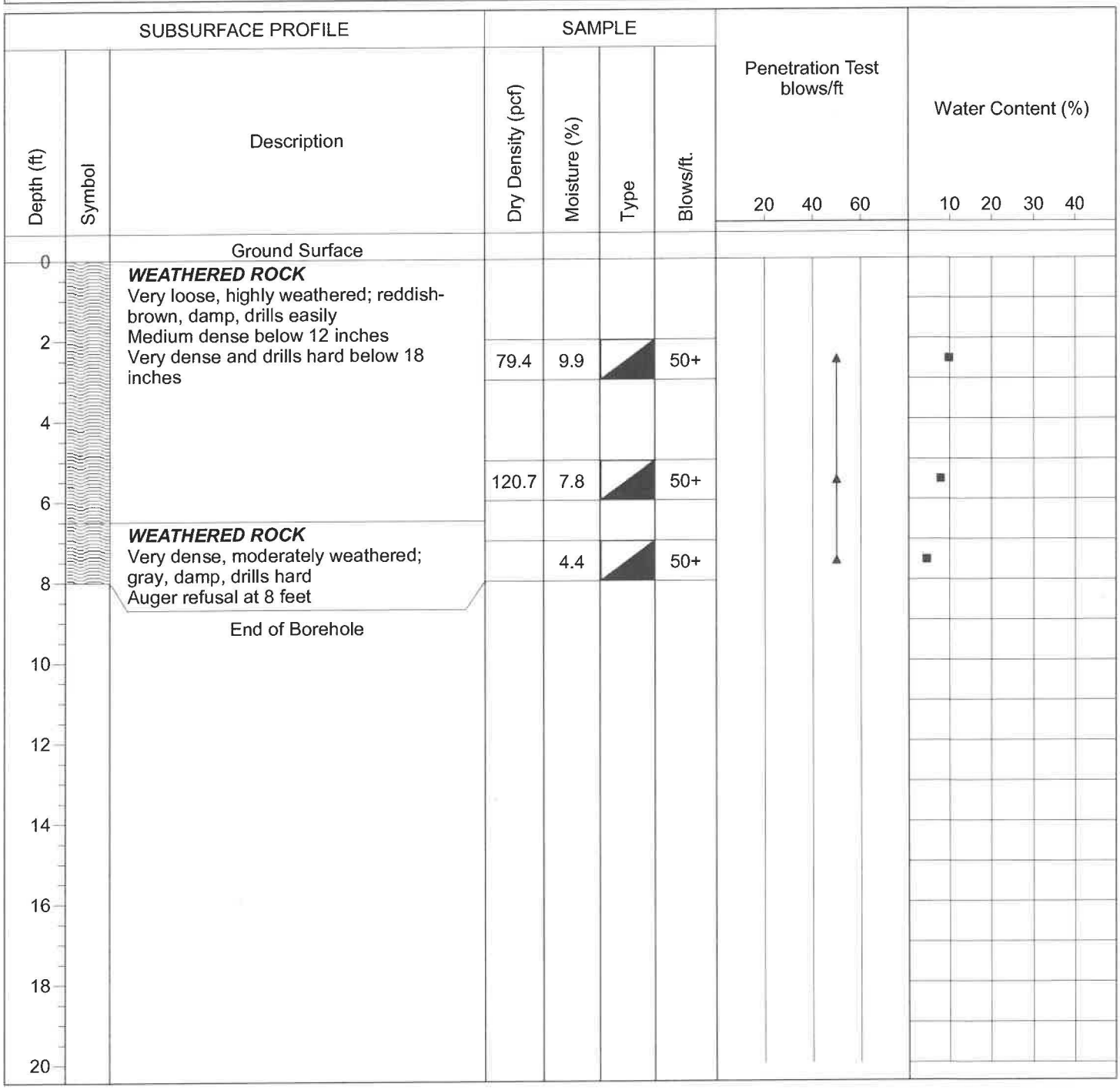
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Michael Rupright

Depth to Water>

Initial: None

At Completion: None



Drill Method: Hollow Stem

Drill Date: 7-7-23

Drill Rig: CME 45B

Krazan and Associates

Hole Size: 4½ Inches

Driller: Brent Snyder

Elevation: 8 Feet

Sheet: 1 of 1

Log of Boring B7

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-7

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 15 Feet **At Completion:** 23 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0		***CLAYEY SILTY SAND (SM)*** Very loose, fine- to medium-grained with trace GRAVEL; brown, damp, drills easily				
2		Loose below 12 inches Percent passing No. 200 - 24.3%	110.5	9.4		9
4		Dense below 5 feet Percent passing No. 200 - 28.8%	119.5	8.2		33
8		***SILTY SAND/SAND (SM/SP)*** Medium dense, fine- to medium-grained; brown, damp, drills easily Percent passing No. 200 - 10.6%	112.9	6.2		14
14		▽ Saturated below 15 feet Percent passing No. 200 - 8.4%	118.4	13.4		12
18		***CLAYEY SAND (SC)*** Medium dense, fine- to coarse-grained; red-brown, saturated, drills easily Percent passing No. 200 - 16.9%				
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 2-14-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B7

Project: Triangle Development

Project No: 012-22165

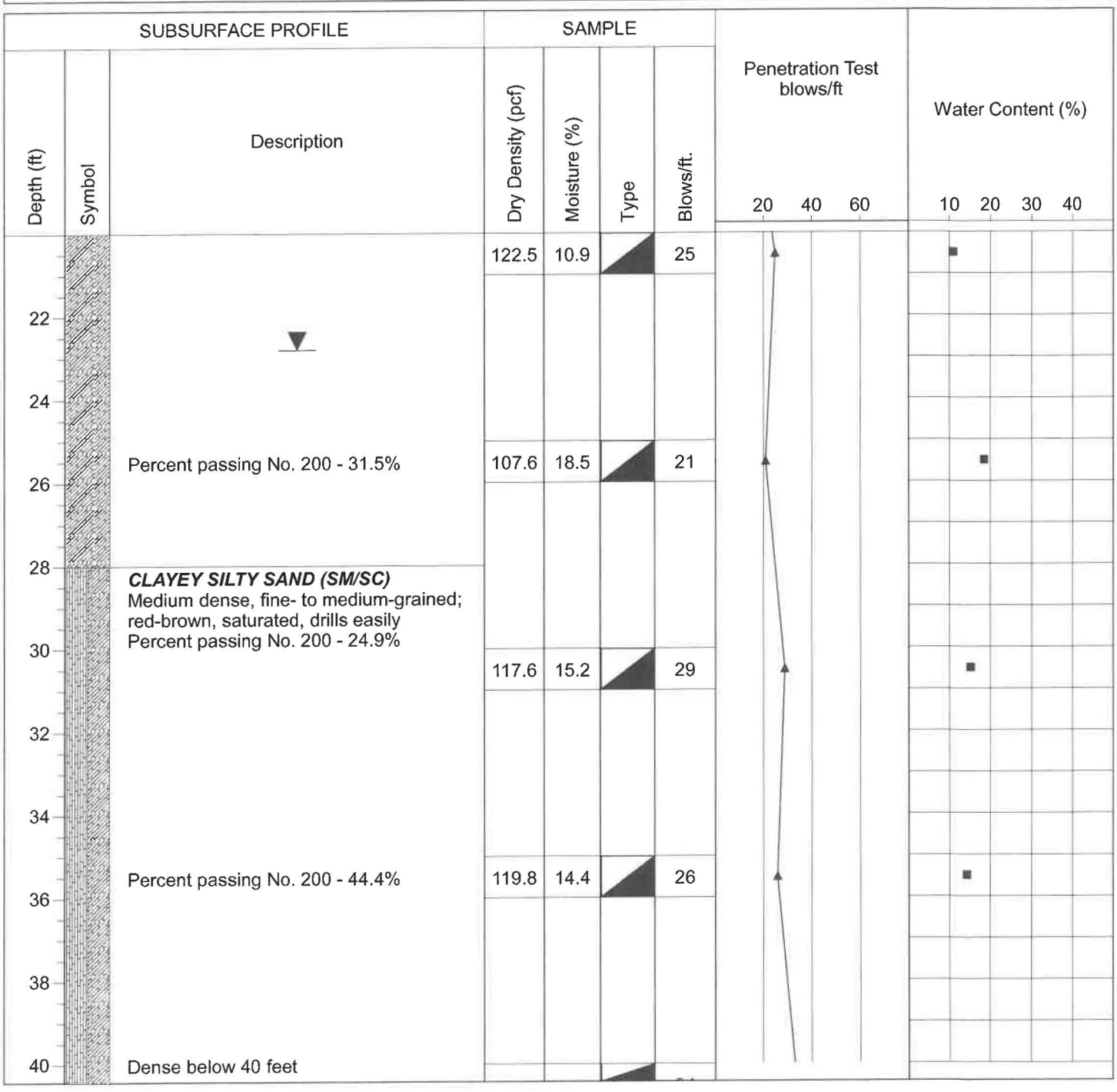
Client: Wilson Homes

Figure No.: A-7

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 15 Feet **At Completion:** 23 Feet



Drill Method: Hollow Stem

Drill Date: 2-14-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B7

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-7

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 15 Feet **At Completion:** 23 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
42		Percent passing No. 200 - 37.8%	119.7	15.2		34		
44		***SILTY SAND (SM)*** Dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 36.1%	126.3	13.6		41		
46								
48								
50		End of Borehole						
52								
54								
56								
58								
60								

Drill Method: Hollow Stem

Drill Date: 2-14-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B8

Project: Triangle Development

Project No: 012-22165

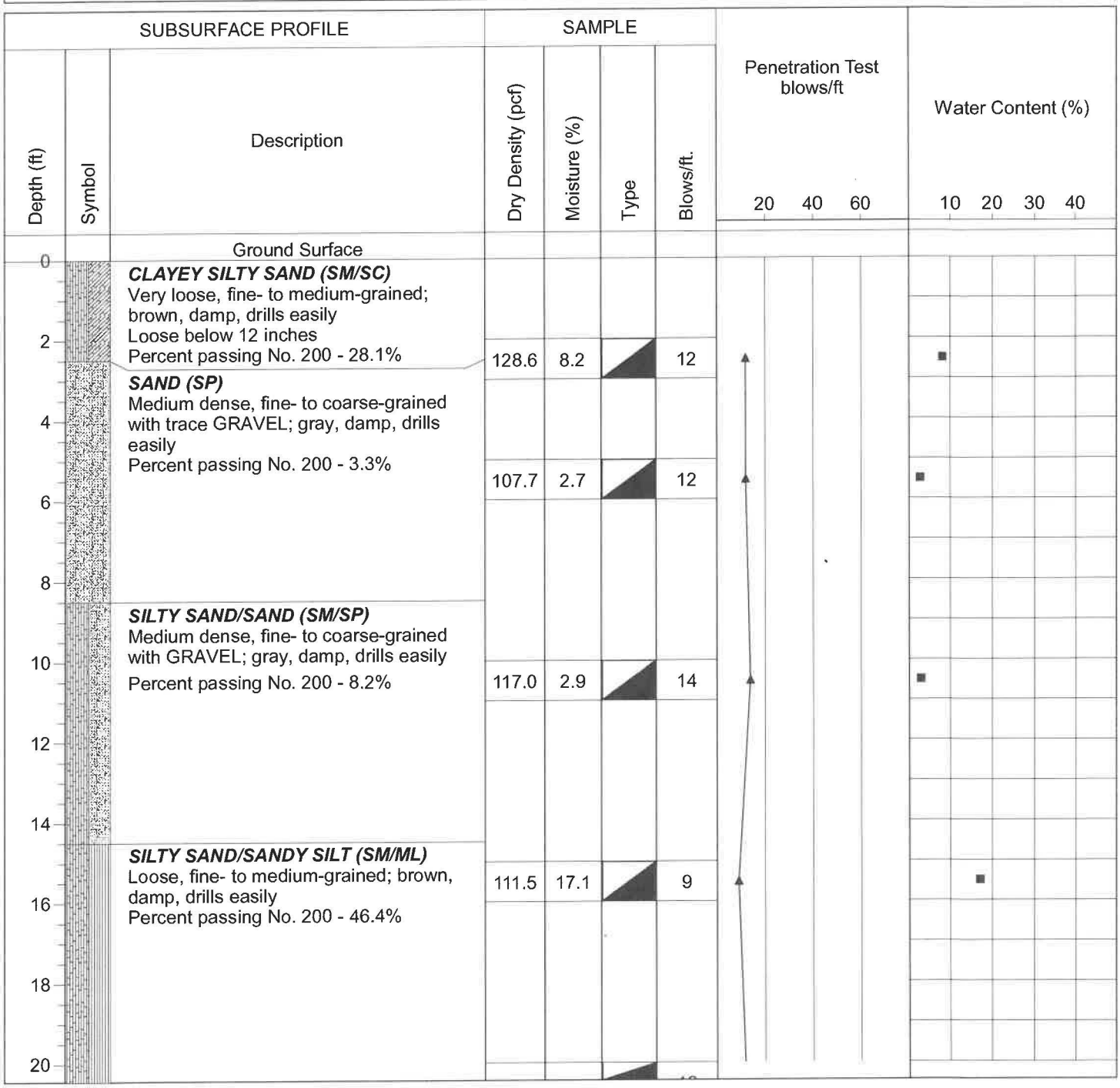
Client: Wilson Homes

Figure No.: A-8

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 25 Feet **At Completion:** 23 Feet



Drill Method: Hollow Stem

Drill Date: 2-14-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B8

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-8

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 25 Feet **At Completion:** 23 Feet

Depth (ft)	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22	***SILTY SAND/SAND (SM/SP)*** Medium dense, fine- to medium-grained; brown, damp, drills easily Percent passing No. 200 - 15.0% Saturated below 23 feet	100.7	19.3		12
24					
26	***GRAVELLY SILTY SAND (SM)*** Medium dense, fine- to coarse-grained; brown, saturated, drills easily Percent passing No. 200 - 23.2	127.0	11.4		29
28					
30	Percent passing No. 200 - 15.7%	119.7	12.4		31
32	***CLAYEY SAND (SC)*** Dense, fine- to medium-grained; brown, saturated, drills easily				
34	***SANDY SILTY CLAY (CL)*** Very stiff, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 72.9%				
36		107.9	21.1		21
38					
40					

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Date: 2-14-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B8

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-8

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 25 Feet **At Completion:** 23 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 50.6%	103.1	16.6		27
44						
46		Dense below 45 feet Percent passing No. 200 - 46.2%	119.5	18.5		41
48						
50		End of Borehole				
52						
54						
56						
58						
60						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 2-14-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B9

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-9

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 20 Feet **At Completion:** 17 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0		***CLAYEY SANDY SILT (ML)*** Very loose, fine- to medium-grained; brown, damp, drills easily Loose below 12 inches Medium dense below 2 feet Percent passing No. 200 - 62.0%	91.6	21.7		10
4		***SILTY SAND/SANDY SILT (SM/ML)*** Medium dense, fine- to medium-grained with trace CLAY; brown, damp, drills easily Percent passing No. 200 - 50.5%	111.2	4.4		18
8		***SAND (SP)*** Medium dense, fine- to coarse-grained with trace GRAVEL; light brown, damp, drills easily Percent passing No. 4.5%	106.9	1.6		12
14		***SILTY SAND/SAND (SM/SP)*** Medium dense, fine- to coarse-grained; light brown, damp, drills easily Percent passing No. 200 - 8.3%	116.4	3.3		14
18		▽ Saturated below 20 feet				

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 2-16-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B9

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-9

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 20 Feet **At Completion:** 17 Feet

Depth (ft)	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
	Percent passing No. 200 - 9.1%	119.2	10.6		21
22					
24	***CLAYEY SILTY SAND (SM)*** Medium dense, fine- to medium-grained with thin lenses of CLAYEY SAND; brown, saturated, drills easily Percent passing No. 200 - 20.8%	113.1	14.4		20
26					
28					
30	Percent passing No. 200 - 19.8%	121.4	12.6		20
32					
	With increased fines below 33 feet				
34					
	Percent passing No. 200 - 41.9%	114.6	17.1		19
36					
38					
40					

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 2-16-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B9

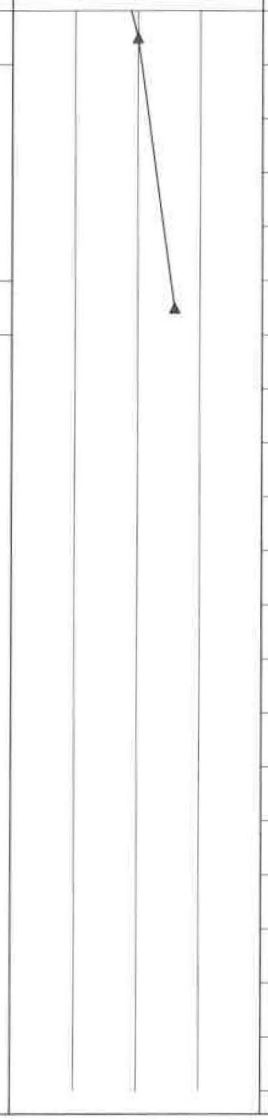
Project: Triangle Development | **Project No:** 012-22165

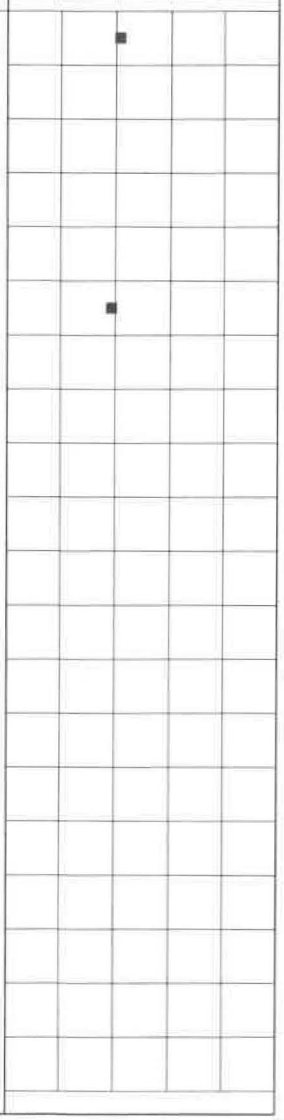
Client: Wilson Homes | **Figure No.:** A-9

Location: Shepherd Avenue and Locan Avenue, Clovis, California | **Logged By:** Dave Adams

Depth to Water> **Initial:** 20 Feet | **At Completion:** 17 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		***CLAYEY SAND (SC)*** Dense, fine- to medium-grained; brown, saturated, drills firmly Percent passing No. 200 - 37.0%	106.4	20.8		40
44						
46		Very dense below 45 feet Percent passing No. 200 - 43.7%	108.1	19.3		52
48						
50		End of Borehole				
52						
54						
56						
58						
60						





Drill Method: Hollow Stem | **Drill Date:** 2-16-23

Drill Rig: CME 45C-4 | **Hole Size:** 4½ Inches

Driller: Jim Watts | **Elevation:** 50 Feet

Krazan and Associates

Log of Boring B10

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-10

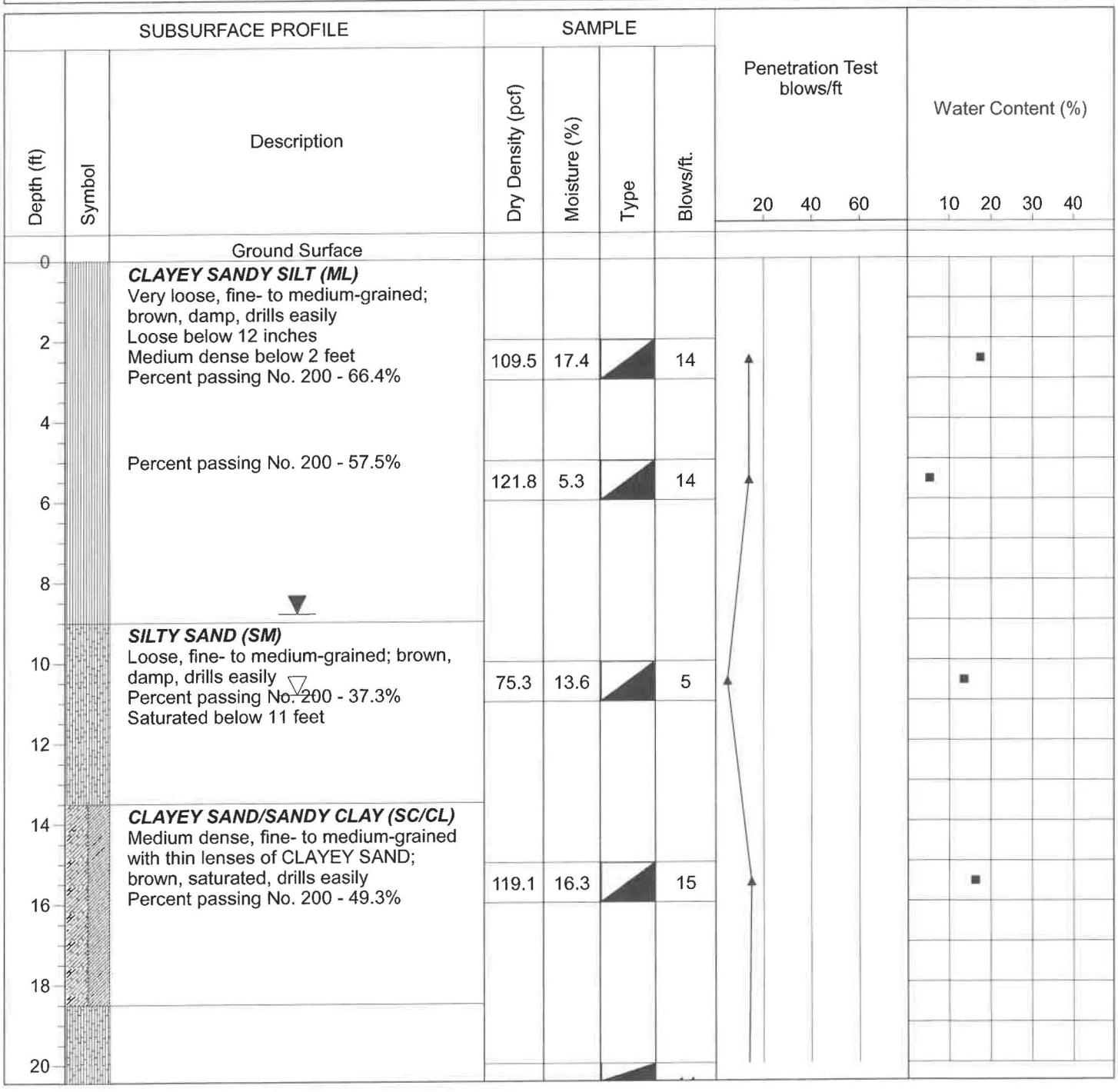
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water>

Initial: 11 Feet

At Completion: 9 Feet



Drill Method: Hollow Stem

Drill Date: 2-16-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B10

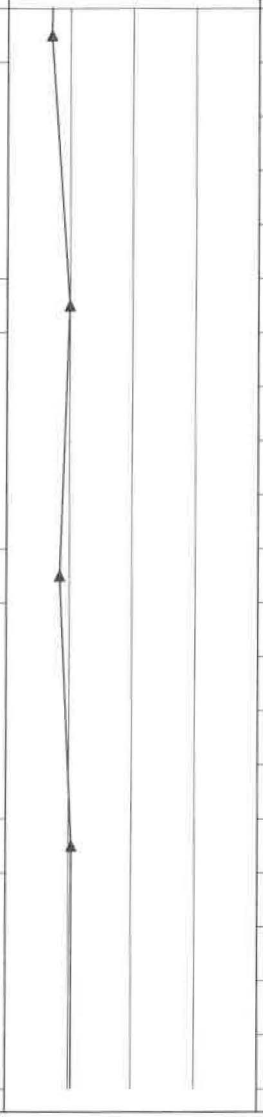
Project: Triangle Development | **Project No:** 012-22165

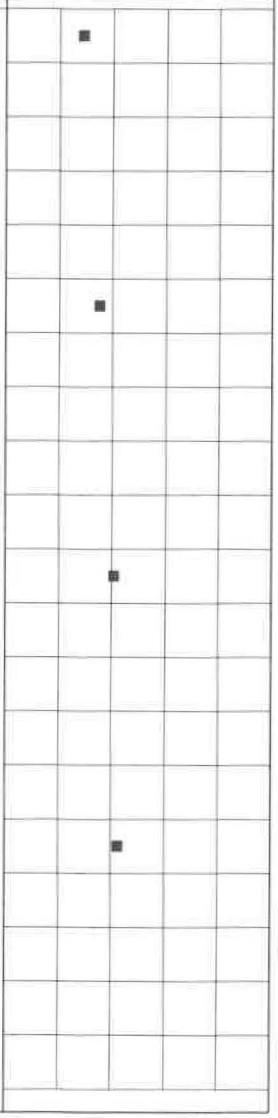
Client: Wilson Homes | **Figure No.:** A-10

Location: Shepherd Avenue and Locan Avenue, Clovis, California | **Logged By:** Dave Adams

Depth to Water> | **Initial:** 11 Feet | **At Completion:** 9 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***SILTY SAND (SM)*** Medium dense, fine- to coarse-grained with CLAY; red-brown, saturated, drills easily Percent passing No. 18.1%	119.3	14.4		14
24		***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; gray, saturated, drills easily Percent passing No. 200 - 30.6%	107.7	17.6		20
26						
28						
30		Percent passing No. 200 - 41.9%	104.8	20.5		17
32						
34						
36		With thin lenses of SAND below 35 feet Percent passing No. 200 - 40.8%	106.2	21.4		21
38						
40						





Drill Method: Hollow Stem | **Drill Date:** 2-16-23

Drill Rig: CME 45C-4 | **Hole Size:** 4½ Inches

Driller: Jim Watts | **Elevation:** 50 Feet

Krazan and Associates

Log of Boring B10

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-10

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 11 Feet **At Completion:** 9 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
42		Percent passing No. 200 - 43.5%	95.7	22.2		21		
44		Percent passing No. 200 - 36.4%	108.3	20.5		21		
46								
48								
50		End of Borehole						
52								
54								
56								
58								
60								

Drill Method: Hollow Stem

Drill Date: 2-16-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Sheet: 3 of 3

Log of Boring B11

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-11

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 10 Feet **At Completion:** 8 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***SILTY SAND/SANDY SILT (SM/ML)*** Very loose, fine- to medium-grained with CLAY; brown, damp, drills easily Loose below 12 inches Medium dense below 2 feet Percent passing No. 200 - 52.2%	96.3	20.8		10
4		Loose, with interbeds of SANDY SILT and very moist below 5 feet Percent passing No. 200 - 55.8%	97.1	17.6		5
10		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Medium dense, fine- to medium-grained; red-brown, saturated, drills easily Percent passing No. 200 - 49.4%	117.5	14.9		21
14		***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 40.4%	117.6	16.8		16
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Date: 2-17-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B11

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-11

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 10 Feet **At Completion:** 8 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 34.1%	118.5	14.4		22
24		Percent passing No. 200 - 20.7%	115.2	16.3		23
26						
28						
30		***SILTY SAND/CLAYEY SAND (SM/SC)*** Medium dense, fine- to coarse-grained; brown, saturated, drills easily Percent passing No. 43.5%	109.7	18.8		14
32		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily				
34		Percent passing No. 200 - 54.8%	95.0	25.6		11
36						
38						
40						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 2-17-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B11

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-11

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 10 Feet **At Completion:** 8 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained with CLAY and thin lenses of CLAYEY SANDY SILT; brown, saturated, drills easily Percent passing No. 200 - 19.1%	116.5	13.9		17
44		Percent passing No. 200 - 16.9%	108.5	15.7		21
46						
48						
50		End of Borehole				
52						
54						
56						
58						
60						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 2-17-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B12

Project: Triangle Development

Project No: 012-22165

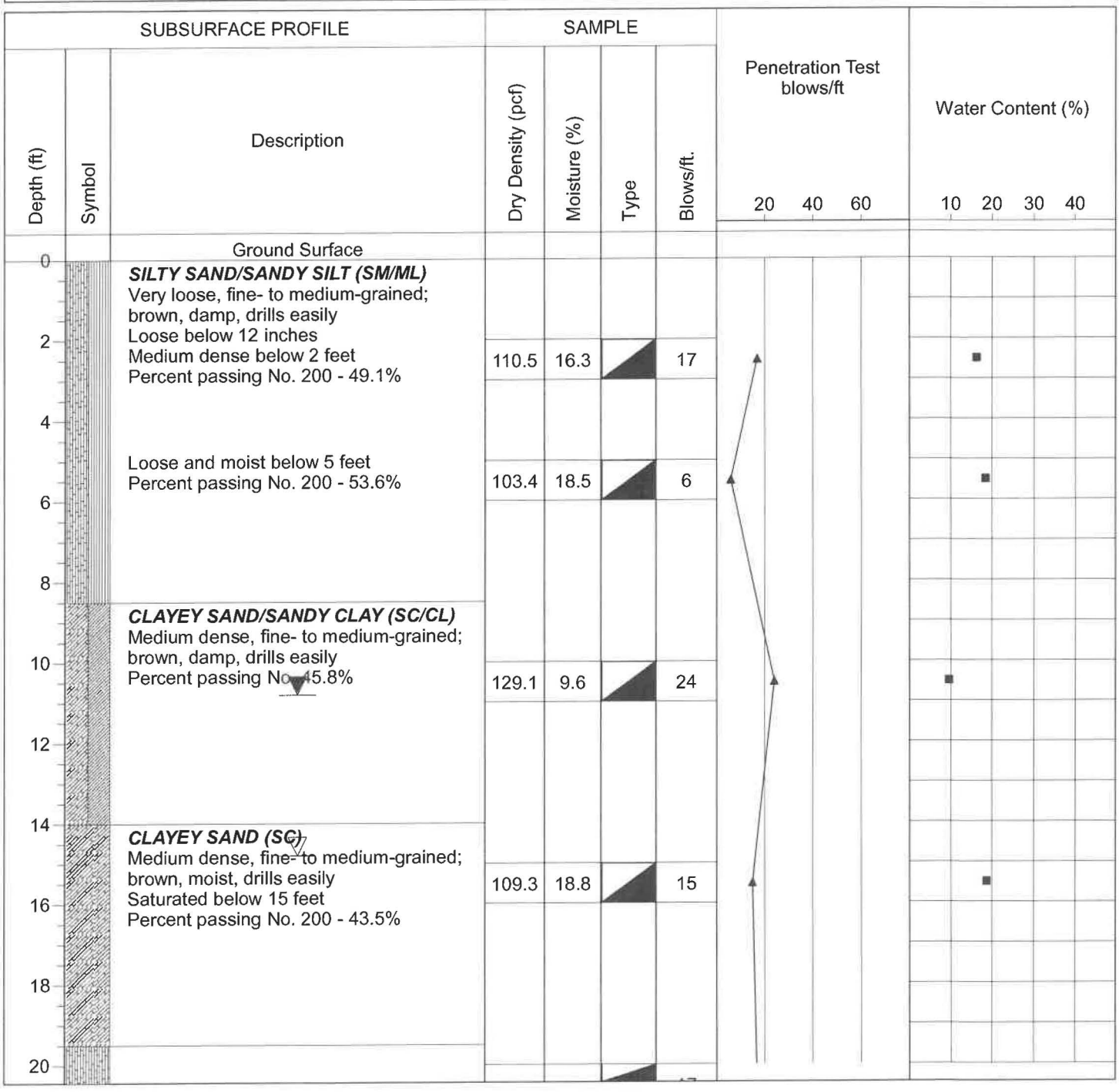
Client: Wilson Homes

Figure No.: A-12

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 15 Feet **At Completion:** 11 Feet



Drill Method: Hollow Stem

Drill Date: 2-17-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Log of Boring B12

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-12

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 15 Feet **At Completion:** 11 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 43.2%	98.6	25.6		17
24						
26		***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 36.6%	108.9	17.9		14
28						
30		***SILTY SAND (SM)*** Dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 37.8%	100.4	23.5		30
32						
34						
36		Medium dense below 35 feet Percent passing No. 200 - 32.7%	110.0	18.5		13
38						
40						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: Jim Watts

Krazan and Associates

Drill Date: 2-17-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B12

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-12

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Dave Adams

Depth to Water> **Initial:** 15 Feet **At Completion:** 11 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
42		***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 38.4%	107.2	20.8		23		
44		***SILTY SAND/CLAYEY SAND (SM/SC)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 36.6%						
46			106.9	20.5		24		
48								
50		End of Borehole						
52								
54								
56								
58								
60								

Drill Method: Hollow Stem

Drill Date: 2-17-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 4½ Inches

Driller: Jim Watts

Elevation: 50 Feet

Sheet: 3 of 3

Log of Boring B13

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-13

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 11 Feet **At Completion:** 9½ Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained; dark brown, damp, drills easily Loose below 12 inches				
2			115.3	9.6		9
4		Medium dense below 5 feet Percent passing No. 200 - 29.3%	102.5	9.3		13
6		Very dense and drills firmly below 7 feet	125.4	10.1		58
8		Medium dense and drills easily below 9 feet. Percent passing No. 200 - 35.1% Saturated below 9½ feet	70.9	11.4		11
10		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained with trace GRAVEL; brown, saturated, drills easily	116.1	12.6		16
12			111.9	13.8		18
14		With increased SAND below 15 feet Percent passing No. 200 - 17.6%	92.0	13.8		18
16						
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-11-23

Hole Size: 6½ Inches

Elevation: 50 Feet

Log of Boring B13

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

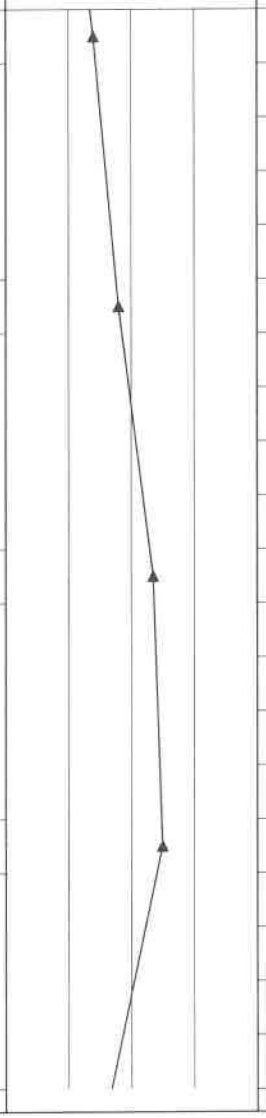
Figure No.: A-13

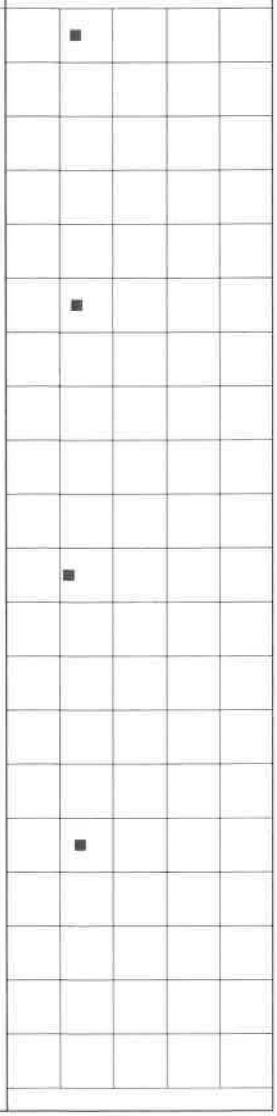
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 11 Feet **At Completion:** 9½ Feet

Depth (ft)	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22	***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily	118.3	12.9		28
24					
26	Dense below 25 feet Percent passing No. 200 - 21.3%	115.0	13.1		36
28					
30	Very dense, orange-brown and drills firmly below 30 feet	123.7	11.7		47
32					
34					
36	Drills hard below 35 feet	112.2	13.8		50+
38					
40	Dense below 40 feet				





Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-11-23

Hole Size: 6½ Inches

Elevation: 50 Feet

Log of Boring B13

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-13

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 11 Feet **At Completion:** 9½ Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
42		Percent passing No. 200 - 39.3%	122.0	13.6		32		
44								
46		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 44.7%	110.4	17.6		20		
48								
50		End of Borehole						
52								
54								
56								
58								
60								

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-11-23

Hole Size: 6½ Inches

Elevation: 50 Feet

Log of Boring B14

Project: Triangle Development

Project No: 012-22165

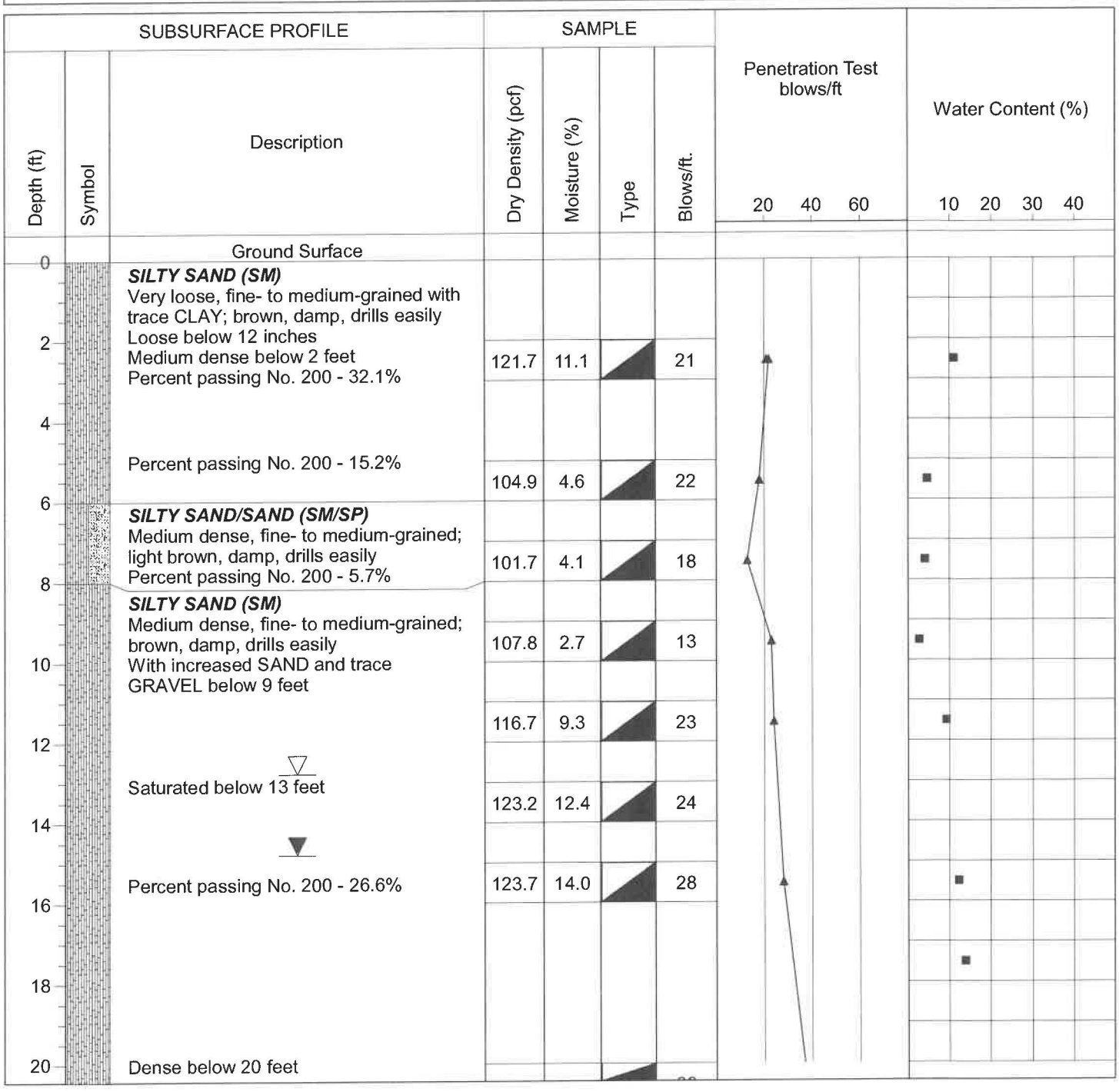
Client: Wilson Homes

Figure No.: A-14

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 13 Feet **At Completion:** 15 Feet



Drill Method: Hollow Stem

Drill Date: 4-11-23

Drill Rig: CME 45C-4

Krazan and Associates

Hole Size: 6½ Inches

Driller: One Way Drilling

Elevation: 50 Feet

Log of Boring B14

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-14

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 13 Feet **At Completion:** 15 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
		Percent passing No. 200 - 20.0%	125.6	11.6		38		
22								
24								
		Percent passing No. 200 - 22.3%	119.5	13.3		30		
26								
28								
30		Very dense below 30 feet	118.7	13.0		47		
32								
34								
36		***SANDY CLAY (CL)*** Hard, fine- to medium-grained; brown, saturated, drills firmly Percent passing No. 200 - 58.8%	116.7	25.7		45		
38								
40								

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-11-23

Hole Size: 6½ Inches

Elevation: 50 Feet

Log of Boring B14

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-14

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 13 Feet **At Completion:** 15 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		***SANDY CLAY (CL)*** Very stiff, fine- to medium-grained; reddish-brown, saturated, drills easily Percent passing No. 200 - 78.1%	97.5	25.9		26
44						
46		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Medium dense, fine- to medium-grained; red-brown, saturated, drills easily Percent passing No. 200 - 51.3%	105.5	20.3		22
48						
50		End of Borehole				
52						
54						
56						
58						
60						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-11-23

Hole Size: 6½ Inches

Elevation: 50 Feet

Log of Boring B15

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-15

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 15 Feet **At Completion:** 20 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained with trace CLAY; dark brown, damp, drills easily				
2		Loose below 12 inches	97.7	17.1		9
4		Medium dense, with increased SAND, trace GRAVEL and no CLAY below 5 feet Percent passing No. 200 - 34.7	115.4	11.6		14
6		***SILTY SAND/SAND (SM/SP)*** Medium dense, fine- to coarse-grained; brown, damp, drills easily Percent passing No. 200 - 7.6	104.0	4.1		11
8			111.8	4.4		12
10			123.9	11.4		15
12			115.4	13.3		12
14		▽				
14		***SILTY SAND (SM)*** Medium dense, fine- to coarse-grained; brown, moist, drills easily	116.0	15.1		16
16						
18						
20		▼				

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-11-23

Hole Size: 6½ Inches

Elevation: 50 Feet

Log of Boring B15

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-15

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 15 Feet **At Completion:** 20 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***SILTY SAND/SAND (SM/SP)*** Medium dense, fine- to coarse-grained; brown, moist, drills easily Percent passing No. 200 - 10.3%	112.4	11.1		24
24		Percent passing No. 200 - 10.6	120.7	10.6		27
26						
28						
30		***SILTY SAND/SANDY SILT (SM/ML)*** Medium dense, fine- to medium-grained with trace CLAY; brown, saturated, drills easily	117.6	12.7		16
32						
34						
36		Percent passing No. 200 - 49.9%	104.4	20.5		18
38						
40		With decreased SAND below 40 feet				

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-11-23

Hole Size: 6½ Inches

Elevation: 50 Feet

Log of Boring B15

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-15

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water>

Initial: 15 Feet

At Completion: 20 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
42			105.2	19.3		23		
44								
46		Percent passing No. 200 - 45.2%	112.6	17.6		22		
48								
50		End of Borehole						
52								
54								
56								
58								
60								

Drill Method: Hollow Stem

Drill Rig: CME 45C-4

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-11-23

Hole Size: 6½ Inches

Elevation: 50 Feet

Log of Boring B16

Project: Triangle Development

Project No: 012-22165

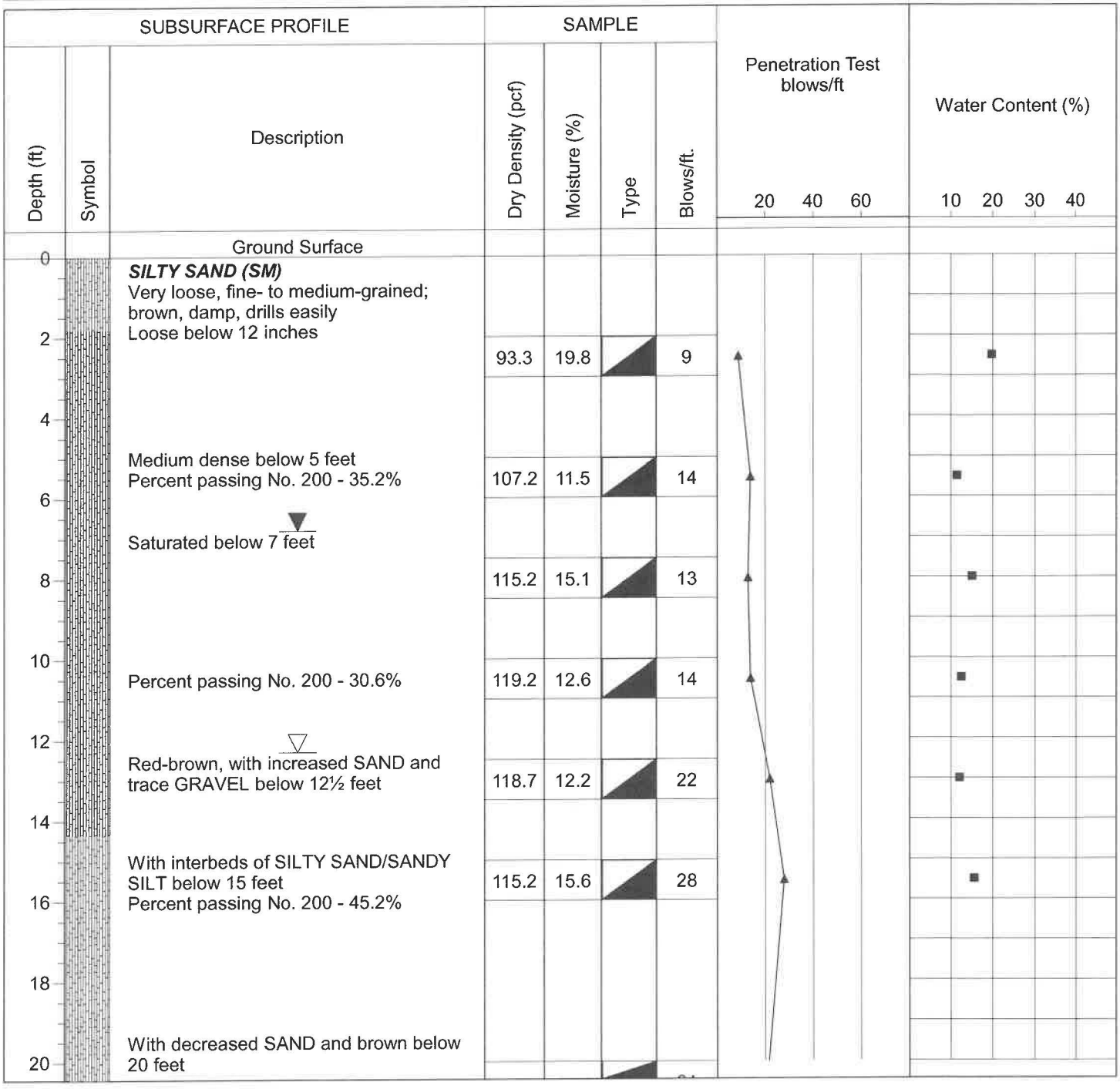
Client: Wilson Homes

Figure No.: A-16

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 12½ Feet **At Completion:** 7 Feet



Drill Method: Hollow Stem

Drill Date: 4-12-23

Drill Rig: CME 75

Krazan and Associates

Hole Size: 4½ Inches

Driller: One Way Drilling

Elevation: 50 Feet

Log of Boring B16

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-16

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 12½ Feet **At Completion:** 7 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
22		Percent passing No. 200 - 43.4%	104.6	18.5		21		
24								
26		Percent passing No. 200 - 31.7%	111.2	16.3		20		
28								
30		Percent passing No. 200 - 53.3%	103.8	22.2		12		
32								
34								
36		Dense below 35 feet Percent passing No. 200 - 25.9%	113.4	15.7		36		
38								
40								

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-12-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B16

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-16

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 12½ Feet **At Completion:** 7 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		Percent passing No. 200 - 24.7%	124.7	12.6		43
44						
46		Percent pasing No. 200 - 35.4%	115.5	16.1		30
48						
50		End of Borehole				
52						
54						
56						
58						
60						

SUBSURFACE PROFILE

SAMPLE

Penetration Test blows/ft

20 40 60

Water Content (%)

10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-12-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B17

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-17

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 12½ Feet **At Completion:** 6 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
		SILTY SAND (SM) Very loose, fine- to medium-grained with trace CLAY; dark brown, moist, drills easily				
2		Loose below 12 inches Medium dense below 2 feet	109.4	27.4		13
4		Percent passing No. 200 - 29.6%				
		▼ Saturated below 6 feet	120.3	12.9		14
6						
8			114.7	14.0		17
10		Percent passing No. 200 - 26.4%	122.8	12.0		18
12		▽ With trace GRAVEL and red-brown below 12½ feet	118.4	12.7		21
14						
		SANDY CLAY (CL) Very stiff, fine- to medium-grained; brown, saturated, drills easily	108.3	19.3		19
16		Percent passing No. 200 - 68%				
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-12-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B17

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-17

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 12½ Feet **At Completion:** 6 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		Percent passing No. 200 - 57.6%	106.4	19.9		18
24		***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 18%	111.4	12.4		15
30		***SILTY SAND (SM)*** Loose, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 20.1%	103.1	18.5		9
36		Medium dense with interbeds of SAND below 35 feet Percent passing No. 200 - 19.4%	110.5	16.3		30
40						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-12-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B17

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-17

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 12½ Feet **At Completion:** 6 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		***SILTY SAND (SM)*** Very dense, fine- to medium-grained; red-brown, saturated, drills hard Percent passing No. 200 - 26.5%	115.1	14.5		72
44		***SILTY SAND/SAND (SM/SP)*** Medium dense, fine- to medium-grained; light brown, saturated, drills easily Percent passing No. 200 - 5.5%				
46		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; red-brown, saturated, drills easily	118.9	12.2		27
48						
50		End of Borehole				
52						
54						
56						
58						
60						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-12-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B18

Project: Triangle Development

Project No: 012-22165

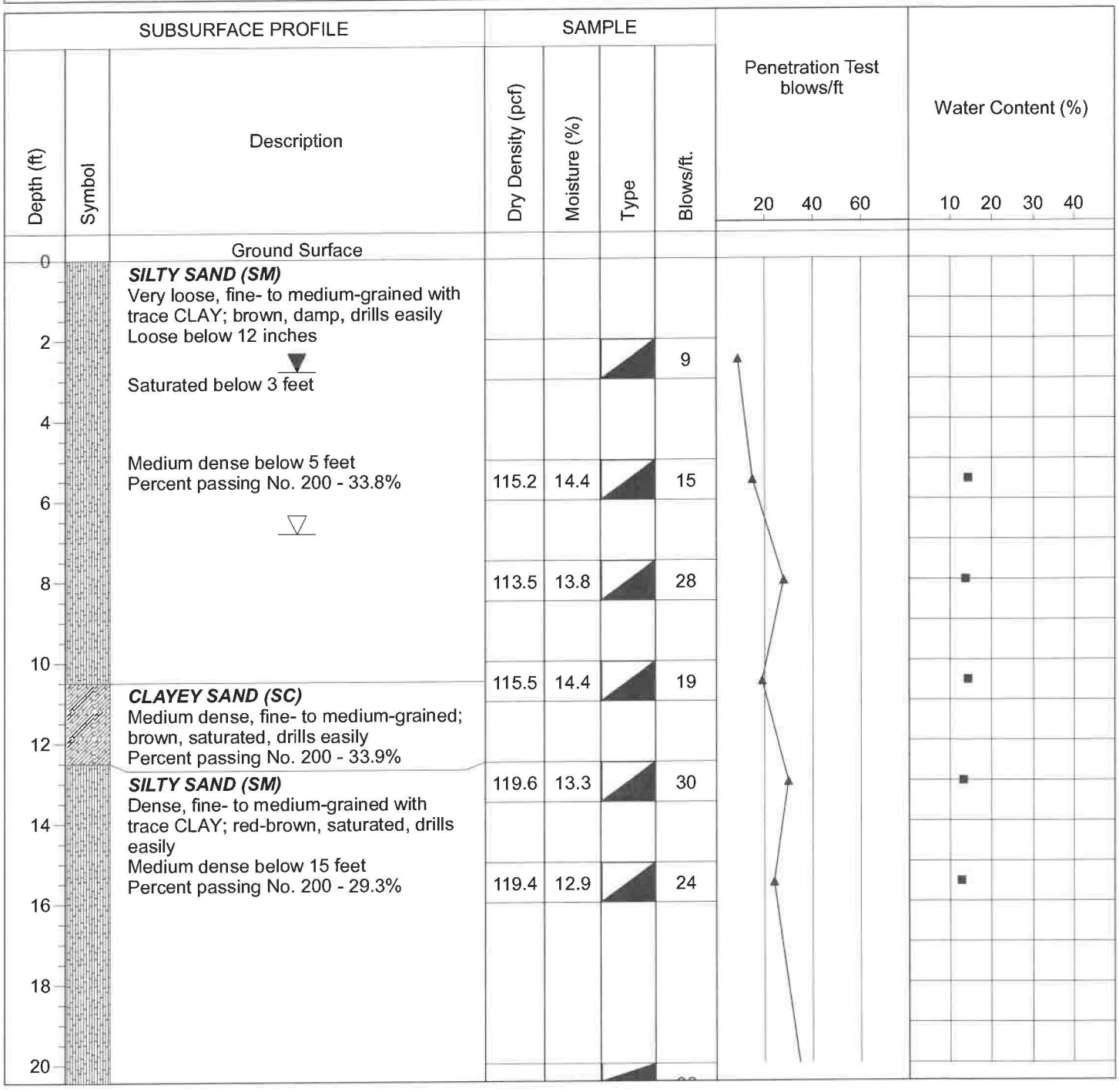
Client: Wilson Homes

Figure No.: A-18

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 7 Feet **At Completion:** 3 Feet



Drill Method: Hollow Stem

Drill Date: 4-13-23

Drill Rig: CME 75

Krazan and Associates

Hole Size: 4½ Inches

Driller: One Way Drilling

Elevation: 50 Feet

Log of Boring B18

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

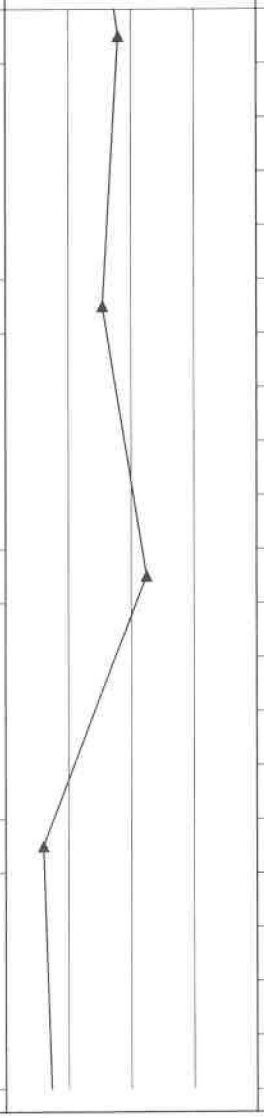
Figure No.: A-18

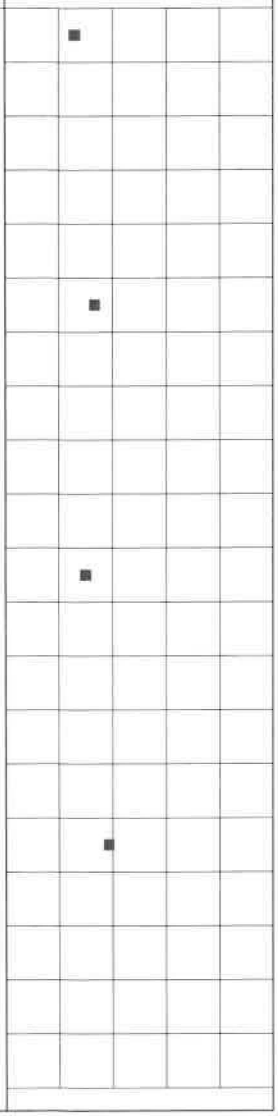
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 7 Feet **At Completion:** 3 Feet

Depth (ft)	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
	Percent passing No. 200 - 20.1%	118.1	12.9		36
22	***CLAYEY SAND (SC)*** Dense, fine- to medium-grained; red-brown, saturated, drills easily				
24					
26	Percent passing No. 200 - 23.1%	107.5	16.6		31
28					
30	***SILTY SAND/SANDY SILT (SM/ML)*** Very dense, fine- to medium-grained with CLAY; brown, saturated, drills easily Percent passing No. 200 - 45.5%	116.5	14.9		45
32					
34					
36	***CLAYEY SAND/SANDY CLAY (SC/CL)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 45.6%	101.5	19.3		12
38					
40					





Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-13-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B18

Project: Triangle Development | **Project No:** 012-22165

Client: Wilson Homes | **Figure No.:** A-18

Location: Shepherd Avenue and Locan Avenue, Clovis, California | **Logged By:** Sarah Redondo

Depth to Water> **Initial:** 7 Feet | **At Completion:** 3 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
42		***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 40.8%	97.6	24.4		15		
44								
46		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained with trace CLAY; brown, saturated, drills easily Percent passing No. 200 - 44.2%	102.2	17.6		29		
48								
50		End of Borehole						
52								
54								
56								
58								
60								

Drill Method: Hollow Stem | **Drill Date:** 4-13-23

Drill Rig: CME 75 | **Krazan and Associates** | **Hole Size:** 4½ Inches

Driller: One Way Drilling | **Elevation:** 50 Feet

Log of Boring B19

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

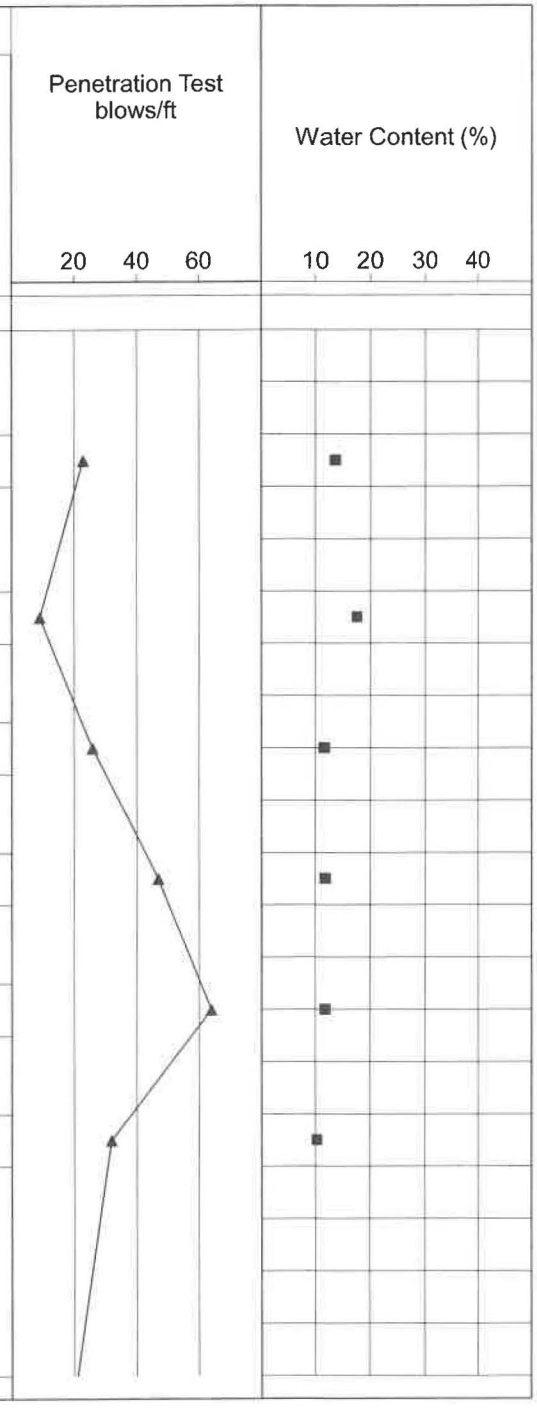
Figure No.: A-19

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 15 Feet **At Completion:** 4 Feet

Depth (ft)	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0	Ground Surface				
0	***SILTY SAND (SM)*** Very loose, fine- to medium-grained with trace CLAY; brown, damp, drills easily				
2	Loose below 12 inches	120.4	13.6		23
4	Medium dense below 2 feet ▼				
6	***SANDY CLAY (CL)*** Stiff, fine- to medium-grained; red-brown, saturated, drills easily Percent passing No. 200 - 77.9%	109.4	17.6		9
8	Very stiff below 7½ feet	122.8	11.7		26
10	Hard below 10 feet Percent passing No. 200 - 60.2%	121.4	11.9		47
12		125.3	11.9		64
14	▽				
16	***CLAYEY SAND (SC)*** Dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 34.7%	119.3	10.4		32
18					
20					



Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-13-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B19

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

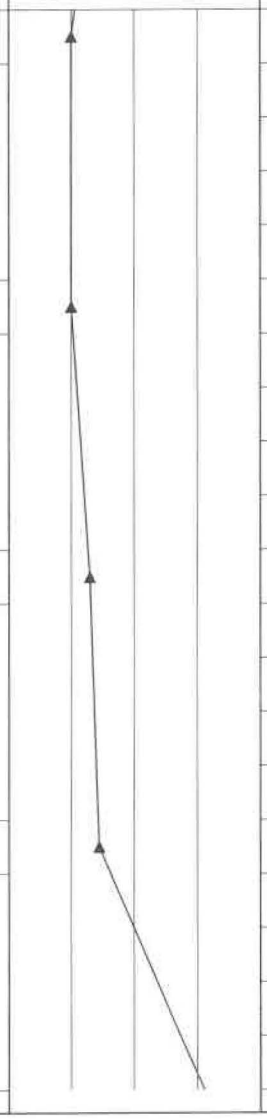
Figure No.: A-19

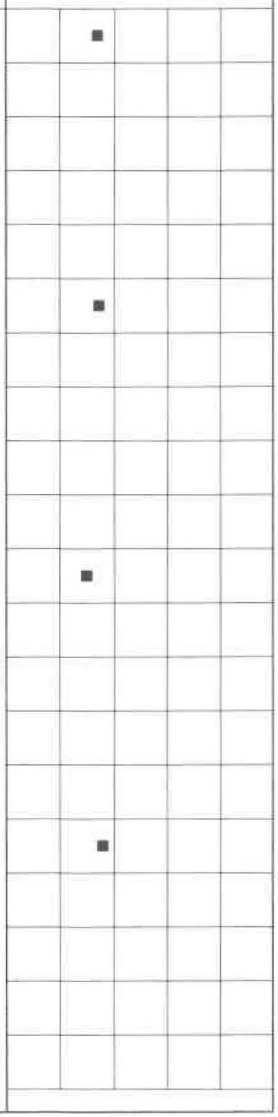
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 15 Feet **At Completion:** 4 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 49.3%	116.6	16.8		20
24						
26		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained with trace CLAY; brown, saturated, drills easily Percent passing No. 200 - 28.6%	108.9	17.1		20
28						
30		***CLAYEY SAND (SC)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 31.5%	115.2	14.9		26
32						
34		***SILTY SAND/SANDY SILT (SM/ML)*** Medium dense, fine- to medium-grained; brown, saturated, drills easily Percent passing No. 200 - 48.8%	110.2	17.9		29
36						
38						
40						





Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-13-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B19

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-19

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 15 Feet **At Completion:** 4 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
42		***SILTY SAND (SM)*** Very dense, fine- to medium-grained; brown, saturated, drills hard Percent passing No. 200 - 22.1%	130.1	11.2		66		
44		With interbeds of SILTY SAND/SAND below 44 feet Percent passing No. 200 - 14.8%	123.4	10.6		77		
46								
48								
50		End of Borehole						
52								
54								
56								
58								
60								

Drill Method: Hollow Stem

Drill Date: 4-13-23

Drill Rig: CME 75

Krazan and Associates

Hole Size: 4½ Inches

Driller: One Way Drilling

Elevation: 50 Feet

Log of Boring B20

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-20

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 10 Feet **At Completion:** 10 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
		CLAYEY SAND/SANDY CLAY (SC/CL) Very loose, fine- to medium-grained; dark brown, moist, drills easily Loose below 12 inches				
2		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained with trace GRAVEL; red, moist, drills easily	122.0	13.4		29
4		Dense below 5 feet Percent passing No. 200 - 30.5%	117.2	12.1		44
6						
8		Medium dense below 7½ feet	124.5	11.7		22
10		▽ Saturated below 10 feet Percent passing No. 200 - 19.5%	118.2	12.7		29
12						
14		***SANDY CLAY (CL)*** Very stiff, fine- to medium-grained; brown, saturated, drills easily	108.7	18.7		22
16		Hard below 15 feet Percent passing No. 200 - 69.1%	109.3	18.8		33
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Date: 4-14-23

Drill Rig: CME 75

Krazan and Associates

Hole Size: 4½ Inches

Driller: One Way Drilling

Elevation: 50 Feet

Log of Boring B20

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-20

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 10 Feet **At Completion:** 10 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		Percent passing No. 200 - 62.1%	107.4	21.4		22
24						
26		***SILTY SAND/SANDY SILT (SM/ML)*** Very dense, fine- to medium-grained with CLAY; brown, saturated, drills firmly Percent passing No. 200 - 51.4%	116.8	15.7		50+
28						
30		Dense below 30 feet Percent passing No. 200 - 49.8%	116.0	15.2		30
32						
34						
36		***SILTY SAND (SM)*** Very dense, fine- to coarse-grained with trace GRAVEL; red-brown, saturated, drills hard Percent passing No. 200 - 37.4%	112.6	18.1		50+
38						
40						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-14-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B20

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-20

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 10 Feet **At Completion:** 10 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		Percent passing No. 200 - 39.2%	109.7	17.9		50+
44						
46		Dense below 45 feet Percent passing No. 200 - 25.9%	102.6	23.0		38
48						
50		End of Borehole				
52						
54						
56						
58						
60						

SUBSURFACE PROFILE

SAMPLE

Penetration Test blows/ft

20 40 60

Water Content (%)

10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-14-23

Hole Size: 4½ Inches

Elevation: 50 Feet

Log of Boring B21

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-21

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 7 Feet **At Completion:** 3 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained with trace GRAVEL; light red-brown, moist, drills easily				
2		Loose below 12 inches	120.1	10.4		10
		Medium dense below 2 feet				
4		Saturated below 3 feet				
		Percent passing No. 200 - 22.4%	121.9	11.1		20
6		▽				
8			121.2	10.6		29
10		Dense below 10 feet				
		Percent passing No. 200 - 20.8%	124.5	10.4		39
12		***SANDY CLAY (CL)***	114.4	16.6		41
14		Hard, fine- to medium-grained; brown, saturated, drills firmly				
		Percent passing No. 200 - 58.7%	112.0	16.0		37
16						
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Date: 4-17-23

Drill Rig: CME 75

Krazan and Associates

Hole Size: 4½ Inches

Driller: One Way Drilling

Elevation: 35 Feet

Log of Boring B21

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-21

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 7 Feet **At Completion:** 3 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***SILTY SAND (SM)*** Very dense, fine- to medium-grained with trace CLAY; red-brown, saturated, drills hard Percent passing No. 200 - 43.7%	118.8	13.1		58
24						
26		***SANDY CLAY (CL)*** Hard, fine- to medium-grained; light brown, saturated, drills firmly Percent passing No. 200 - 30.5%	117.0	14.7		49
28						
30		Percent passing No. 200 - 55.1%	110.8	18.2		69
32						
34		***WEATHERED ROCK*** Very dense, moderately weathered; brown, saturated, drills hard Auger refusal at 35 feet	117.4	10.9		50+
36		End of Borehole				
38						
40						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-17-23

Hole Size: 4½ Inches

Elevation: 35 Feet

Log of Boring B22

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-22

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 25 Feet **At Completion:** 4 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
2		***SILTY SAND (SM)*** Very loose, fine- to medium-grained with trace CLAY; brown, damp, drills easily Loose below 12 inches Medium dense below 2 feet Percent Passing No. 200 - 43.9%	118.9	13.1		28
4		Saturated below 4 feet				
6		***SILTY SAND (SM)*** Very dense, fine- to medium-grained, weakly cemented; red-brown, saturated, drills hard Percent passing No. 200 - 40.2%	110.4	8.7		50+
8			124.0	10.4		50+
10		***CLAYEY SAND (SC)*** Dense, fine- to medium-grained; red-brown, saturated, drills hard Percent passing No. 200 - 31.4% Very dense below 12 feet	115.9	11.4		42
12			101.2	19.6		50+
14		***SANDY SILT (ML)*** Very dense, fine- to medium-grained; gray-brown, saturated, drills hard	107.7	12.6		50+
16		***SILTY SAND (SM)*** Very dense, fine- to medium-grained; orange-brown, saturated, drills hard Percent passing No. 200 - 39.6%				
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-17-23

Hole Size: 4½ Inches

Elevation: 27½ Feet

Log of Boring B22

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-22

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 25 Feet **At Completion:** 4 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***SANDY SILT (ML)*** Very dense, fine- to medium-grained; orange-brown, saturated, drills hard	114.7	16.3		62
24		Percent passing No. 200 - 71.1%	100.4	22.2		58
26						
28		***WEATHERED ROCK*** Very dense, moderately weathered; gray, saturated, drills hard Auger refusal at 27½ feet	112.5	14.7		50+
30		End of Borehole				
32						
34						
36						
38						
40						

SUBSURFACE PROFILE

SAMPLE

Penetration Test blows/ft

20 40 60

Water Content (%)

10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-17-23

Hole Size: 4½ Inches

Elevation: 27½ Feet

Log of Boring B23

Project: Triangle Development

Project No: 012-22165

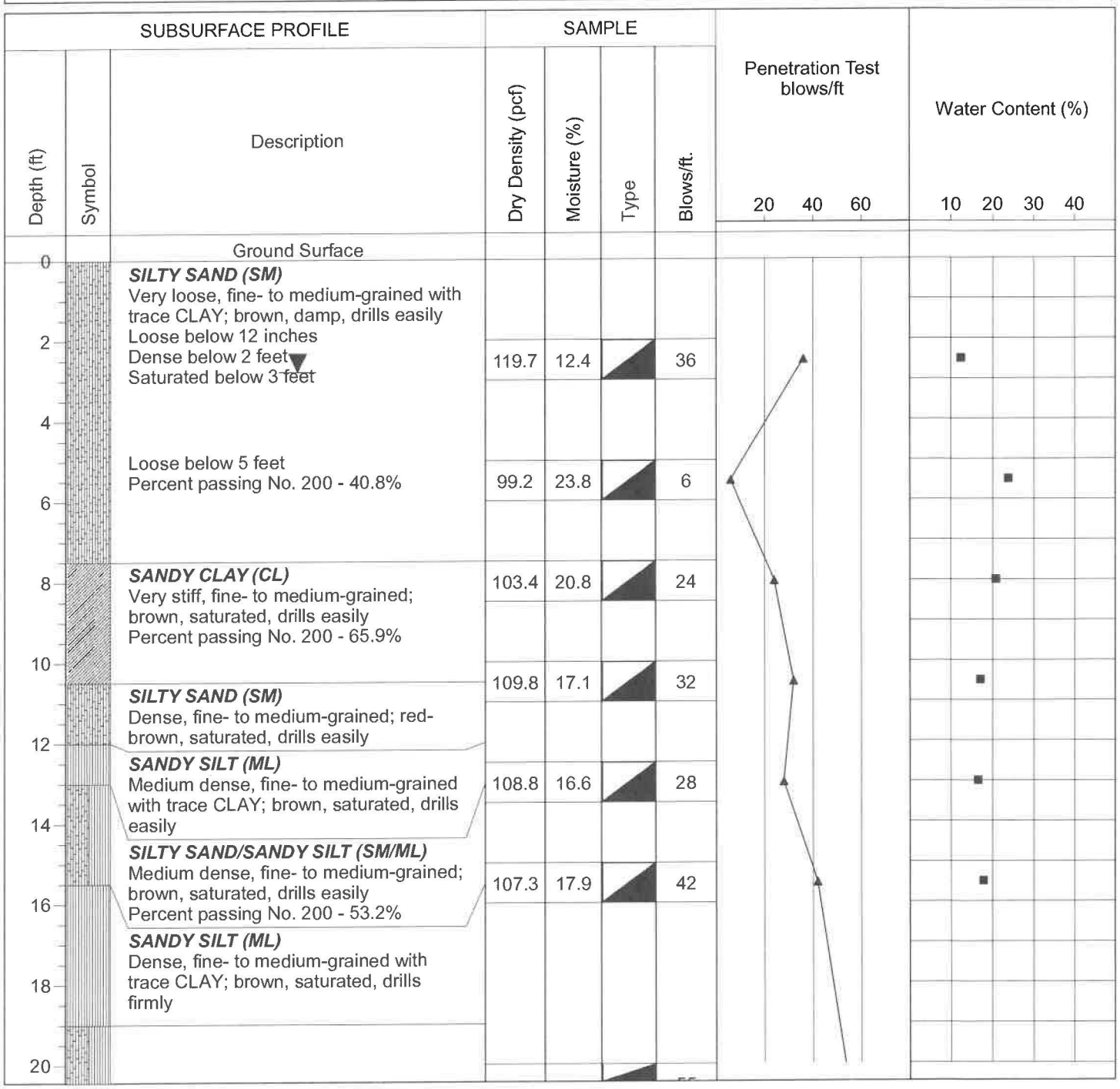
Client: Wilson Homes

Figure No.: A-23

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 22 Feet **At Completion:** 3 Feet



Drill Method: Hollow Stem

Drill Date: 4-18-23

Drill Rig: CME 75

Krazan and Associates

Hole Size: 4½ Inches

Driller: One Way Drilling

Elevation: 27½ Feet

Log of Boring B23

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

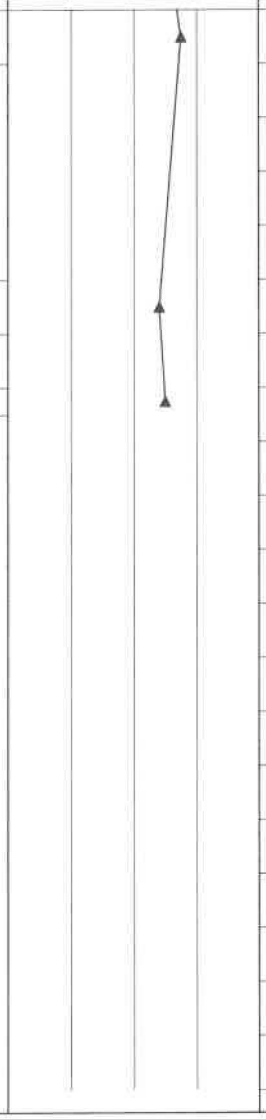
Figure No.: A-23

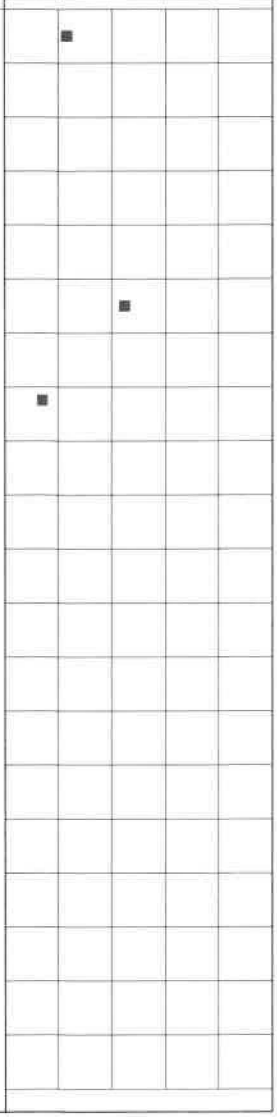
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 22 Feet **At Completion:** 3 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***SILTY SAND/SANDY SILT (SM/ML)*** Very dense, fine-grained; brown, saturated, drills firmly ▽ Percent passing No. 200 - 55.2%	119.3	11.6		55
24						
26		***WEATHERED ROCK*** Very dense, highly weathered; brown, saturated, drills firmly Percent passing No. 200 - 42.4%	105.8	22.5		48
28		***WEATHERED ROCK*** Very dense, moderately weathered; light gray, saturated, drills hard Auger refusal at 27½ feet	127.4	7.1		50+
30		End of Borehole				
32						
34						
36						
38						
40						





Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-18-23

Hole Size: 4½ Inches

Elevation: 27½ Feet

Log of Boring B24

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-24

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 30 Feet **At Completion:** 3 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained with trace CLAY; brown, damp, drills easily				
2		Loose below 12 inches Very dense and drills firmly below 2 feet Saturated below 3 feet	117.3	12.9		45
4		Dense below 5 feet Percent passing No. 200 - 33.3%	123.2	10.4		33
6		Medium dense below 7½ feet	116.8	14.7		16
8		Percent passing No. 200 - 36.8%	111.9	16.6		15
10		***SANDY CLAY (CL)*** Hard, fine- to medium-grained; brown, saturated, drills firmly	108.6	16.0		51
12		Percent passing No. 200 - 60.0%	123.3	9.4		57
14						
16						
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-18-23

Hole Size: 4½ Inches

Elevation: 41½ Feet

Log of Boring B24

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

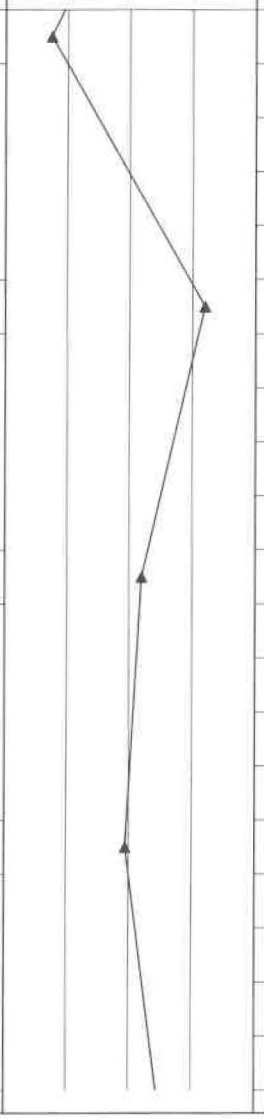
Figure No.: A-24

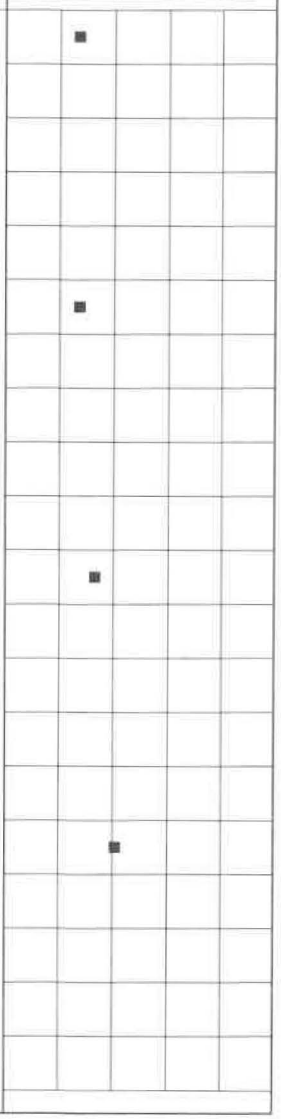
Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 30 Feet **At Completion:** 3 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Medium dense, fine- to medium-grained; red-brown, saturated, drills easily Percent passing No. 200 - 47.4%	108.5	13.4		15
24						
26		***CLAYEY SAND (SC)*** Very dense, fine- to medium-grained; red-brown, saturated, drills hard Percent passing No. 200 - 41.6%	116.9	13.6		64
28						
30		***SILTY SAND (SM)*** Dense, fine- to medium-grained with CLAY; red-brown, saturated, drills firmly Percent passing No. 200 - 44.8%	113.0	16.6		44
32						
34						
36		***SANDY CLAYEY SILT (ML)*** Dense, fine- to medium-grained; red-brown, saturated, drills firmly Percent passing No. 200 - 60.5%	109.4	20.5		39
38						
40						





Drill Method: Hollow Stem

Drill Date: 4-18-23

Drill Rig: CME 75

Krazan and Associates

Hole Size: 4½ Inches

Driller: One Way Drilling

Elevation: 41½ Feet

Log of Boring B24

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-24

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 30 Feet **At Completion:** 3 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		CLAYEY SAND (SC) Very dense, fine- to medium-grained; red-brown, saturated, drills hard	102.1	22.2		50+
				17.4		50+
42		***WEATHERED ROCK*** Very dense, moderately weathered; gray, saturated, drills hard Auger refusal at 41½ feet				
44		End of Borehole				
46						
48						
50						
52						
54						
56						
58						
60						

SUBSURFACE PROFILE

SAMPLE

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-18-23

Hole Size: 4½ Inches

Elevation: 41½ Feet

Log of Boring B25

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-25

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 20 Feet **At Completion:** 4 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0		***SILTY SAND/CLAYEY SAND (SM/SC)*** Very loose, fine- to medium-grained; red-brown, damp, drills easily				
2		Loose below 12 inches Dense below 2 feet Percent passing No. 200 - 42.3%	116.4	12.6		30
4		▼ Very dense, saturated and drills hard below 4 feet	122.3	8.2		50+
6						
8			118.9	9.9		50+
10		Weakly cemented below 10 feet	121.0	10.4		50+
12						
12		***SILTY SAND (SM)*** Very dense, fine- to medium-grained with trace CLAY; brown, saturated, drills hard	113.2	14.7		50+
14		Percent passing No. 200 - 42.9%				
16			118.7	10.9		50+
18						
20		▽				

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Date: 4-18-23

Drill Rig: CME 75

Krazan and Associates

Hole Size: 4½ Inches

Driller: One Way Drilling

Elevation: 40½ Feet

Log of Boring B25

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-25

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 20 Feet **At Completion:** 4 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
22		Percent passing No. 200 - 29.2%	116.6	11.4		62
24						
26			125.5	10.1		50+
28						
30		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Very dense, fine- to medium-grained; red-brown, saturated, drills firmly Percent passing No. 200 - 48.3%	116.1	15.5		63
32						
34						
36		***SILTY SAND (SM)*** Very dense, fine- to medium-grained with trace CLAY and GRAVEL; red-brown, saturated, drills hard Percent passing No. 200 - 43.8%	104.6	21.1		50+
38						
40						50+

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-18-23

Hole Size: 4½ Inches

Elevation: 40½ Feet

Log of Boring B25

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-25

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 20 Feet **At Completion:** 4 Feet

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
		WEATHERED ROCK Very dense, moderately weathered; light gray, saturated, drills hard Auger refusal at 40½ feet	118.5	11.1		50+		
42		End of Borehole						
44								
46								
48								
50								
52								
54								
56								
58								
60								

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-18-23

Hole Size: 4½ Inches

Elevation: 40½ Feet

Log of Boring B26

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-26

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 7 Feet **At Completion:** 10 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained with trace CLAY; brown, damp, drills easily				
2		Loose below 12 inches Medium dense below 2 feet	125.4	8.9		28
4						
6		Dense below 10 feet Percent passing No. 200 - 32.4%	123.3	11.1		32
8			122.6	10.4		44
10		Saturated below 10 feet	99.8	23.2		44
12		Very dense below 12 feet Percent passing No. 200 - 39.8%	92.5	25.9		54
14						
16		***SILTY SAND/SANDY SILT (SM/ML)*** Very dense, fine- to medium-grained with trace CLAY; red-brown, saturated, drills firmly	99.2	18.8		55
18						
20		Medium dense and drills easily below 20 feet				

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-19-23

Hole Size: 4½ Inches

Elevation: 35½ Feet

Log of Boring B26

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-26

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water> **Initial:** 7 Feet **At Completion:** 10 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Percent passing No. 200 - 48%	102.4	19.9		24
22						
24		Dense, light red-brown and drills firmly below 25 feet	112.3	17.9		44
26						
28						
30		***CLAYEY SAND/SANDY CLAY (SC/CL)*** Very dense, fine- to medium-grained; brown, saturated, drills firmly Percent passing No. 200 - 52%	113.1	15.5		54
32						
34						
		WEATHERED ROCK Very dense, moderately weathered; light gray, saturated, drills hard Auger refusal at 35½ feet	109.1	18.8		50+
36		End of Borehole				
38						
40						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 75

Driller: One Way Drilling

Krazan and Associates

Drill Date: 4-19-23

Hole Size: 4½ Inches

Elevation: 35½ Feet

Log of Boring B27

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-27

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water>

Initial: None

At Completion: None

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	10 20 30 40
0		Ground Surface						
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained with trace CLAY; brown, damp, drills easily						
2		Medium dense below 12 inches Very dense and drills hard below 18 inches	82.4	7.8		50+		
4								
6		***WEATHERED ROCK*** Very dense, moderately weathered; gray, moist, drills hard	115.3	8.2		50+		
8			95.4	1.8		50+		
		Auger refusal at 9 feet						
		End of Borehole						
10								
12								
14								
16								
18								
20								

Drill Method: Hollow Stem

Drill Date: 7-7-23

Drill Rig: CME 55

Krazan and Associates

Hole Size: 4½ Inches

Driller: Eddie Tapia

Elevation: 9 Feet

Sheet: 1 of 1

Log of Boring B28

Project: Triangle Development | **Project No:** 012-22165

Client: Wilson Homes | **Figure No.:** A-28

Location: Shepherd Avenue and Locan Avenue, Clovis, California | **Logged By:** Sarah Redondo

Depth to Water> | **Initial:** None | **At Completion:** None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0		***CLAYEY SAND (SC)*** Very loose, fine- to medium-grained; red-brown, damp, drills easily Medium dense below 12 inches Very dense and drills hard below 2 feet				
2			126.1	9.9		50+
4						
6			123.5	10.4		50+
8			105.1	12.6		50+
10			120.6	14.2		50+
10		***WEATHERED ROCK*** Very dense, moderately weathered; gray, moist, drills hard				
12				7.5		50+
14						
16			86.4	6.4		50+
16		Auger refusal at 16 feet				
		End of Borehole				
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem | **Drill Date:** 7-7-23

Drill Rig: CME 55 | **Hole Size:** 4½ Inches

Driller: Eddie Tapia | **Elevation:** 16 Feet

Krazan and Associates

Log of Boring B29

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-29

Location: Shepherd Avenue and Locan Avenue, Clovis, California

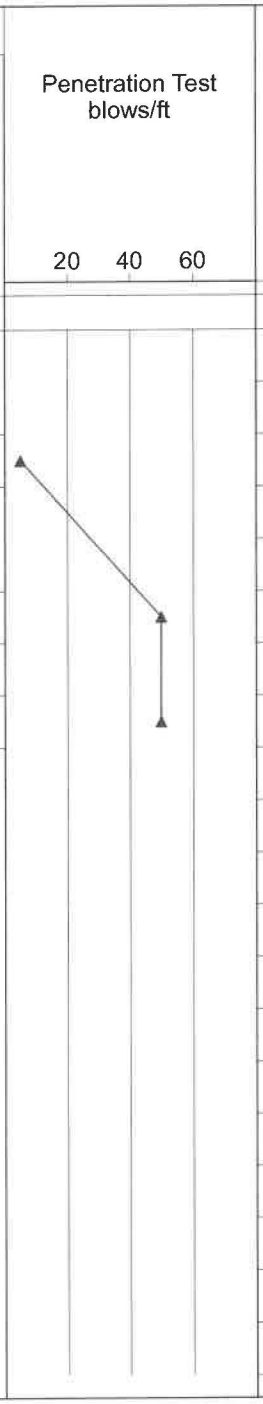
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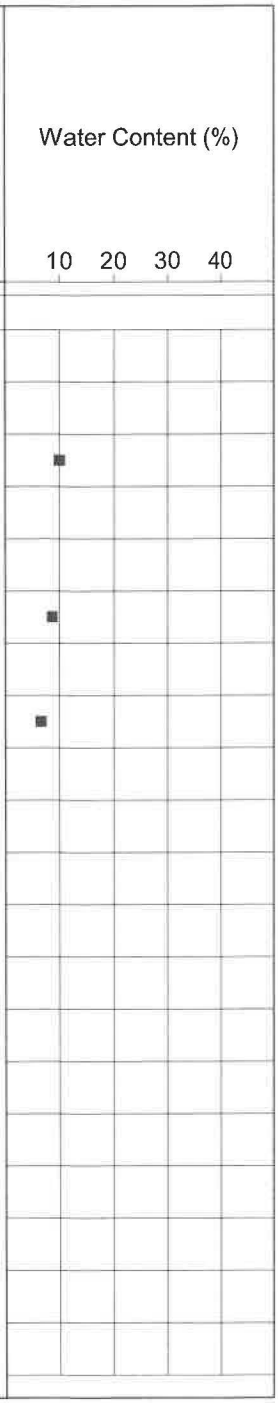
Depth to Water>

Initial: None

At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***SANDY CLAYEY SILT (ML)*** Very loose, with trace fine-grained SAND; brown, moist, drills easily Loose below 12 inches				
2			102.4	10.1		5
4						
6		***SILTY SAND (SM)*** Very dense, fine-grained; gray, moist, drills hard	122.9	8.7		50+
8		***WEATHERED ROCK*** Very dense, moderately weathered; grayish-brown, moist, drills hard Auger refusal at 8 feet		6.6		50+
		End of Borehole				
10						
12						
14						
16						
18						
20						





Drill Method: Hollow Stem

Drill Date: 7-7-23

Drill Rig: CME 45B

Krazan and Associates

Hole Size: 4½ Inches

Driller: Brent Snyder

Elevation: 8 Feet

Sheet: 1 of 1

Log of Boring B30

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-30

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Michael Rupright

Depth to Water>

Initial: None

At Completion: None

Depth (ft)	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0	Ground Surface				
0	***SILTY SAND (SM)*** Very loose, fine-grained; brown, moist, drills easily Loose below 12 inches Medium dense below 2 feet Percent passing No. 200 - 30.5	127.2	10.6		22
4	***CLAYEY SAND (SC)*** Dense, fine-grained; reddish-brown, moist, drills firmly Percent passing No. 200 - 29.2%	129.7	10.6		37
8	***CLAYEY SAND/SANDY CLAY (SC/CL)*** Very dense, fine-grained; reddish-brown, moist, drills firmly Percent passing No. 200 - 48.8%	107.0	11.9		53
10	***SILTY SAND (SM)*** Medium dense, fine-grained with trace CLAY; grayish-brown, moist, drills easily Percent passing No. 200 - 41.4% With interbeds of SILTY SAND/SANDY SILT with CLAY below 12 feet Percent passing No. 200 - 48.1%	108.1	14.9		46
12		113.4	8.9		24
14	***SANDY SILT (ML)*** Medium dense, fine-grained with trace CLAY; grayish-brown, moist, drills easily				
16	***WEATHERED ROCK*** Very dense, highly weathered; grayish-brown, moist, drills hard Percent passing No. 200 - 47.0% Percent passing No. 200 - 72.8% Auger refusal at 17 feet	103.1	5.9		50+
18	End of Borehole		4.6		
20					

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Date: 7-7-23

Drill Rig: CME 45B

Krazan and Associates

Hole Size: 4½ Inches

Driller: Brent Snyder

Elevation: 17 Feet

Sheet: 1 of 1

Log of Boring B31

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-31

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Sarah Redondo

Depth to Water>

Initial: None

At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***CLAYEY SAND (SC)*** Very loose, fine- to medium-grained; red-brown, damp, drills easily Medium dense below 12 inches Very dense and drills hard below 2 feet				
2			124.2	11.6		50+
4						
6		***WEATHERED ROCK*** Very dense, moderately weathered; gray, moist, drills hard	110.1	11.1		50+
8		Auger refusal at 8½ feet	85.1	5.9		50+
		End of Borehole				
10						
12						
14						
16						
18						
20						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Date: 7-7-23

Drill Rig: CME 55

Krazan and Associates

Hole Size: 4½ Inches

Driller: Eddie Tapia

Elevation: 8½ Feet

Sheet: 1 of 1

Log of Boring B32

Project: Triangle Development

Project No: 012-22165

Client: Wilson Homes

Figure No.: A-32

Location: Shepherd Avenue and Locan Avenue, Clovis, California

Logged By: Michael Rupright

Depth to Water>

Initial: None

At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***WEATHERED ROCK*** Very loose, highly weathered; reddish-brown, damp, drills easily Medium dense below 12 inches Very dense and drills hard below 18 inches				
2			79.4	9.9		50+
4						
6			120.7	7.8		50+
		WEATHERED ROCK Very dense, moderately weathered; gray, damp, drills hard Auger refusal at 8 feet		4.4		50+
8		End of Borehole				
10						
12						
14						
16						
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): 10 20 30 40

Drill Method: Hollow Stem

Drill Rig: CME 45B

Driller: Brent Snyder

Krazan and Associates

Drill Date: 7-7-23

Hole Size: 4½ Inches

Elevation: 8 Feet

Sheet: 1 of 1

Sieve Analysis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/19/2022
Sample Location	: B1 @ 12-13'
Soil Classification	: SM/ML

Wet Weight	:	50.00
Dry Weight	:	41.80
Moisture Content	:	20%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75				100.0
#8	2.36				100.0
#16	1.18	0.3	0.7	0.7	99.3
#30	0.60	0.5	1.2	1.9	98.1
#50	0.30	1.4	3.3	5.3	94.7
#100	0.15	7.1	17.0	22.2	77.8
#200	0.08	10.4	24.9	47.1	52.9

Krazan Testing Laboratory

Sieve Analysis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/19/2022
Sample Location	: B1 @ 12-13'
Soil Classification	: SM/ML

Wet Weight	:	50.00
Dry Weight	:	41.80
Moisture Content	:	20%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75				100.0
#8	2.36				100.0
#16	1.18	0.3	0.7	0.7	99.3
#30	0.60	0.5	1.2	1.9	98.1
#50	0.30	1.4	3.3	5.3	94.7
#100	0.15	7.1	17.0	22.2	77.8
#200	0.08	10.4	24.9	47.1	52.9

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM/ML
Sample Number	B1 @ 12-13'

Krazan Testing Laboratory

Hydrometer Anaylsis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/19/2022
Sample Location	: B1 @ 20-21'
Soil Classification	: SM

Dry Weight Used	113.2 g
Temperature	20.0 C
Soil Specific Gravity	2.65
Solution Spec. Grav.	1.003
K Value	0.01365
Correction Factor	0.00000

Elapsed Time (min)	Hydro. Reading	Hydro. Corrected	% Passing	Particle Diameter
2	1.02	1.02	24.2	0.0320
5	1.018	1.018	21.3	0.0207
15	1.017	1.017	19.9	0.0121
30	1.016	1.016	18.5	0.0087
60	1.014	1.014	15.6	0.0063
250	1.013	1.013	14.2	0.0031
1440	1.009	1.009	8.5	0.0013

Particle Diameter	Percent Passing
0.005	15.1
0.002	10.7
0	NA

Krazan Testing Laboratory

Sieve Analysis

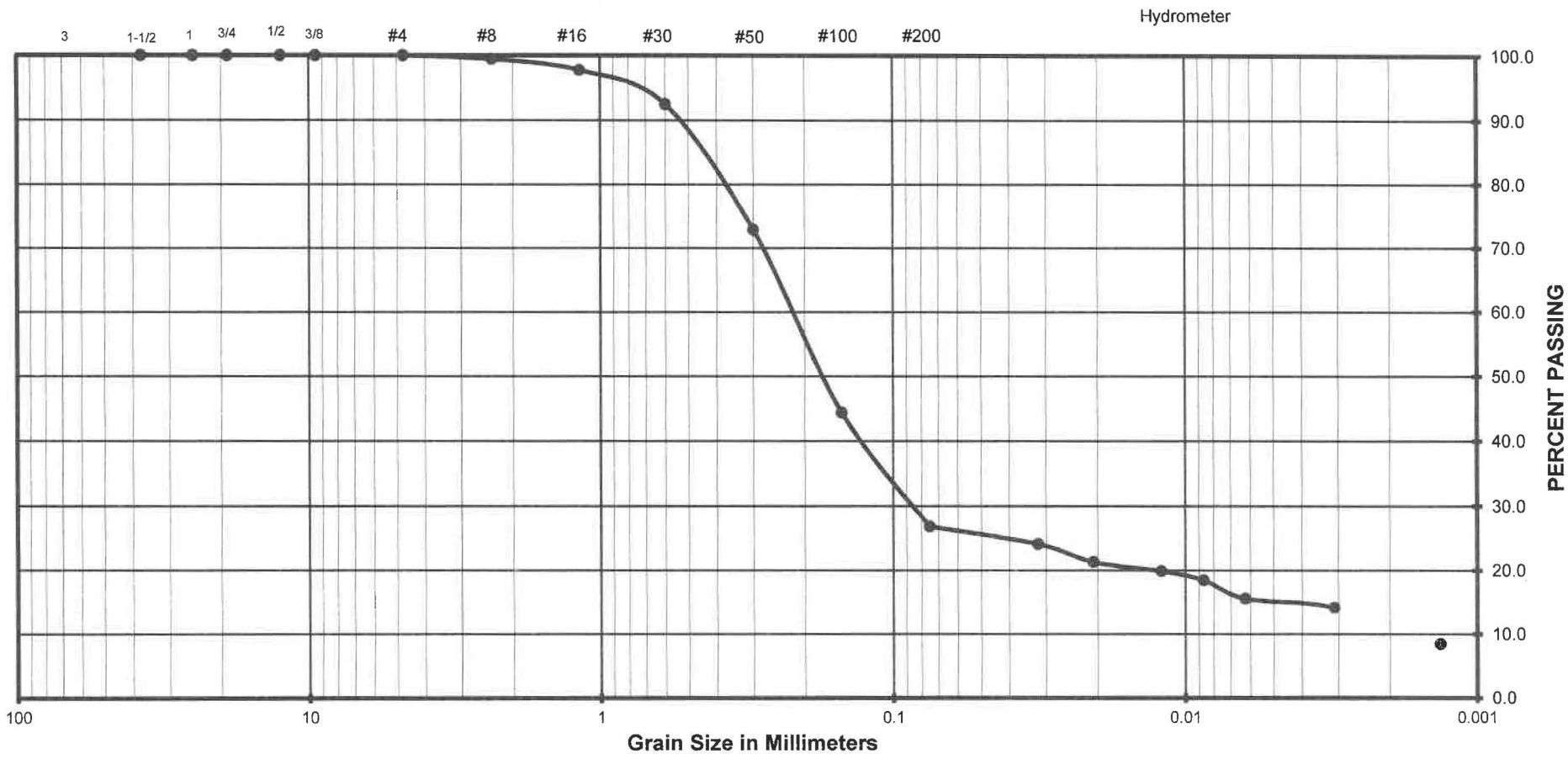
Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/19/2022
Sample Location	: B1 @ 20-21'
Soil Classification	: SM

Wet Weight	:	200.00
Dry Weight	:	182.70
Moisture Content	:	9%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75				100.0
#8	2.36	1.0	0.5	0.5	99.5
#16	1.18	3.1	1.7	2.2	97.8
#30	0.60	9.6	5.3	7.5	92.5
#50	0.30	35.8	19.6	27.1	72.9
#100	0.15	52.0	28.5	55.6	44.4
#200	0.08	32.1	17.6	73.1	26.9

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM
Sample Number	B1 @ 20-21'

Krazan Testing Laboratory

Hydrometer Anaylsis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/16/2022
Sample Location	: B2 @ 15-16'
Soil Classification	: SM/ML

Dry Weight Used	89.7 g
Temperature	20.0 C
Soil Specific Gravity	2.65
Solution Spec. Grav.	1.003
K Value	0.01365
Correction Factor	0.00000

Elapsed Time (min)	Hydro. Reading	Hydro. Corrected	% Passing	Particle Diameter
2	1.02	1.02	30.5	0.0320
5	1.018	1.018	26.9	0.0207
15	1.017	1.017	25.1	0.0121
30	1.016	1.016	23.3	0.0087
60	1.015	1.015	21.5	0.0062
250	1.014	1.014	19.7	0.0031
1440	1.011	1.011	14.3	0.0013

Particle Diameter	Percent Passing
0.005	20.8
0.002	16.5
0	NA

Krazan Testing Laboratory

Sieve Analysis

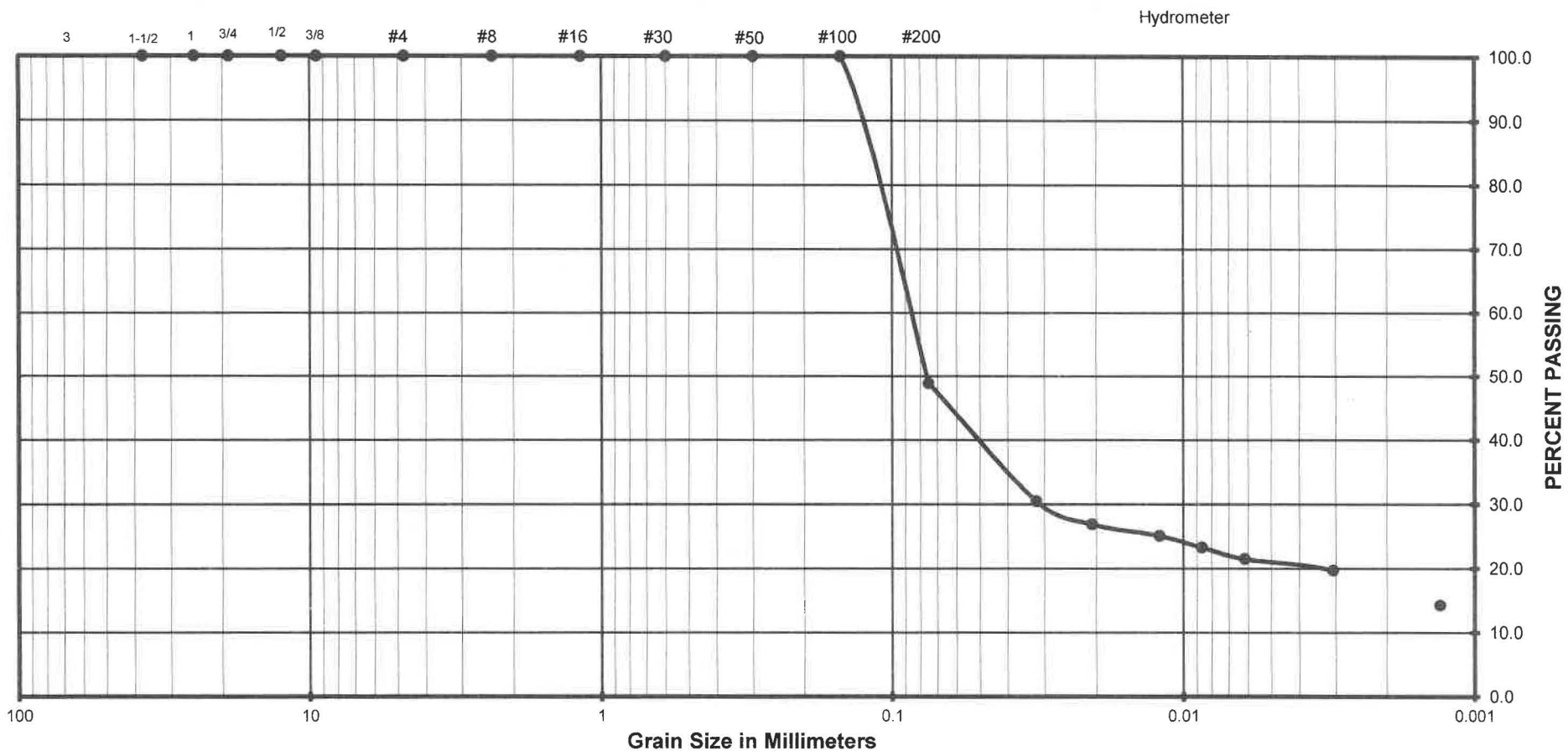
Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/16/2022
Sample Location	: B2 @ 15-16'
Soil Classification	: SM/ML

Wet Weight	:	100.00
Dry Weight	:	89.10
Moisture Content	:	12%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75				100.0
#8	2.36				100.0
#16	1.18				100.0
#30	0.60				100.0
#50	0.30				100.0
#100	0.15				100.0
#200	0.08	45.5	51.1	51.1	48.9

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM/ML
Sample Number	B2 @ 15-16'

Krazan Testing Laboratory

Hydrometer Anaylsis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Location	: B2 @ 25-26'
Soil Classification	: SC

Dry Weight Used	111.9 g
Temperature	20.0 C
Soil Specific Gravity	2.65
Solution Spec. Grav.	1.003
K Value	0.01365
Correction Factor	0.00000

Elapsed Time (min)	Hydro. Reading	Hydro. Corrected	% Passing	Particle Diameter
2	1.028	1.028	35.9	0.0288
5	1.025	1.025	31.6	0.0190
15	1.021	1.021	25.9	0.0115
30	1.018	1.018	21.6	0.0085
60	1.015	1.015	17.3	0.0062
250	1.011	1.011	11.5	0.0032
1440	1.007	1.007	5.8	0.0014

Particle Diameter	Percent Passing
0.005	15.0
0.002	7.8
0	NA

Krazan Testing Laboratory

Sieve Analysis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Location	: B2 @ 25-26'
Soil Classification	: SC

Wet Weight	:	50.00
Dry Weight	:	42.80
Moisture Content	:	17%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75				100.0
#8	2.36				100.0
#16	1.18				100.0
#30	0.60				100.0
#50	0.30				100.0
#100	0.15				100.0
#200	0.08	25.8	60.3	60.3	39.7

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SC
Sample Number	B2 @ 25-26'

Krazan Testing Laboratory

Hydrometer Anaylsis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Location	: B4 @ 12-13'
Soil Classification	: SC

Dry Weight Used	102.2 g
Temperature	20.0 C
Soil Specific Gravity	2.65
Solution Spec. Grav.	1.003
K Value	0.01365
Correction Factor	0.00000

Elapsed Time (min)	Hydro. Reading	Hydro. Corrected	% Passing	Particle Diameter
2	1.026	1.026	36.2	0.0296
5	1.022	1.022	29.9	0.0198
15	1.019	1.019	25.2	0.0118
30	1.016	1.016	20.5	0.0087
60	1.015	1.015	18.9	0.0062
250	1.012	1.012	14.2	0.0031
1440	1.009	1.009	9.4	0.0013

Particle Diameter	Percent Passing
0.005	17.1
0.002	11.2
0	NA

Krazan Testing Laboratory

Sieve Analysis

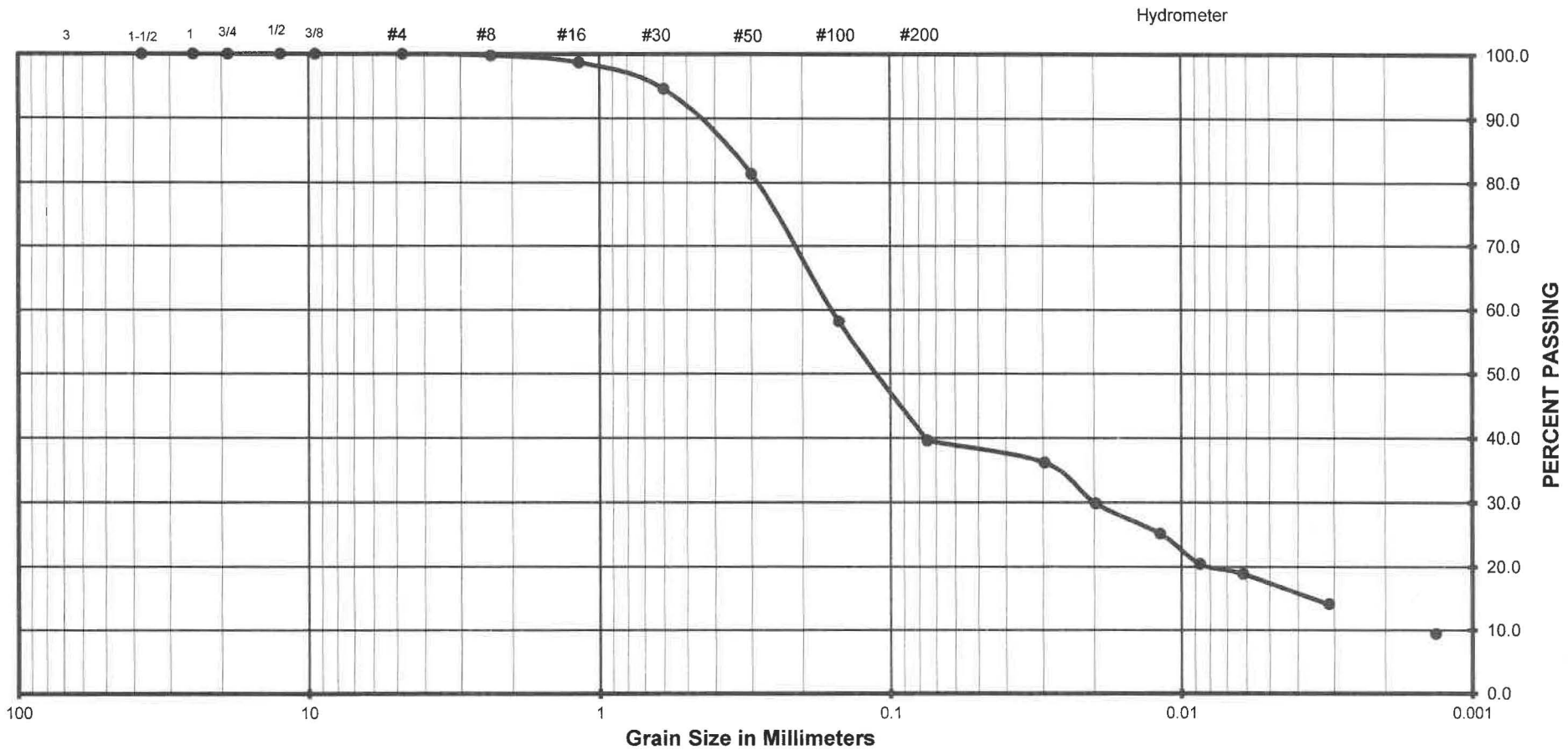
Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Location	: B4 @ 12-13'
Soil Classification	: SC

Wet Weight	:	150.00
Dry Weight	:	130.00
Moisture Content	:	15%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75				100.0
#8	2.36	0.3	0.2	0.2	99.8
#16	1.18	1.4	1.1	1.3	98.7
#30	0.60	5.3	4.1	5.4	94.6
#50	0.30	17.2	13.2	18.6	81.4
#100	0.15	30.2	23.2	41.8	58.2
#200	0.08	24.1	18.5	60.4	39.6

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SC
Sample Number	B4 @ 12-13'

Krazan Testing Laboratory

Hydrometer Anaylsis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Location	: B4 @ 20-21'
Soil Classification	: SM

Dry Weight Used	104.6 g
Temperature	20.0 C
Soil Specific Gravity	2.65
Solution Spec. Grav.	1.003
K Value	0.01365
Correction Factor	0.00000

Elapsed Time (min)	Hydro. Reading	Hydro. Corrected	% Passing	Particle Diameter
2	1.019	1.019	24.6	0.0324
5	1.017	1.017	21.5	0.0210
15	1.015	1.015	18.5	0.0124
30	1.014	1.014	16.9	0.0088
60	1.012	1.012	13.8	0.0064
250	1.01	1.01	10.8	0.0032
1440	1.008	1.008	7.7	0.0014

Particle Diameter	Percent Passing
0.005	12.5
0.002	8.8
0	NA

Krazan Testing Laboratory

Sieve Analysis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Location	: B4 @ 20-21'
Soil Classification	: SM

Wet Weight	:	150.00
Dry Weight	:	135.30
Moisture Content	:	11%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75	0.5	0.4	0.4	99.6
#8	2.36	2.4	1.8	2.1	97.9
#16	1.18	5.3	3.9	6.1	93.9
#30	0.60	11.7	8.6	14.7	85.3
#50	0.30	27.4	20.3	35.0	65.0
#100	0.15	33.6	24.8	59.8	40.2
#200	0.08	16.3	12.0	71.8	28.2

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM
Sample Number	B4 @ 20-21'

Krazan Testing Laboratory

Hydrometer Anaylsis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/16/2022
Sample Location	: B5 @ 17-18'
Soil Classification	: SM/ML w/ trace of clay

Dry Weight Used	95.5 g
Temperature	20.0 C
Soil Specific Gravity	2.65
Solution Spec. Grav.	1.003
K Value	0.01365
Correction Factor	0.00000

Elapsed Time (min)	Hydro. Reading	Hydro. Corrected	% Passing	Particle Diameter
2	1.028	1.028	42.1	0.0288
5	1.026	1.026	38.8	0.0187
15	1.022	1.022	32.0	0.0114
30	1.021	1.021	30.3	0.0082
60	1.02	1.02	28.6	0.0058
250	1.017	1.017	23.6	0.0030
1440	1.013	1.013	16.8	0.0013

Particle Diameter	Percent Passing
0.005	27.2
0.002	19.7
0	NA

Krazan Testing Laboratory

Sieve Analysis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/16/2022
Sample Location	: B5 @ 17-18'
Soil Classification	: SM/ML w/ trace of clay

Wet Weight	:	100.00
Dry Weight	:	85.70
Moisture Content	:	17%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75				100.0
#8	2.36				100.0
#16	1.18	0.9	1.1	1.1	98.9
#30	0.60	2.2	2.6	3.6	96.4
#50	0.30	6.1	7.1	10.7	89.3
#100	0.15	12.7	14.8	25.6	74.4
#200	0.08	20.6	24.0	49.6	50.4

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM/ML w/ trace of clay
Sample Number	B5 @ 17-18'

Krazan Testing Laboratory

Hydrometer Anaylsis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/16/2022
Sample Location	: B5 @ 25-26'
Soil Classification	: SM

Dry Weight Used	106.0 g
Temperature	20.0 C
Soil Specific Gravity	2.65
Solution Spec. Grav.	1.003
K Value	0.01365
Correction Factor	0.00000

Elapsed Time (min)	Hydro. Reading	Hydro. Corrected	% Passing	Particle Diameter
2	1.022	1.022	28.8	0.0313
5	1.02	1.02	25.8	0.0202
15	1.017	1.017	21.3	0.0121
30	1.016	1.016	19.7	0.0087
60	1.014	1.014	16.7	0.0063
250	1.012	1.012	13.7	0.0031
1440	1.01	1.01	10.6	0.0013

Particle Diameter	Percent Passing
0.005	15.5
0.002	11.8
0	NA

Krazan Testing Laboratory

Sieve Analysis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/16/2022
Sample Location	: B5 @ 25-26'
Soil Classification	: SM

Wet Weight	:	200.00
Dry Weight	:	166.60
Moisture Content	:	20%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75				100.0
#8	2.36				100.0
#16	1.18				100.0
#30	0.60				100.0
#50	0.30				100.0
#100	0.15				100.0
#200	0.08	106.2	63.7	63.7	36.3

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM
Sample Number	B5 @ 25-26'

Krazan Testing Laboratory

Hydrometer Anaylsis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Location	: B6 @ 25-26'
Soil Classification	: SC

Dry Weight Used	104.6 g
Temperature	20.0 C
Soil Specific Gravity	2.65
Solution Spec. Grav.	1.003
K Value	0.01365
Correction Factor	0.00000

Elapsed Time (min)	Hydro. Reading	Hydro. Corrected	% Passing	Particle Diameter
2	1.026	1.026	35.4	0.0296
5	1.025	1.025	33.8	0.0190
15	1.024	1.024	32.3	0.0111
30	1.022	1.022	29.2	0.0081
60	1.019	1.019	24.6	0.0059
250	1.016	1.016	20.0	0.0030
1440	1.012	1.012	13.8	0.0013

Particle Diameter	Percent Passing
0.005	23.2
0.002	16.4
0	NA

Krazan Testing Laboratory

Sieve Analysis

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Location	: B6 @ 25-26'
Soil Classification	: SC

Wet Weight	:	100.00
Dry Weight	:	86.70
Moisture Content	:	15%

Sieves Size/Number	Sieve Size, mm	Retained Weight	Retained. %	Cum % Retained	Cum. % Passing.
1-1/2"	37.50				100.0
1"	25.00				100.0
3/4"	19.00				100.0
1/2"	12.50				100.0
3/8"	9.50				100.0
#4	4.75				100.0
#8	2.36	0.3	0.3	0.3	99.7
#16	1.18	0.6	0.7	1.0	99.0
#30	0.60	3.7	4.3	5.3	94.7
#50	0.30	15.7	18.1	23.4	76.6
#100	0.15	21.2	24.5	47.9	52.1
#200	0.08	11.4	13.1	61.0	39.0

Krazan Testing Laboratory

Grain Size Analysis



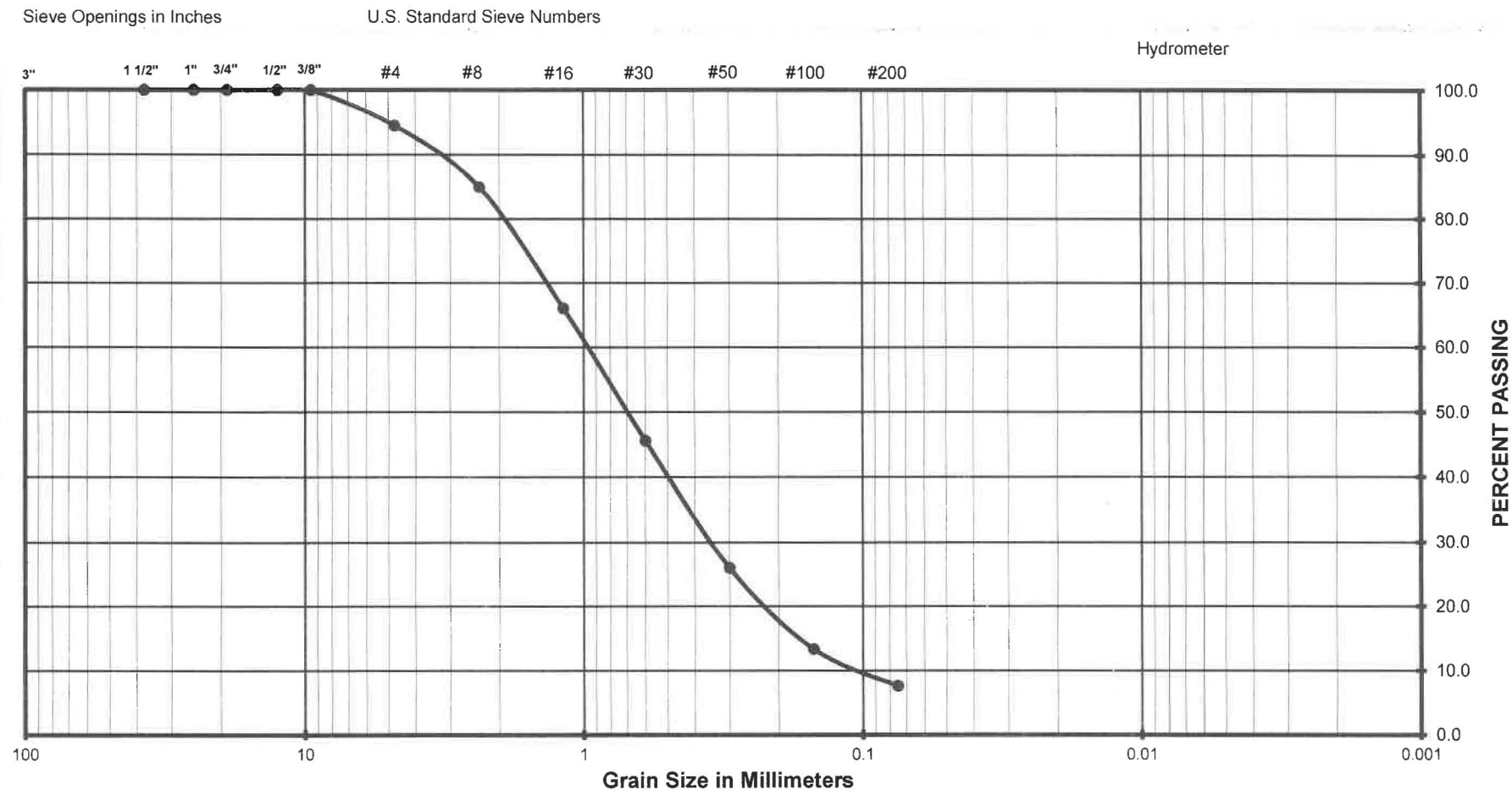
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SC
Sample Number	B6 @ 25-26'

Krazan Testing Laboratory

Grain Size Analysis

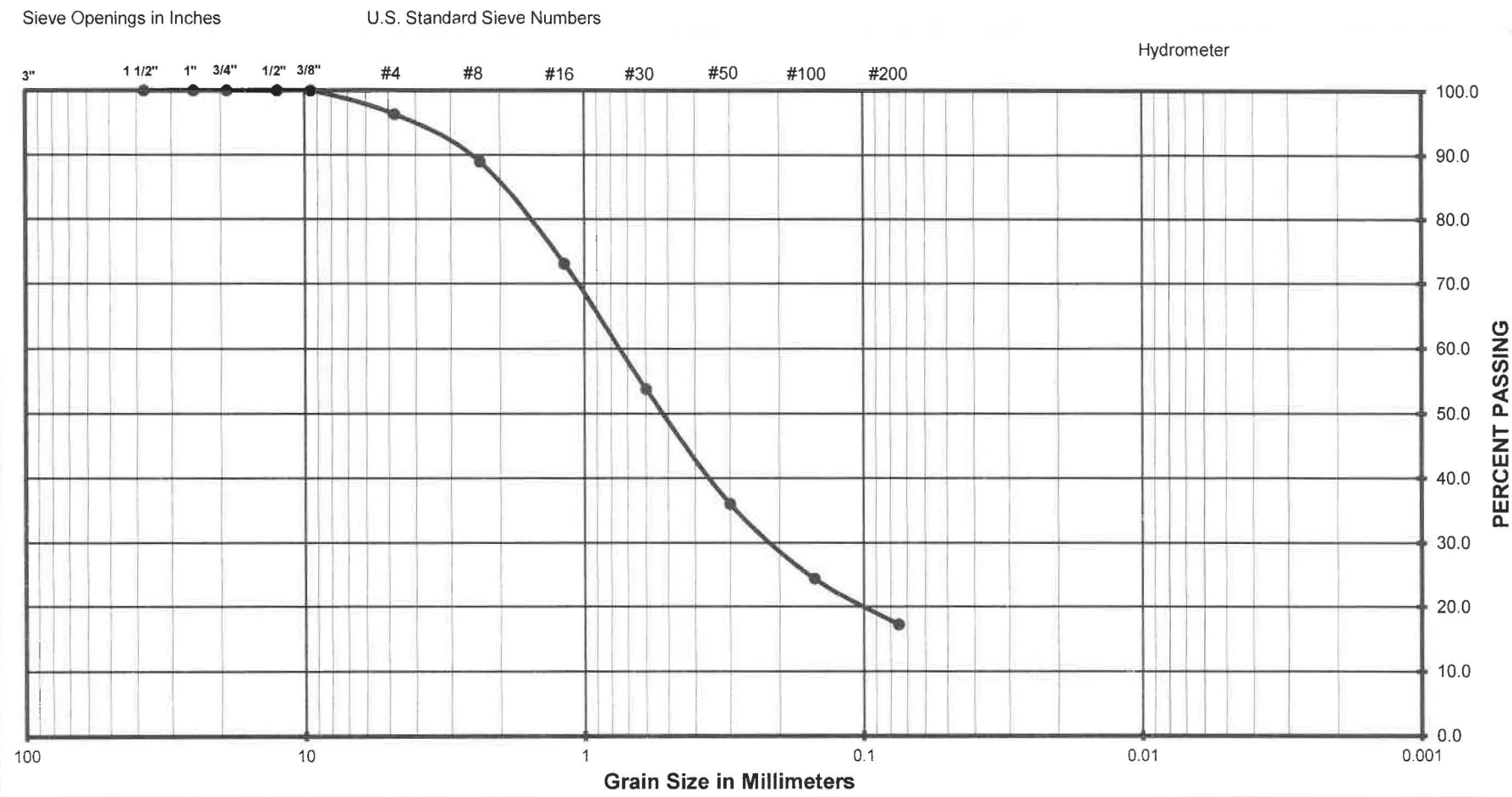


(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM/SP
Sample Number	B15 @ 9-10'

Krazan Testing Laboratory

Grain Size Analysis



(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM w/ trace of clay
Sample Number	B15 @ 15-16'

Krazan Testing Laboratory

Grain Size Analysis

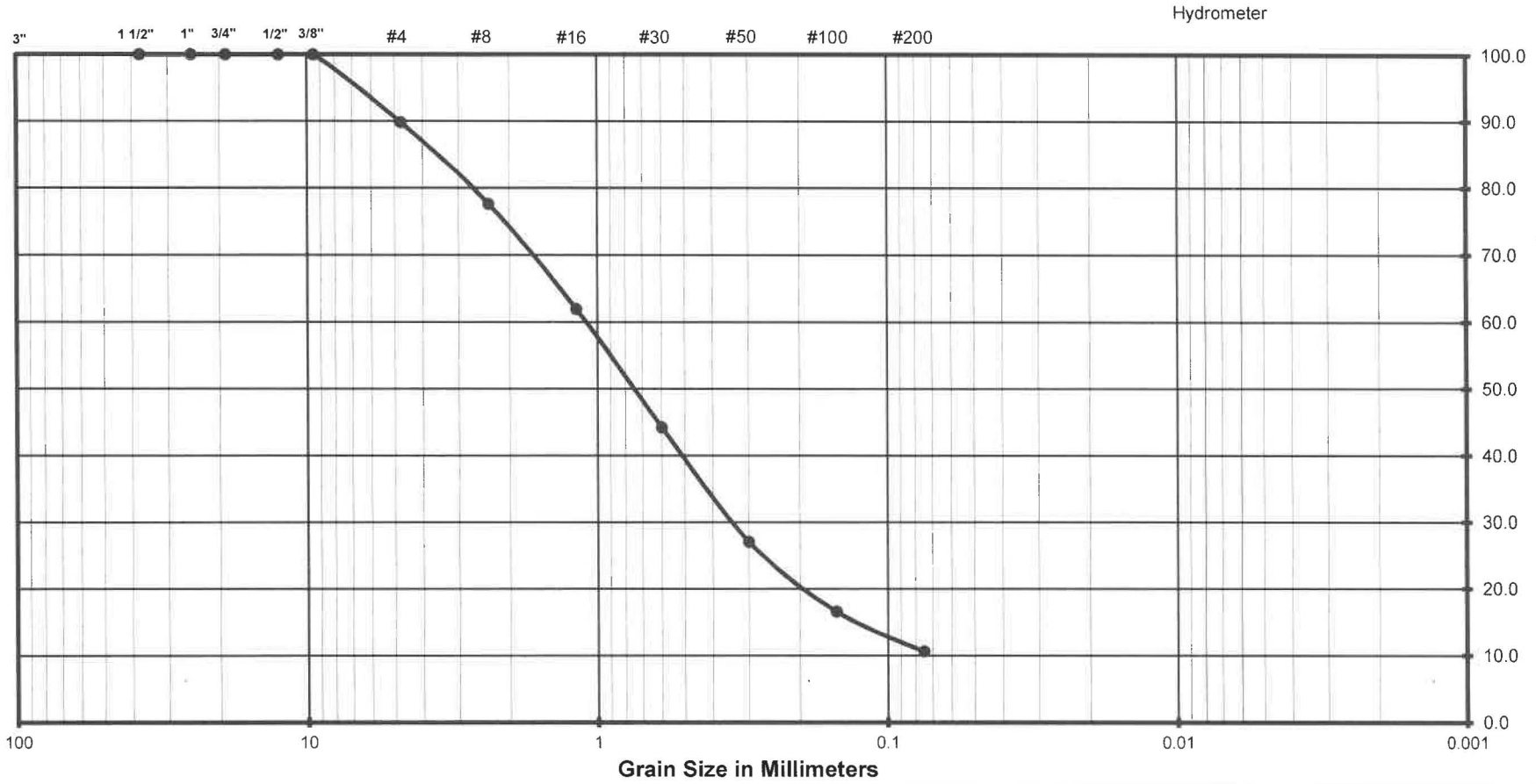


(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM/SP
Sample Number	B15 @ 20-21'

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM/SP
Sample Number	B15 @ 25-26'

Krazan Testing Laboratory

Grain Size Analysis



(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22165
Soil Classification	SM
Sample Number	B15 @ 30-31'

Krazan Testing Laboratory

Grain Size Analysis



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

(Unified Soils Classification)

Project Name	Triangle Development
Project Number	012-22233
Soil Classification	SM w/ trace of clay
Sample Number	B29 @ 5-6'

Krazan Testing Laboratory

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

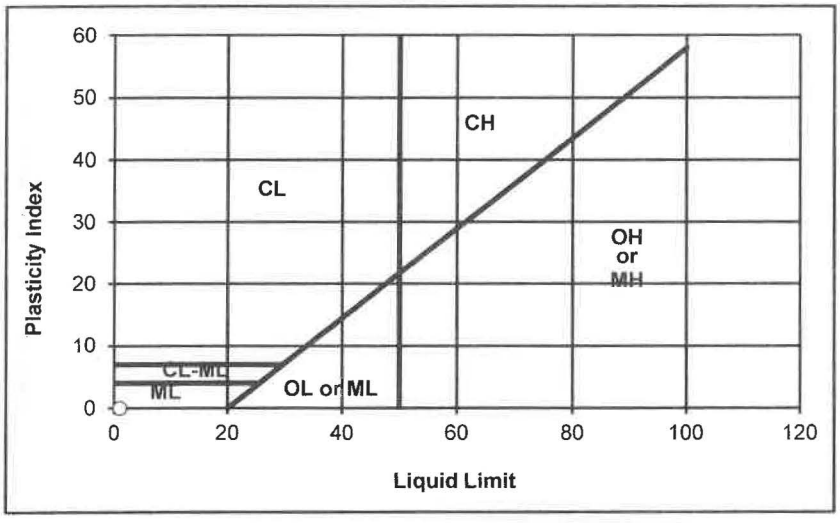
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B1 @ 7-8'
Sample Description: SM

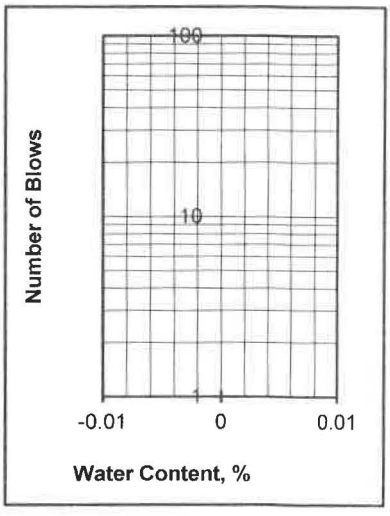
Date Tested: 9/16/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

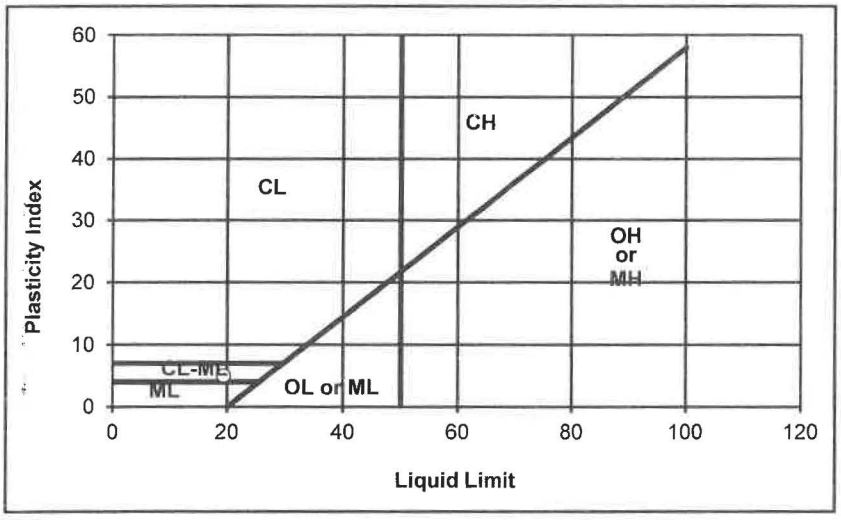
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B1 @ 10-11'
Sample Description: ML/CL

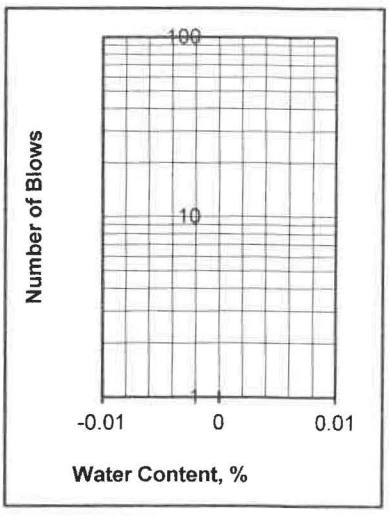
Date Tested: 9/16/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	36.36	37.81		40.03	33.48	
Weight of Dry Soil & Tare (g)	34.83	36.13		37.38	31.16	
Weight of Tare (g)	23.64	23.52		23.37	19.51	
Weight of water (g)	1.53	1.68		2.65	2.32	
Weight of Dry Soil (g)	11.19	12.61		14.01	11.65	
Water Content (% of dry wt.)	13.7%	13.4%		18.9%	19.9%	
Number of Blows				27	23	

Plastic Limit : 14 **Liquid Limit : 19**

Plasticity Index : 5
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

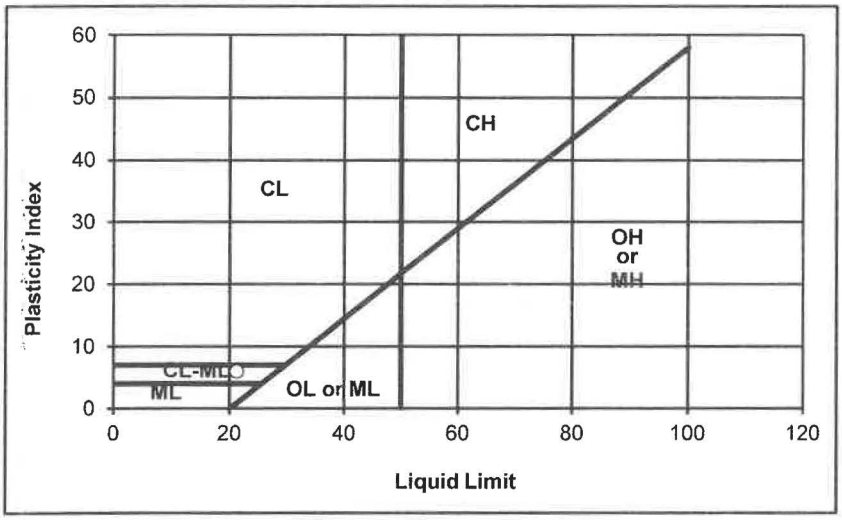
ASTM D4318/AASHTO T89 T90/CT 204

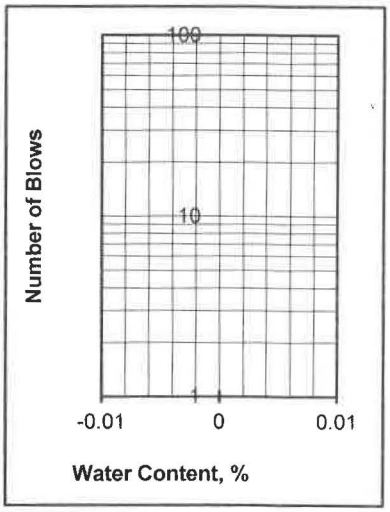
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B1 @ 15-16'
Sample Description: SM/SC

Date Tested: 9/16/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	36.18	34.84		40.41	34.59	
Weight of Dry Soil & Tare (g)	34.51	33.32		37.33	32.55	
Weight of Tare (g)	23.21	23.23		22.36	23.32	
Weight of water (g)	1.67	1.51		3.08	2.04	
Weight of Dry Soil (g)	11.30	10.10		14.97	9.23	
Water Content (% of dry wt.)	14.8%	15.0%		20.6%	22.0%	
Number of Blows				25	23	
	Plastic Limit : 15			**Liquid Limit : 21**		

Plasticity Index : 6
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

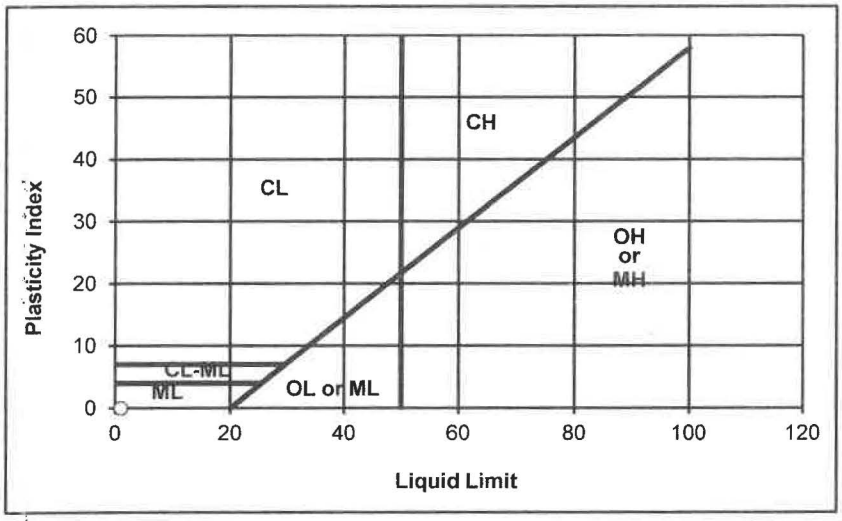
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B1 @ 25-26'
Sample Description: SM

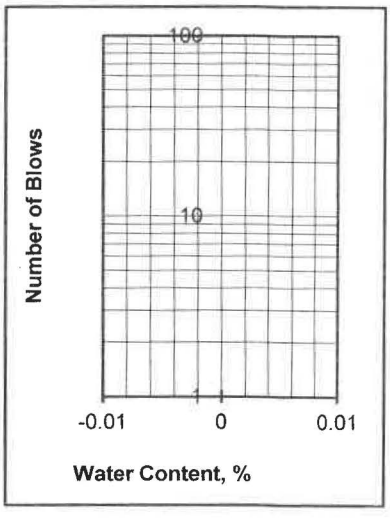
Date Tested: 9/16/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

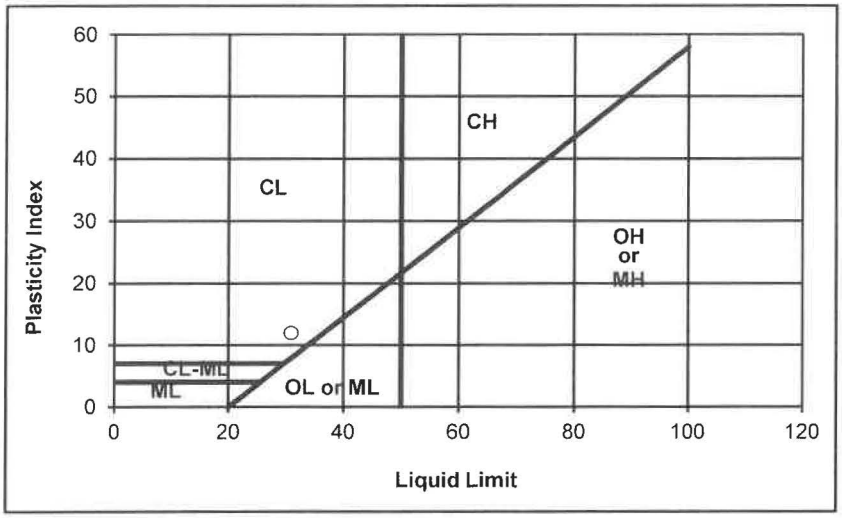
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B1 @ 35-36'
Sample Description: SC/CL

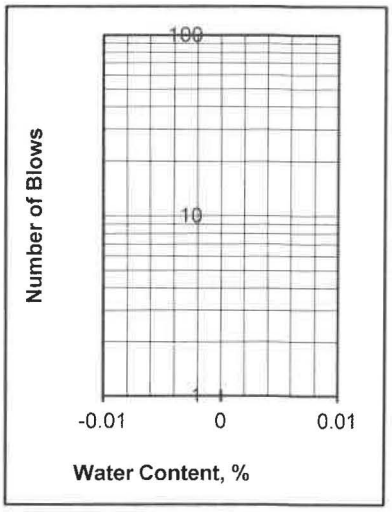
Date Tested: 9/16/2022
Tested By: JM
Verified By: JG

Trial Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	31.77	31.40		38.08	38.28	
Weight of Dry Soil & Tare (g)	30.41	30.01		34.62	34.78	
Weight of Tare (g)	23.38	22.84		23.46	23.42	
Weight of water (g)	1.37	1.39		3.46	3.50	
Weight of Dry Soil (g)	7.02	7.17		11.16	11.36	
Water Content (% of dry wt.)	19.5%	19.4%		31.0%	30.8%	
Number of Blows				25	25	

Plastic Limit : 19 **Liquid Limit : 31**

Plasticity Index : 12
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

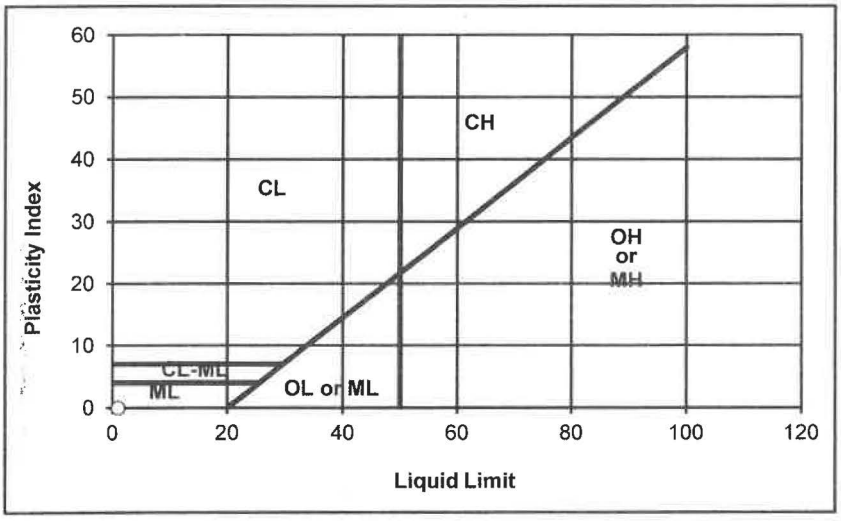
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B1 @ 45-46'
Sample Description: SM

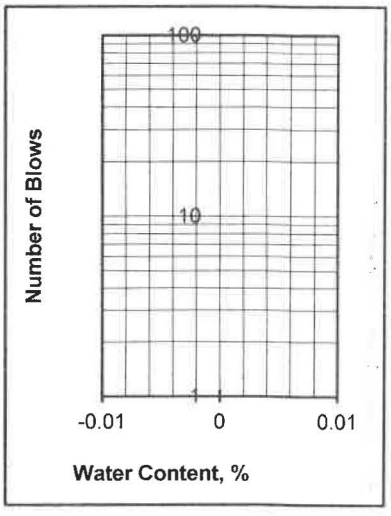
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

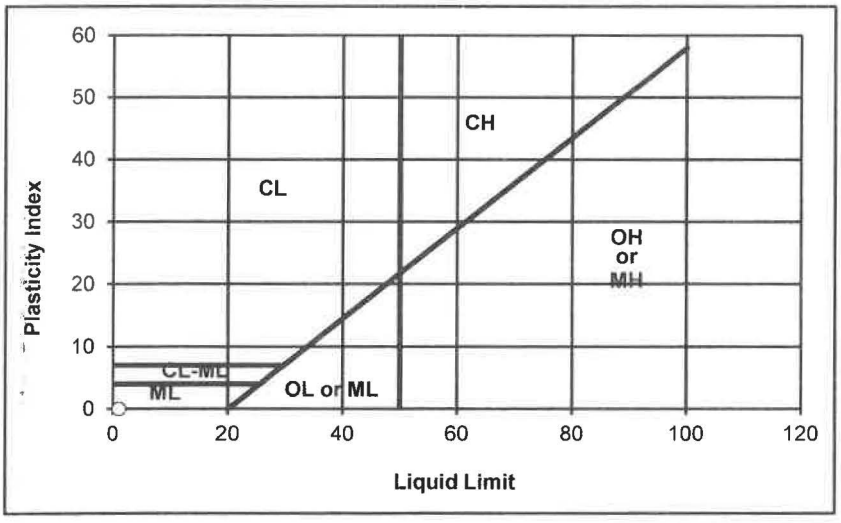
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B2 @ 5-6'
Sample Description: SM

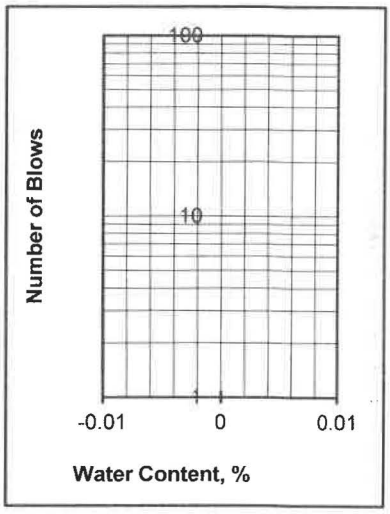
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

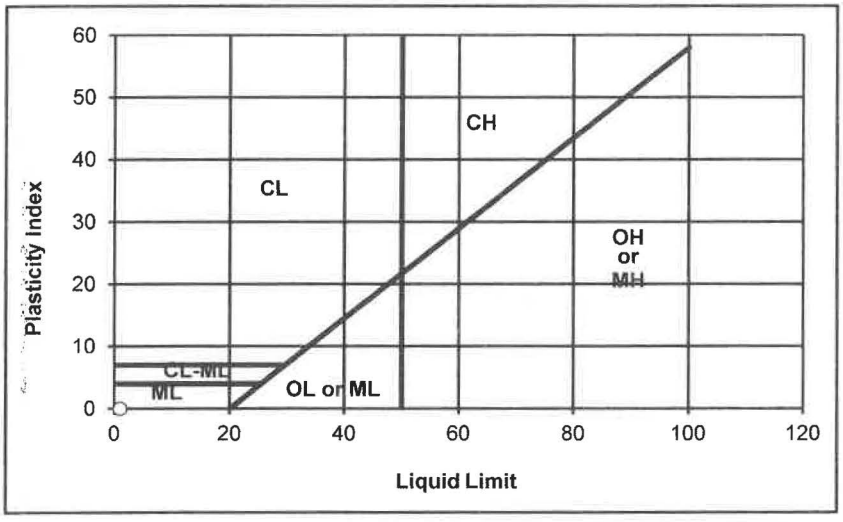
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B2 @ 10-11'
Sample Description: SM

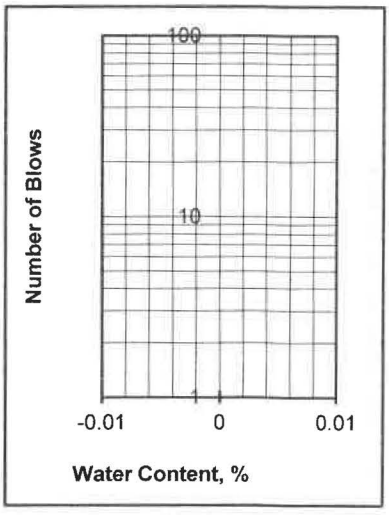
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

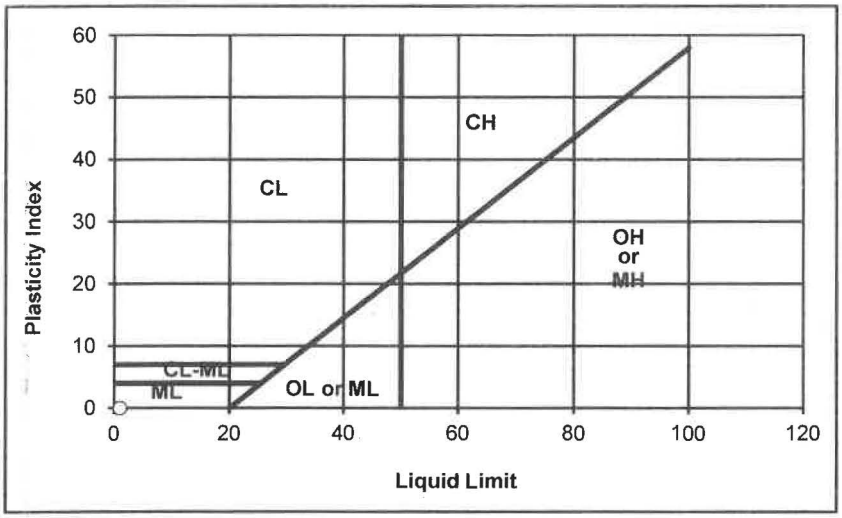
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B2 @ 15-16'
Sample Description: SM/ML

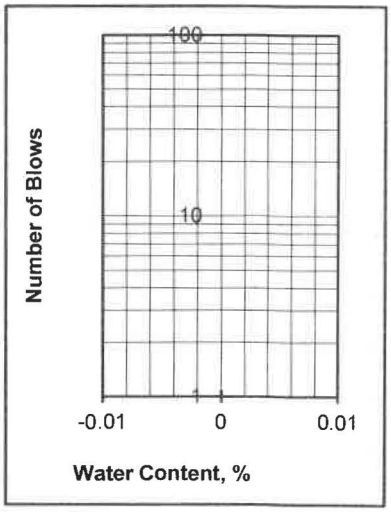
Date Tested: 9/16/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

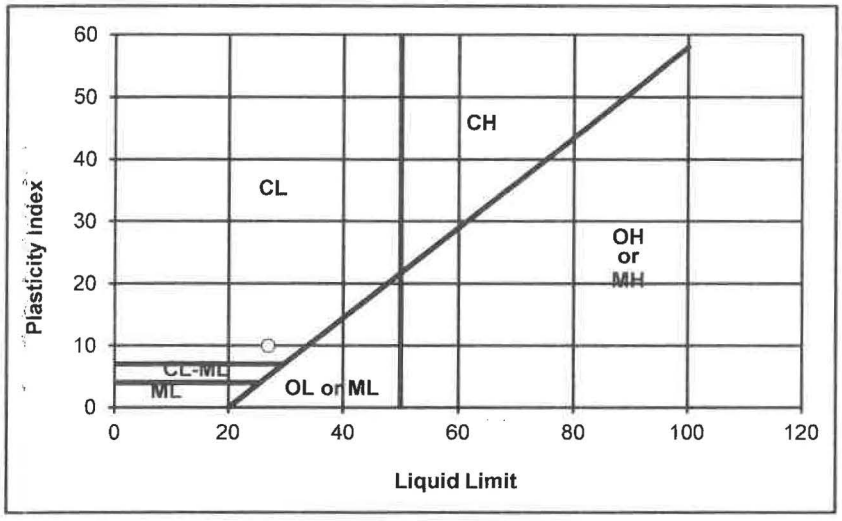
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B2 @ 25-26'
Sample Description: SC

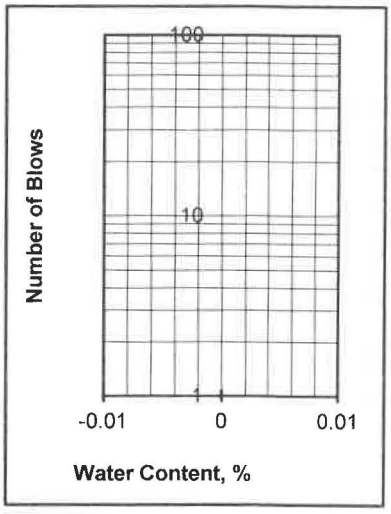
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

Trial Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	42.20	40.81		39.76	38.01	
Weight of Dry Soil & Tare (g)	39.51	38.30		36.30	34.05	
Weight of Tare (g)	23.65	23.51		23.37	19.51	
Weight of water (g)	2.70	2.51		3.46	3.96	
Weight of Dry Soil (g)	15.86	14.79		12.94	14.54	
Water Content (% of dry wt.)	17.0%	17.0%		26.7%	27.2%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 27**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

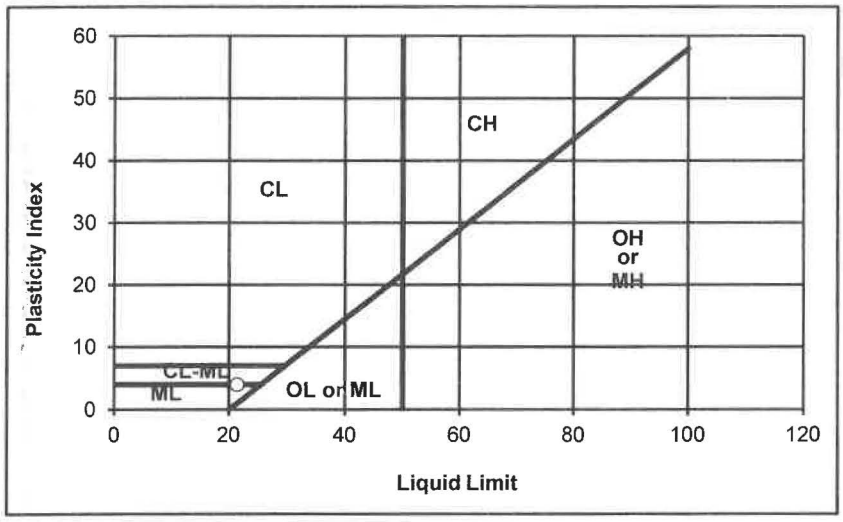
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B2 @ 35-36'
Sample Description: SC/SM

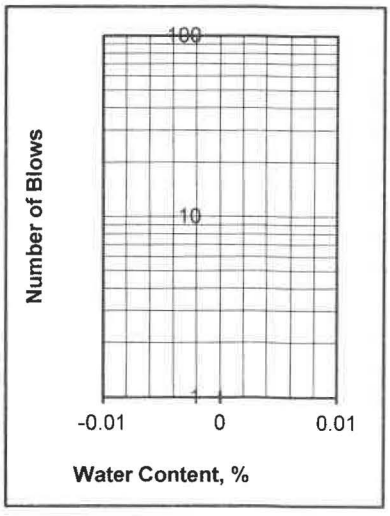
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	36.17	33.30		39.15	39.62	
Weight of Dry Soil & Tare (g)	34.29	31.77		36.37	36.78	
Weight of Tare (g)	23.40	22.84		23.45	23.42	
Weight of water (g)	1.89	1.54		2.78	2.84	
Weight of Dry Soil (g)	10.89	8.93		12.91	13.36	
Water Content (% of dry wt.)	17.3%	17.2%		21.6%	21.3%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 21**

Plasticity Index : 4
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

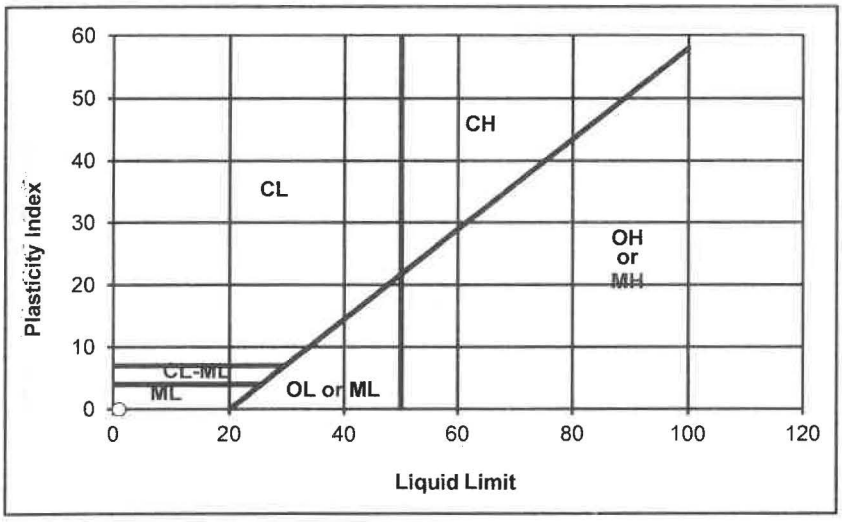
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/29/2022
Sampled By: DA
Sample Number: -
Sample Location: B2 @ 45-46'
Sample Description: SM

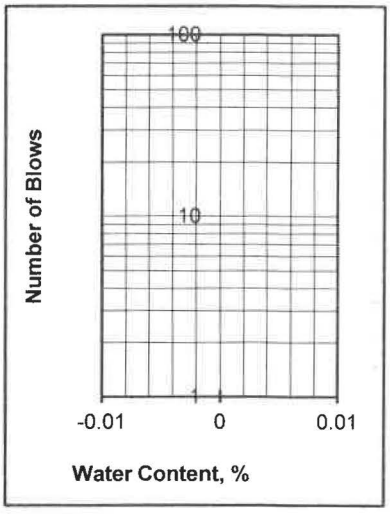
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

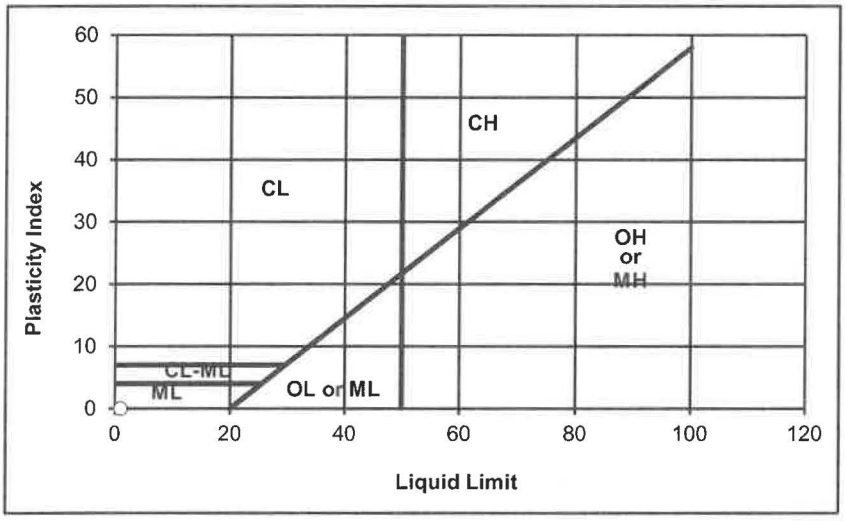
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B3 @ 10-11'
Sample Description: SM

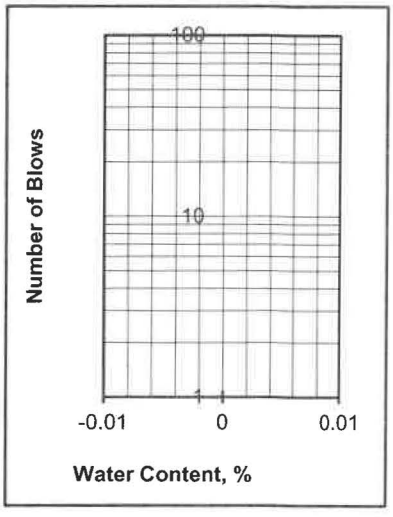
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

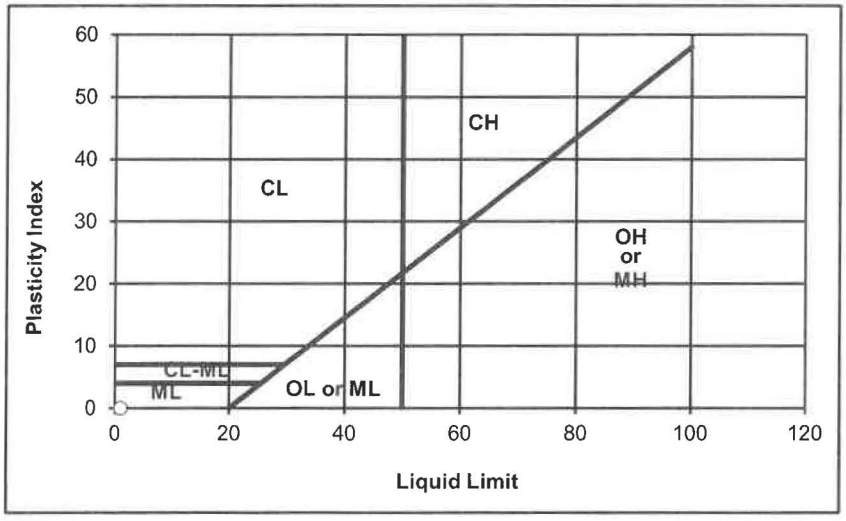
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B3 @ 15-16'
Sample Description: SM

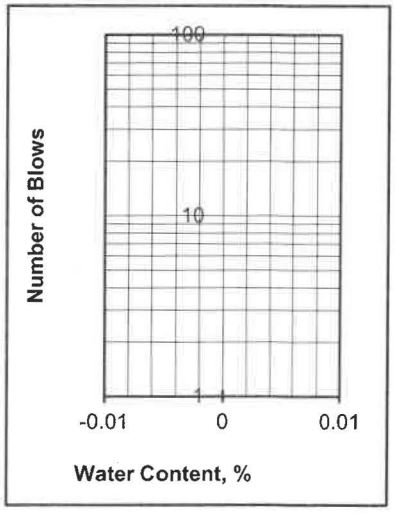
Date Tested: 9/16/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

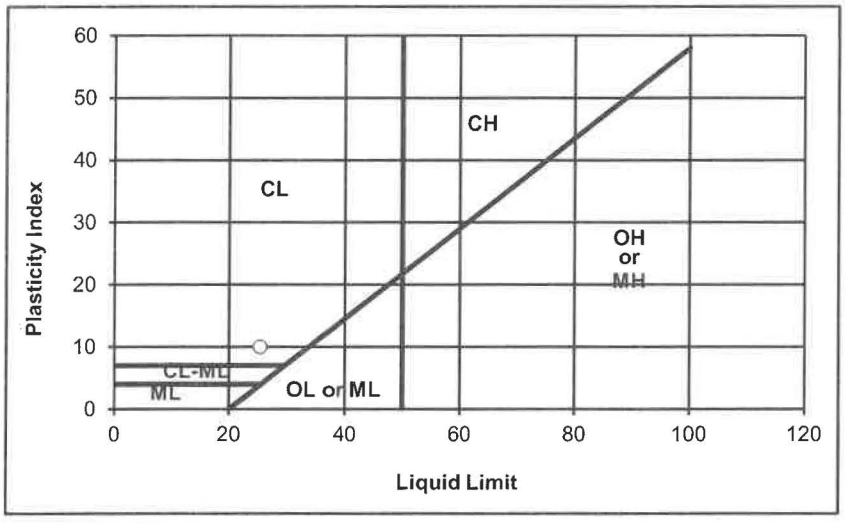
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B3 @ 20-21'
Sample Description: SC

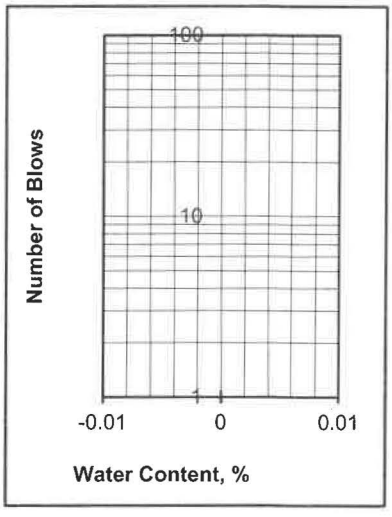
Date Tested: 9/16/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	38.11	37.08		38.49	38.48	
Weight of Dry Soil & Tare (g)	36.23	35.31		35.23	35.42	
Weight of Tare (g)	23.20	23.24		22.38	23.32	
Weight of water (g)	1.88	1.77		3.26	3.06	
Weight of Dry Soil (g)	13.03	12.07		12.86	12.10	
Water Content (% of dry wt.)	14.4%	14.7%		25.3%	25.3%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 25**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

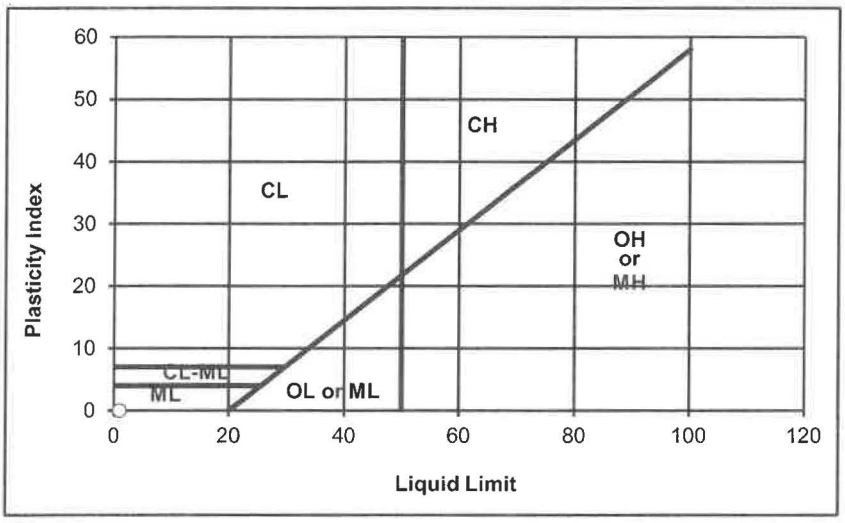
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B3 @ 25-26'
Sample Description: SM

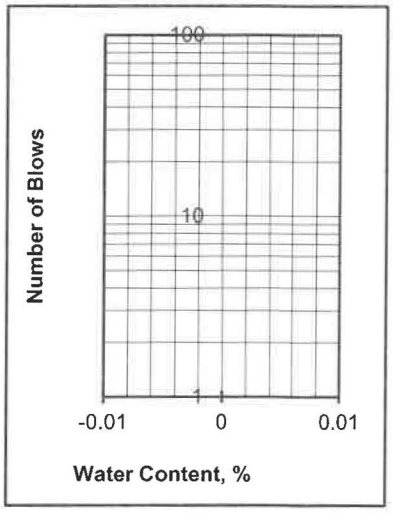
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

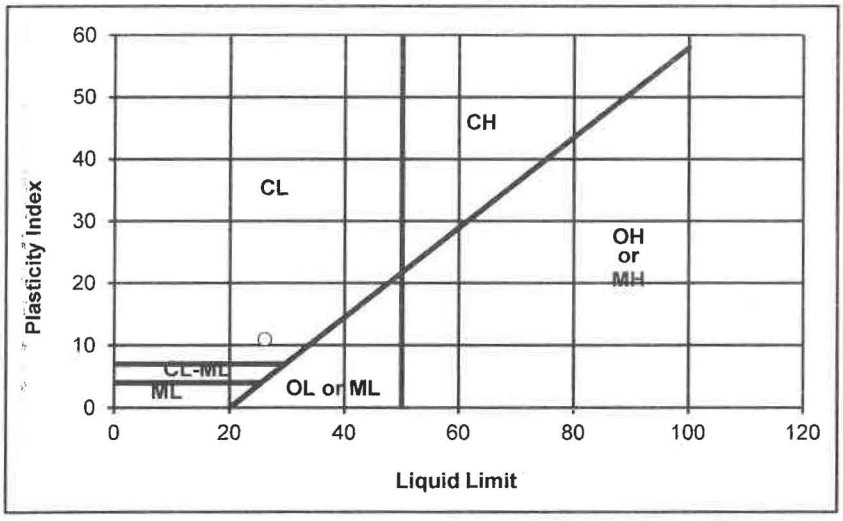
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B4 @ 10-11'
Sample Description: SC/CL

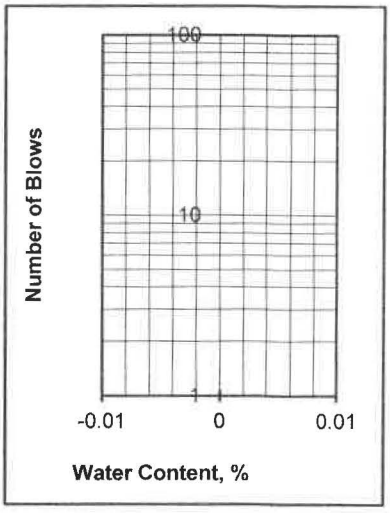
Date Tested: 9/16/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	41.18	35.13		37.49	37.74	
Weight of Dry Soil & Tare (g)	38.82	33.54		34.57	34.78	
Weight of Tare (g)	23.38	22.84		23.45	23.42	
Weight of water (g)	2.36	1.59		2.92	2.96	
Weight of Dry Soil (g)	15.44	10.70		11.12	11.36	
Water Content (% of dry wt.)	15.3%	14.8%		26.3%	26.1%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 26**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/30/2022
Sample Number	: -
Sample Location	: B4 @ 15-16'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	116.5	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	12.5	Initial Length,cm	7.11	% Passing # 200	29.4
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	5:15	5:32	0.18	2.94	9.86	7.10	21.5	19.8	22.5
2	5:32	5:55	2.94	5.68	7.10	4.36	21.5	19.8	22.5
3	5:58	6:31	0.34	5.12	9.80	5.02	21.5	19.8	22.5
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1020	0.75404	2.6E-05	2.601E-05
2	1380	0.67618	2.7E-05	2.664E-05
3	1980	0.57094	2.7E-05	2.66E-05
4				
5				
6				

Permeability
2.64E-05 cm/sec
2.64E-07 m/sec

Krazan Testing Laboratory

Plasticity Index of Soils

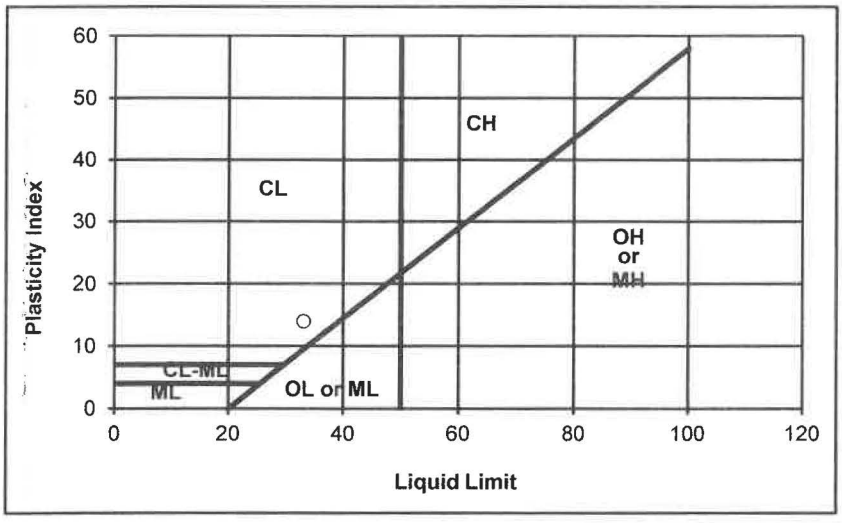
ASTM D4318/AASHTO T89 T90/CT 204

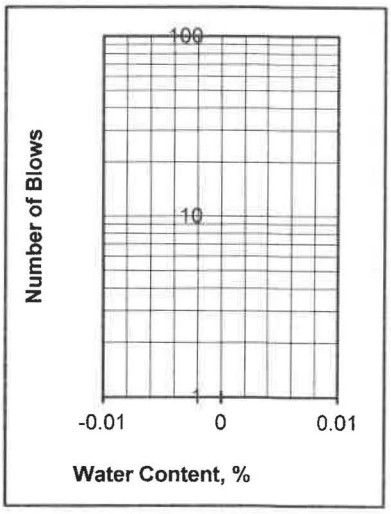
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B4 @ 25-26'
Sample Description: SC

Date Tested: 9/19/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	32.98	36.46		38.30	41.63	
Weight of Dry Soil & Tare (g)	31.44	34.40		34.31	37.09	
Weight of Tare (g)	23.22	23.23		22.38	23.32	
Weight of water (g)	1.54	2.06		3.98	4.54	
Weight of Dry Soil (g)	8.22	11.18		11.93	13.77	
Water Content (% of dry wt.)	18.7%	18.4%		33.4%	33.0%	
Number of Blows				25	25	
	Plastic Limit : 19			**Liquid Limit : 33**		

Plasticity Index : 14
Unified Soil Classification : CL
Requirement:
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

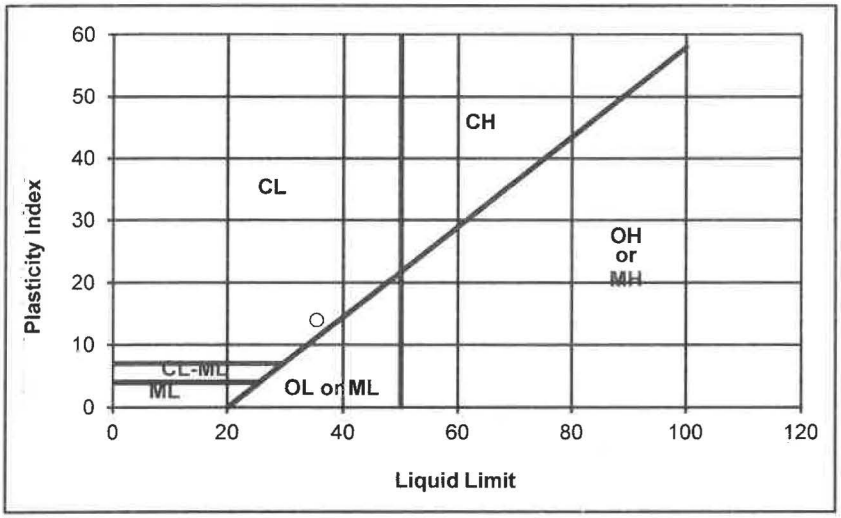
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B4 @ 30-31'
Sample Description: CL

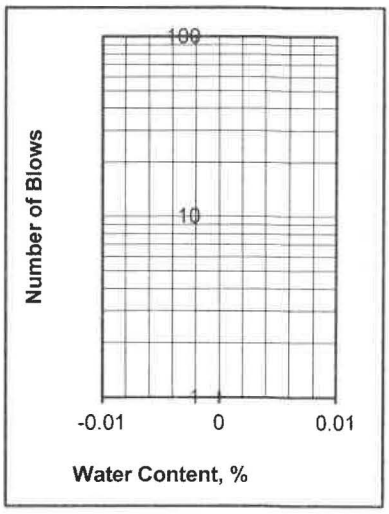
Date Tested: 9/19/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	39.05	38.40		35.91	35.72	
Weight of Dry Soil & Tare (g)	36.33	35.70		32.66	32.50	
Weight of Tare (g)	23.38	22.84		23.47	23.43	
Weight of water (g)	2.73	2.70		3.25	3.22	
Weight of Dry Soil (g)	12.95	12.86		9.19	9.07	
Water Content (% of dry wt.)	21.1%	21.0%		35.3%	35.6%	
Number of Blows				25	25	

Plastic Limit : 21 **Liquid Limit : 35**

Plasticity Index : 14
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

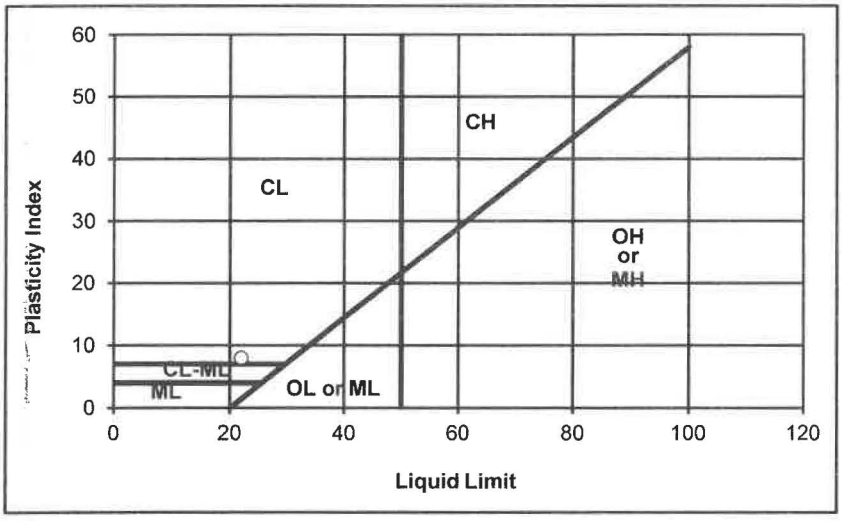
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B5 @ 10-11'
Sample Description: SC

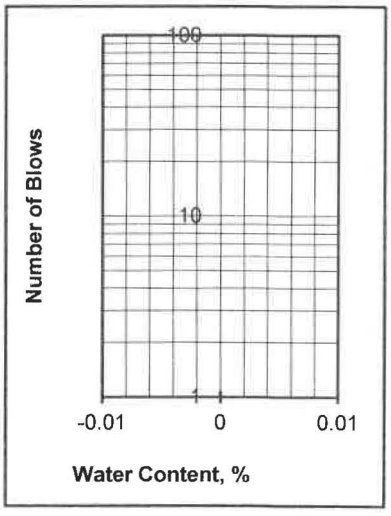
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	47.58	49.70		43.44	47.87	
Weight of Dry Soil & Tare (g)	44.68	46.43		39.66	43.44	
Weight of Tare (g)	23.47	23.23		22.38	23.32	
Weight of water (g)	2.90	3.27		3.78	4.43	
Weight of Dry Soil (g)	21.21	23.20		17.28	20.13	
Water Content (% of dry wt.)	13.7%	14.1%		21.9%	22.0%	
Number of Blows				25	25	

Plastic Limit : 14 **Liquid Limit : 22**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

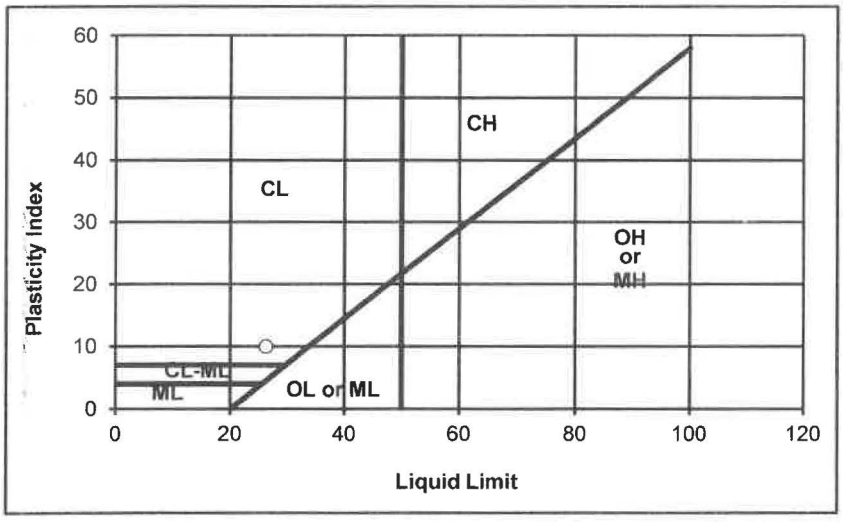
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B5 @ 15-16'
Sample Description: SC

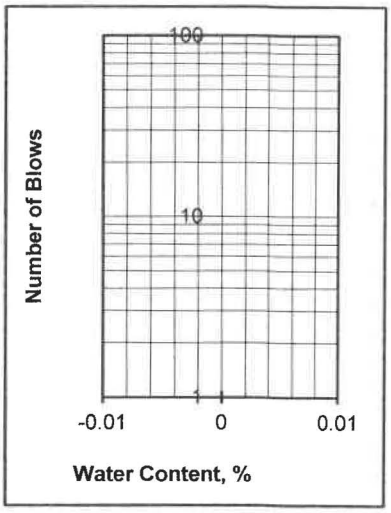
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	37.93	34.92		36.62	35.28	
Weight of Dry Soil & Tare (g)	35.90	33.29		33.83	32.81	
Weight of Tare (g)	23.39	22.85		23.22	23.42	
Weight of water (g)	2.03	1.63		2.79	2.47	
Weight of Dry Soil (g)	12.51	10.45		10.62	9.40	
Water Content (% of dry wt.)	16.3%	15.6%		26.3%	26.3%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 26**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

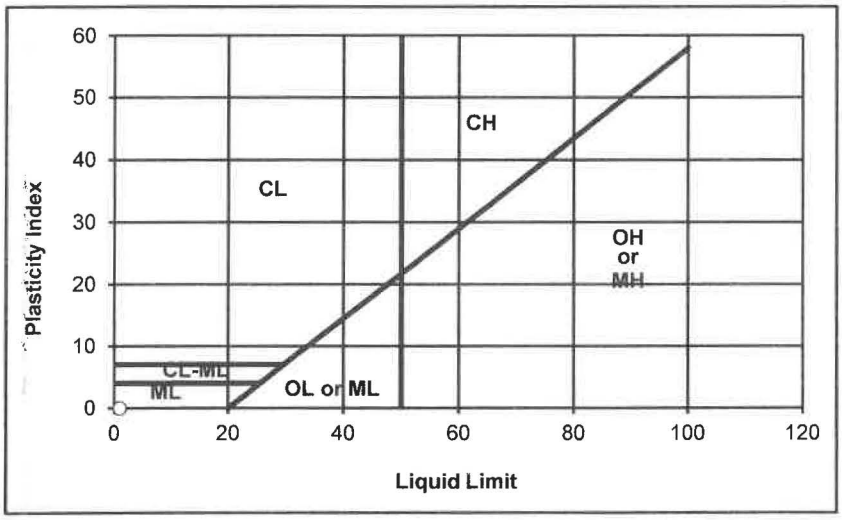
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B5 @ 20-21'
Sample Description: SM

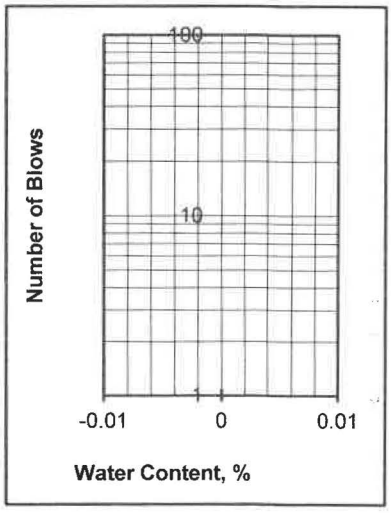
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

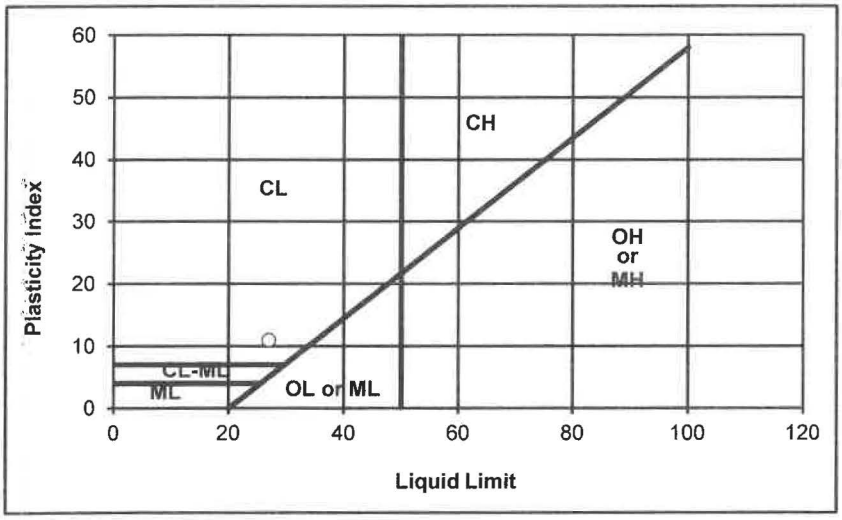
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B5 @ 30-31'
Sample Description: SC

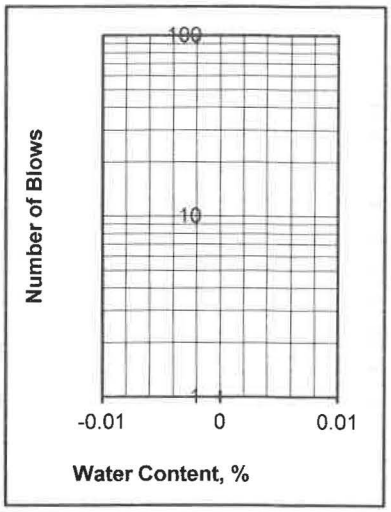
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	37.45	39.24		42.10	42.52	
Weight of Dry Soil & Tare (g)	35.51	37.07		38.01	38.46	
Weight of Tare (g)	23.27	23.28		22.88	23.38	
Weight of water (g)	1.95	2.17		4.09	4.07	
Weight of Dry Soil (g)	12.24	13.79		15.13	15.08	
Water Content (% of dry wt.)	15.9%	15.7%		27.0%	27.0%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 27**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

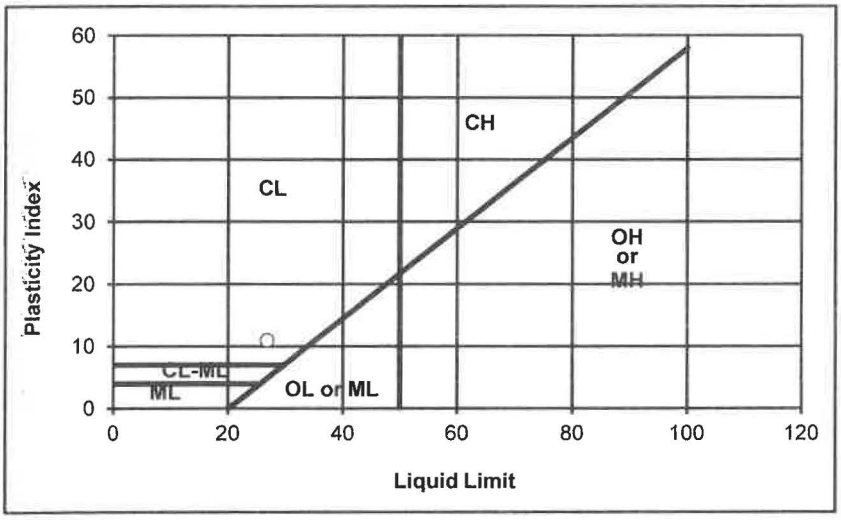
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B5 @ 35-36'
Sample Description: SC

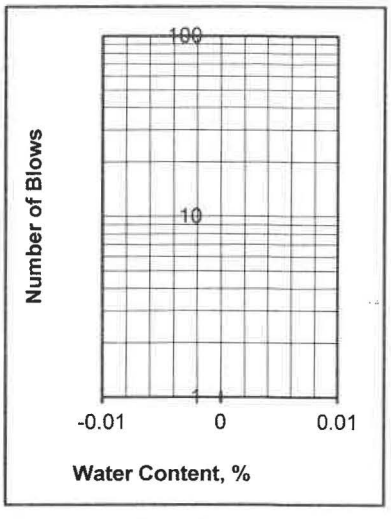
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	39.88	42.32		40.49	37.83	
Weight of Dry Soil & Tare (g)	37.63	39.76		36.88	33.96	
Weight of Tare (g)	23.65	23.53		23.38	19.54	
Weight of water (g)	2.25	2.56		3.60	3.87	
Weight of Dry Soil (g)	13.98	16.23		13.51	14.42	
Water Content (% of dry wt.)	16.1%	15.8%		26.7%	26.9%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 27**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

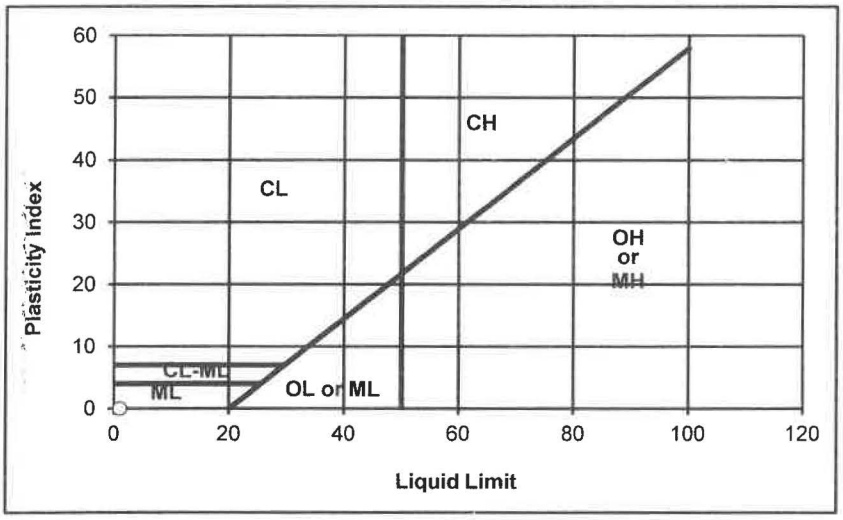
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B6 @ 5-6'
Sample Description: SM

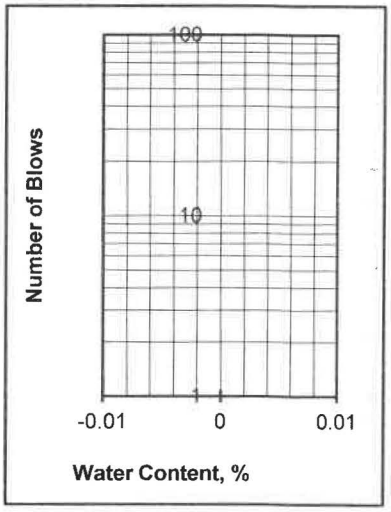
Date Tested: 9/19/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

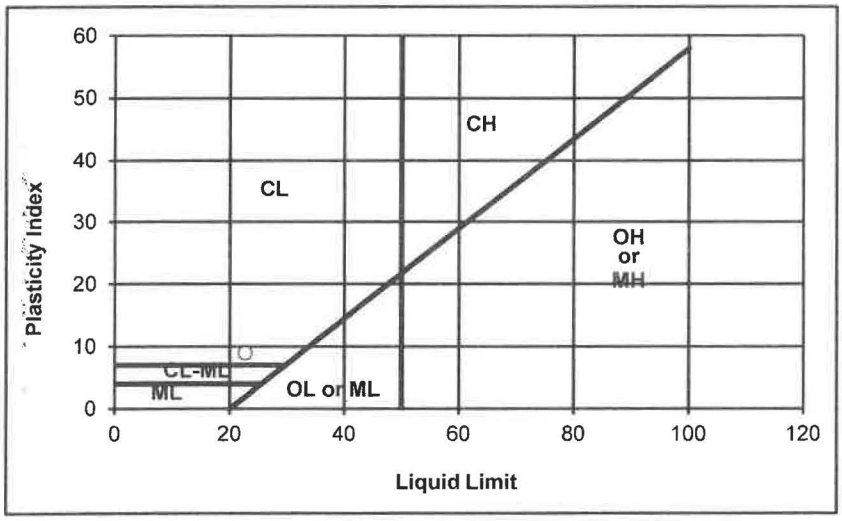
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B6 @ 10-11'
Sample Description: SC

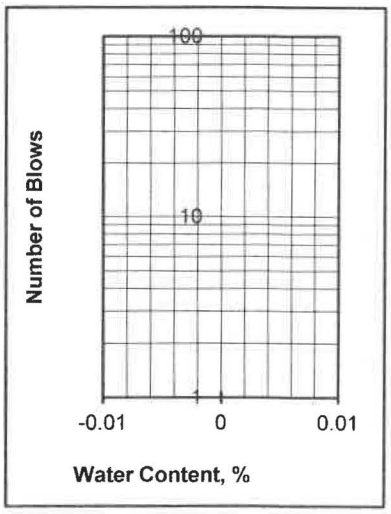
Date Tested: 9/21/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	39.07	41.36		35.15	35.29	
Weight of Dry Soil & Tare (g)	37.07	39.12		32.79	33.11	
Weight of Tare (g)	23.22	23.38		22.38	23.52	
Weight of water (g)	1.99	2.24		2.36	2.18	
Weight of Dry Soil (g)	13.85	15.75		10.41	9.59	
Water Content (% of dry wt.)	14.4%	14.2%		22.7%	22.7%	
Number of Blows				25	25	

Plastic Limit : 14 **Liquid Limit : 23**

Plasticity Index : 9
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

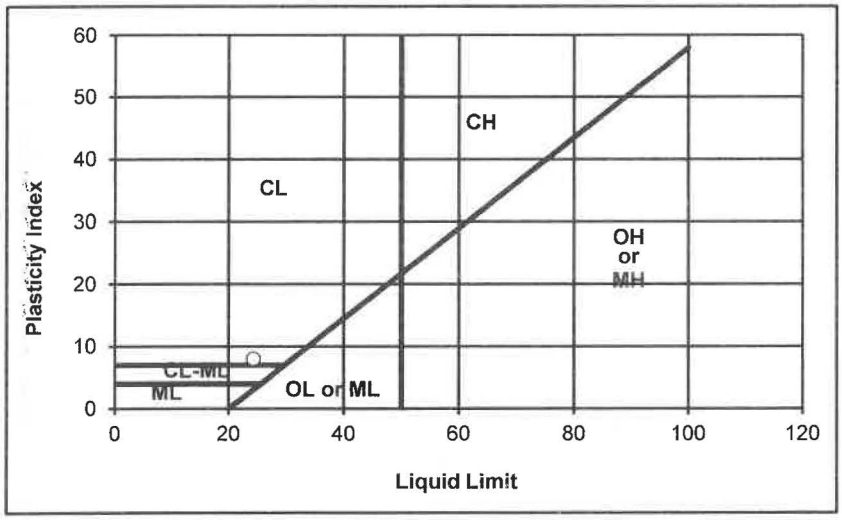
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B6 @ 15-16'
Sample Description: SC

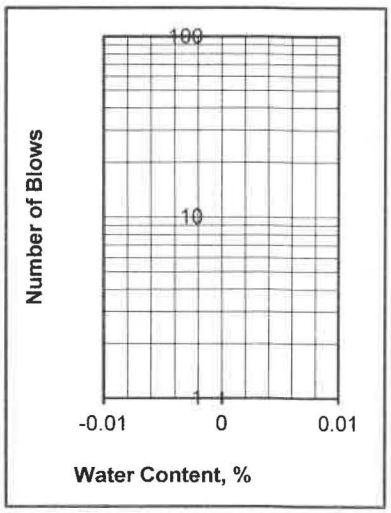
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	39.54	43.27		36.76	43.93	
Weight of Dry Soil & Tare (g)	37.38	40.52		34.20	39.92	
Weight of Tare (g)	23.40	23.22		23.47	23.64	
Weight of water (g)	2.16	2.76		2.56	4.01	
Weight of Dry Soil (g)	13.98	17.30		10.73	16.28	
Water Content (% of dry wt.)	15.4%	15.9%		23.8%	24.7%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 24**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

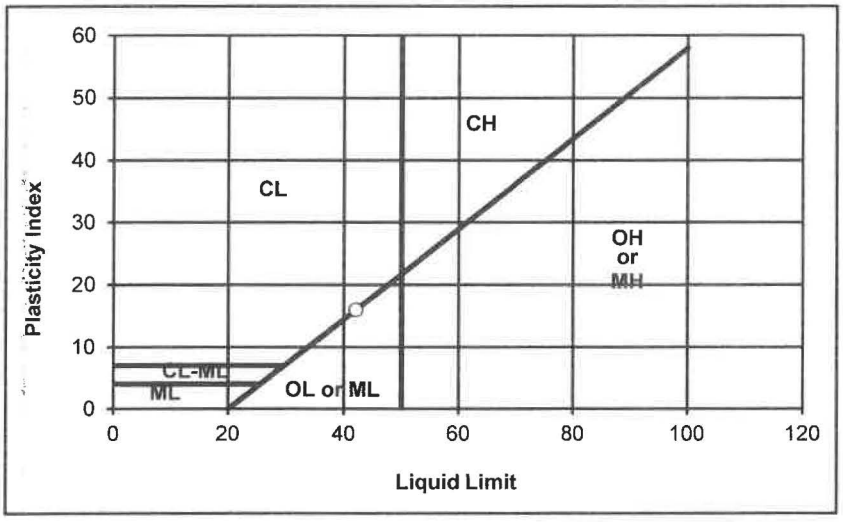
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B6 @ 20-21'
Sample Description: CL

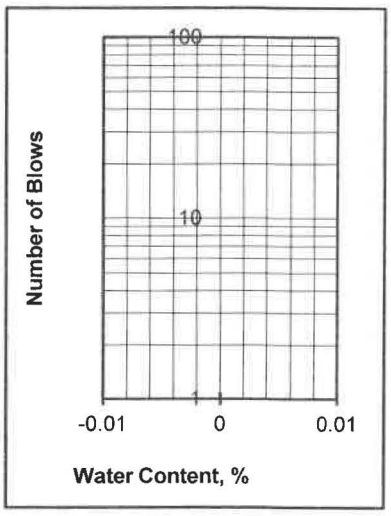
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	41.70	38.88		30.82	37.17	
Weight of Dry Soil & Tare (g)	37.97	35.72		27.45	32.96	
Weight of Tare (g)	23.43	23.32		19.53	22.84	
Weight of water (g)	3.73	3.16		3.37	4.22	
Weight of Dry Soil (g)	14.54	12.40		7.92	10.12	
Water Content (% of dry wt.)	25.6%	25.5%		42.6%	41.7%	
Number of Blows				25	25	

Plastic Limit : 26 **Liquid Limit : 42**

Plasticity Index : 16
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

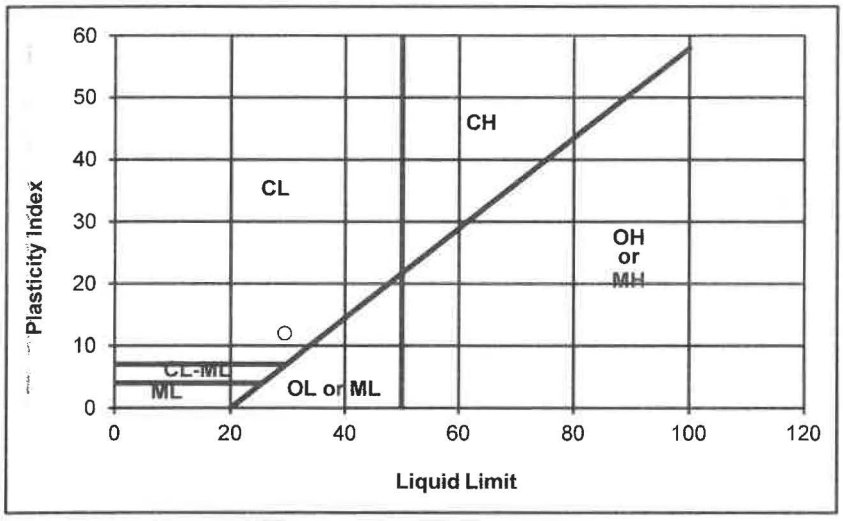
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 8/30/2022
Sampled By: DA
Sample Number: -
Sample Location: B6 @ 25-26'
Sample Description: SC

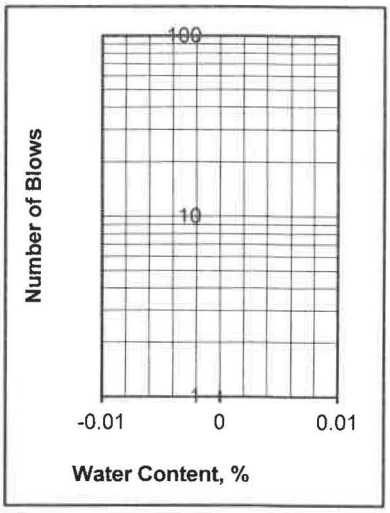
Date Tested: 9/15/2022
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	36.96	45.22		39.89	40.10	
Weight of Dry Soil & Tare (g)	34.96	42.10		36.02	36.31	
Weight of Tare (g)	23.26	23.26		22.90	23.39	
Weight of water (g)	2.00	3.12		3.87	3.78	
Weight of Dry Soil (g)	11.70	18.84		13.12	12.92	
Water Content (% of dry wt.)	17.1%	16.5%		29.5%	29.3%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 29**

Plasticity Index : 12
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

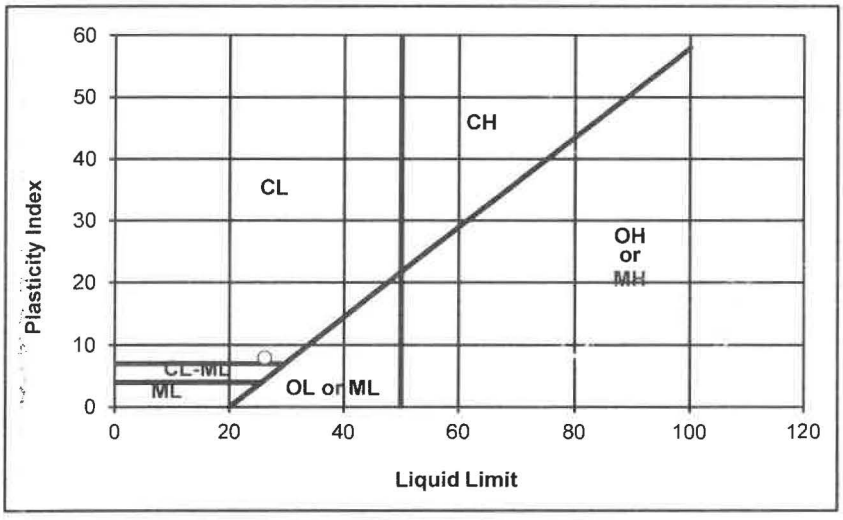
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B7 @ 20-21'
Sample Description: SC

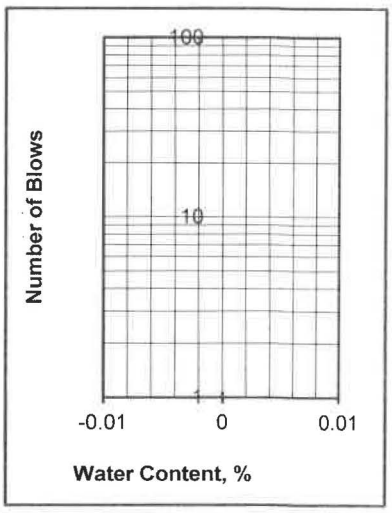
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	31.22	30.56		38.74	39.86	
Weight of Dry Soil & Tare (g)	29.72	28.94		34.57	35.84	
Weight of Tare (g)	21.17	19.66		18.45	20.58	
Weight of water (g)	1.50	1.62		4.17	4.02	
Weight of Dry Soil (g)	8.55	9.28		16.12	15.26	
Water Content (% of dry wt.)	17.6%	17.5%		25.9%	26.3%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 26**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

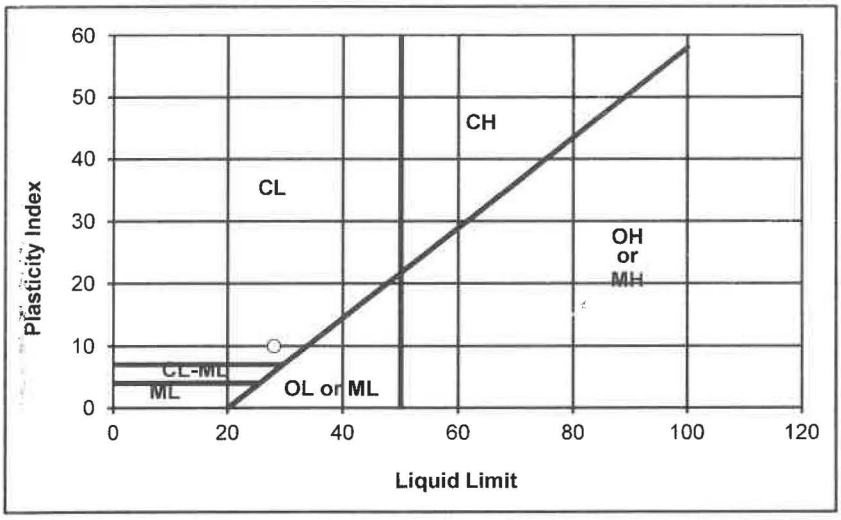
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Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B7 @ 25-26'
Sample Description: SC

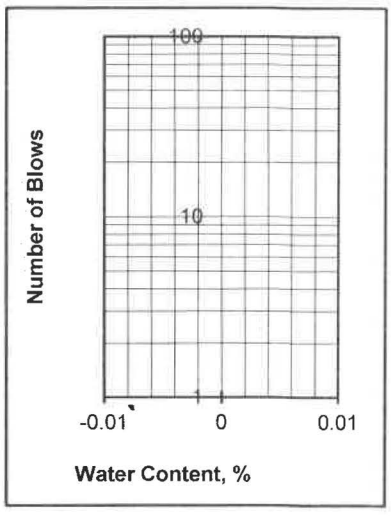
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	32.13	34.82		38.39	40.17	
Weight of Dry Soil & Tare (g)	30.21	32.98		35.24	36.58	
Weight of Tare (g)	19.58	22.67		23.79	24.02	
Weight of water (g)	1.92	1.84		3.15	3.59	
Weight of Dry Soil (g)	10.63	10.31		11.45	12.56	
Water Content (% of dry wt.)	18.1%	17.8%		27.5%	28.6%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 28**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

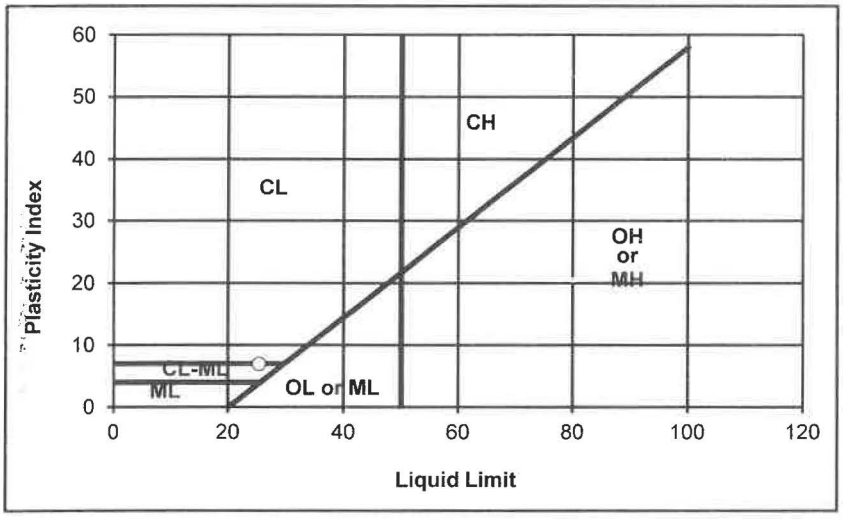
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B7 @ 30-31'
Sample Description: SC/SM

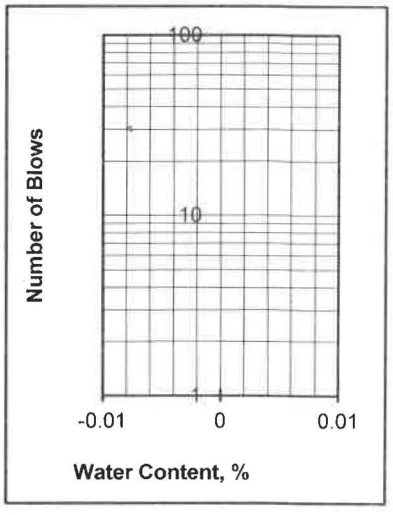
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	37.75	37.99		37.73	41.04	
Weight of Dry Soil & Tare (g)	35.71	35.89		34.90	37.75	
Weight of Tare (g)	24.00	24.10		23.79	24.68	
Weight of water (g)	2.04	2.10		2.83	3.29	
Weight of Dry Soil (g)	11.71	11.79		11.11	13.07	
Water Content (% of dry wt.)	17.4%	17.8%		25.5%	25.2%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 25**

Plasticity Index : 7
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

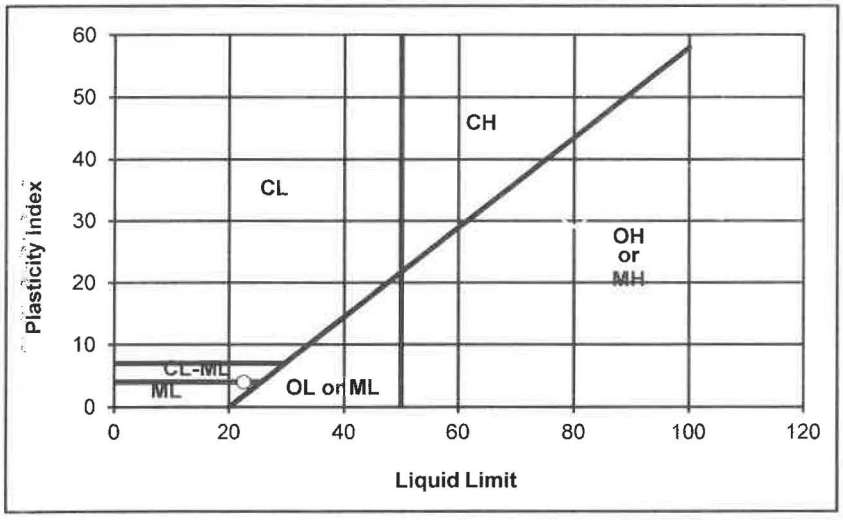
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B7 @ 35-36'
Sample Description: SC/SM

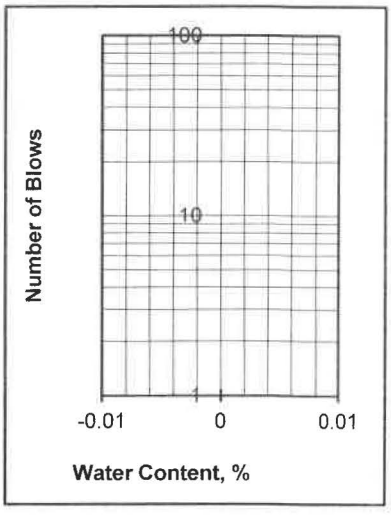
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	38.38	36.71		46.18	43.48	
Weight of Dry Soil & Tare (g)	36.11	34.72		42.07	40.04	
Weight of Tare (g)	24.03	24.12		23.86	24.77	
Weight of water (g)	2.27	1.99		4.11	3.44	
Weight of Dry Soil (g)	12.08	10.60		18.21	15.27	
Water Content (% of dry wt.)	18.8%	18.8%		22.6%	22.5%	
Number of Blows				25	25	

Plastic Limit : 19 **Liquid Limit : 23**

Plasticity Index : 4
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

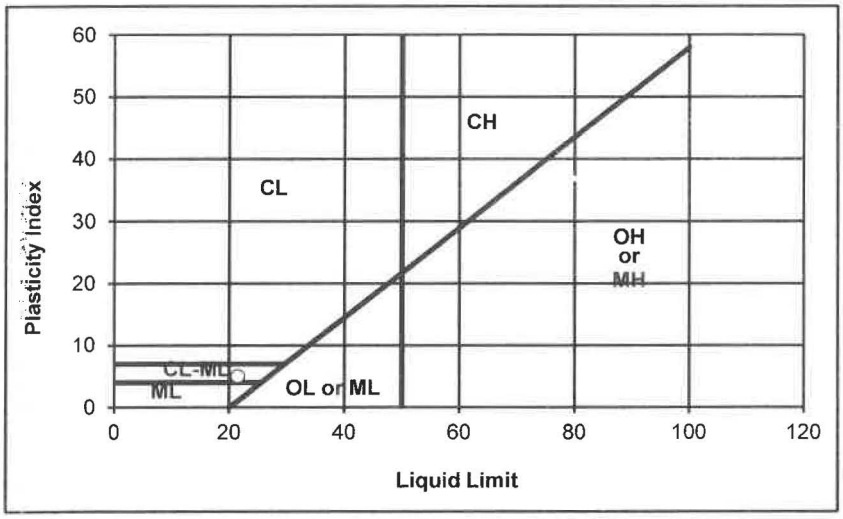
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B7 @ 40-41'
Sample Description: SC/SM

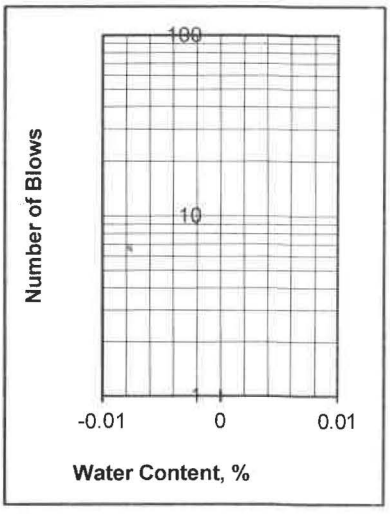
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	31.97	36.38		43.49	39.90	
Weight of Dry Soil & Tare (g)	30.85	34.65		40.11	37.14	
Weight of Tare (g)	23.72	23.80		24.24	24.36	
Weight of water (g)	1.12	1.73		3.38	2.76	
Weight of Dry Soil (g)	7.13	10.85		15.87	12.78	
Water Content (% of dry wt.)	15.7%	15.9%		21.3%	21.6%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 21**

Plasticity Index : 5
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

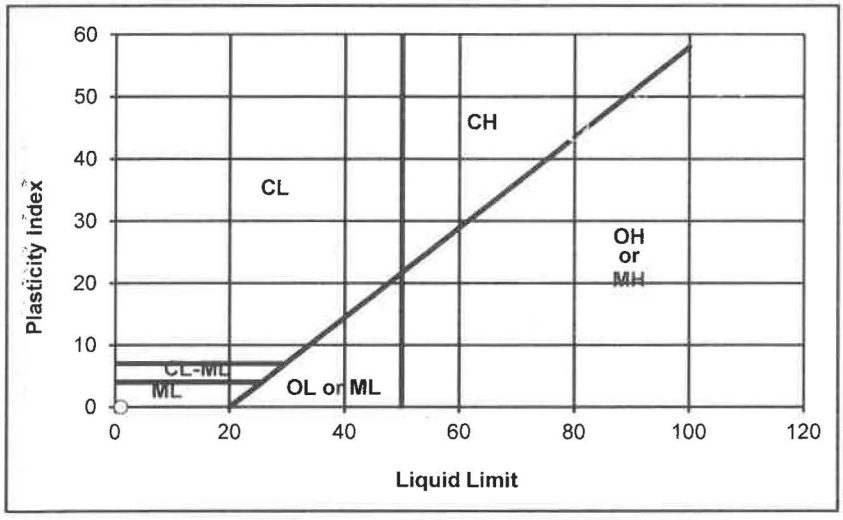
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B7 @ 45-46'
Sample Description: SM

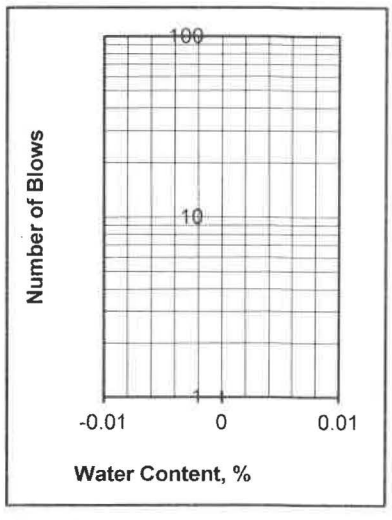
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

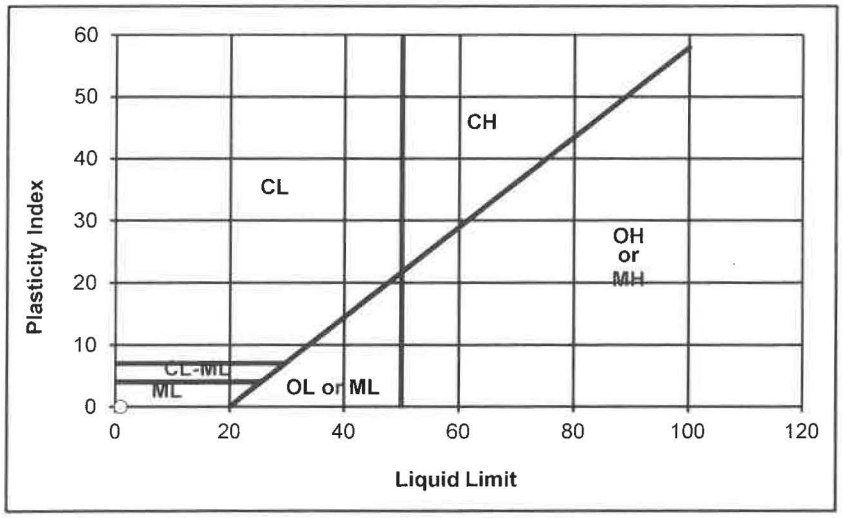
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B8 @ 20-21'
Sample Description: SM/ML

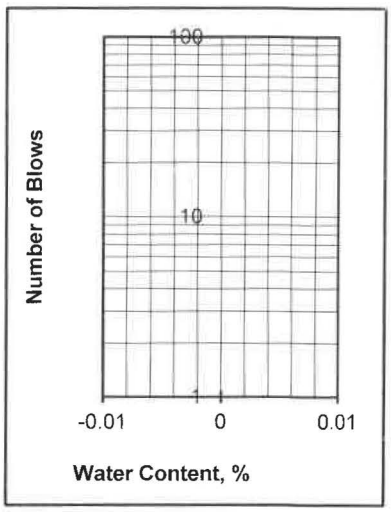
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

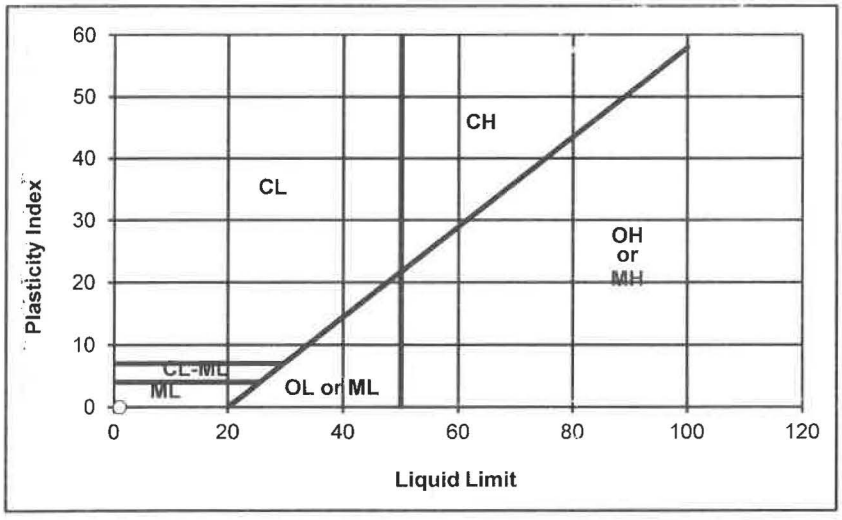
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B8 @ 25-26'
Sample Description: SM

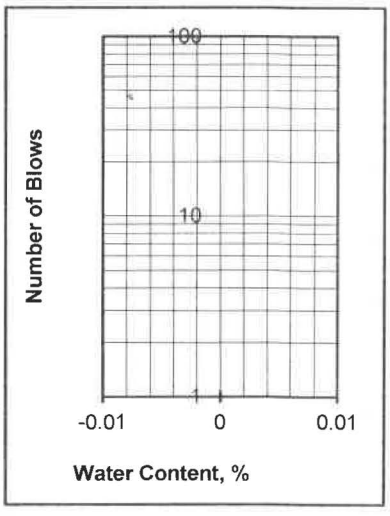
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

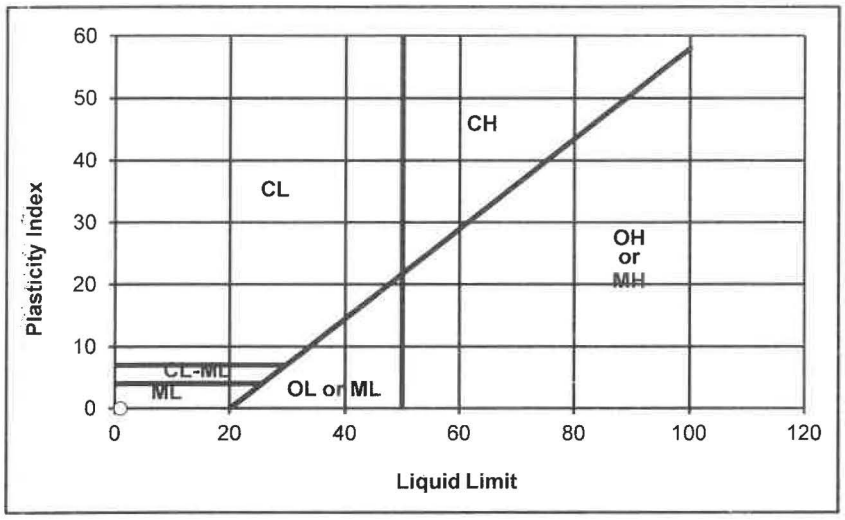
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B8 @ 30-31'
Sample Description: SM

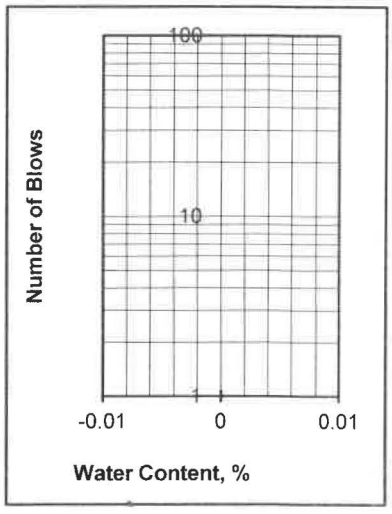
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

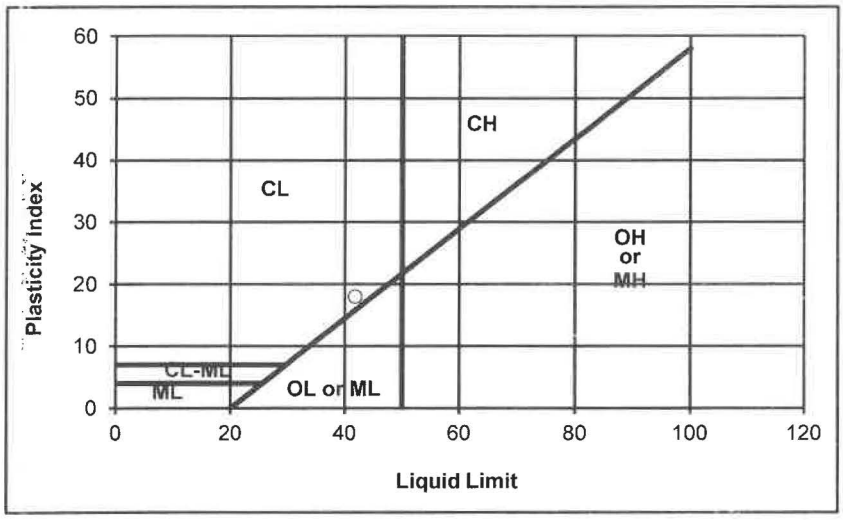
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B8 @ 35-36'
Sample Description: CL

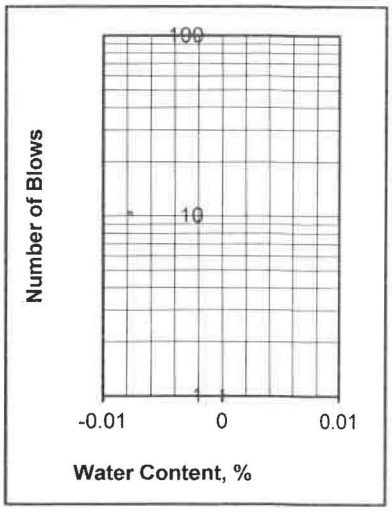
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.52	35.59		41.48	43.29	
Weight of Dry Soil & Tare (g)	33.26	33.33		36.27	37.77	
Weight of Tare (g)	24.01	24.09		23.78	24.60	
Weight of water (g)	2.26	2.26		5.21	5.52	
Weight of Dry Soil (g)	9.25	9.24		12.49	13.17	
Water Content (% of dry wt.)	24.4%	24.5%		41.7%	41.9%	
Number of Blows				25	25	

Plastic Limit : 24 **Liquid Limit : 42**

Plasticity Index : 18
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

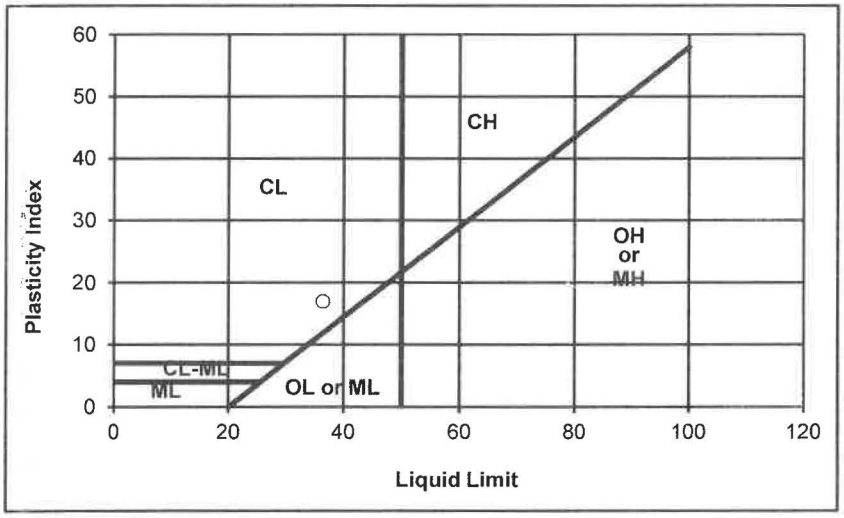
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B8 @ 40-41'
Sample Description: SC/CL

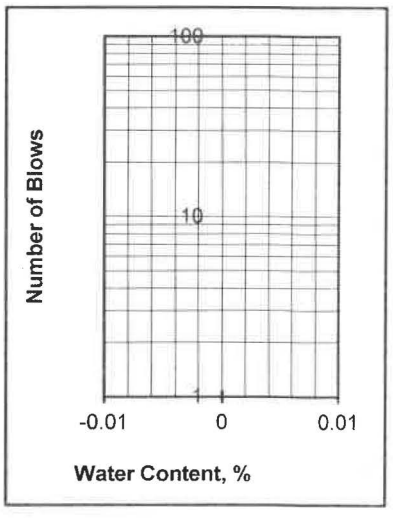
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	38.18	45.69		41.52	37.82	
Weight of Dry Soil & Tare (g)	35.89	42.33		36.93	34.25	
Weight of Tare (g)	23.74	23.82		24.33	24.43	
Weight of water (g)	2.29	3.36		4.59	3.57	
Weight of Dry Soil (g)	12.15	18.51		12.60	9.82	
Water Content (% of dry wt.)	18.8%	18.2%		36.4%	36.4%	
Number of Blows				25	25	

Plastic Limit : 19 **Liquid Limit : 36**

Plasticity Index : 17
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

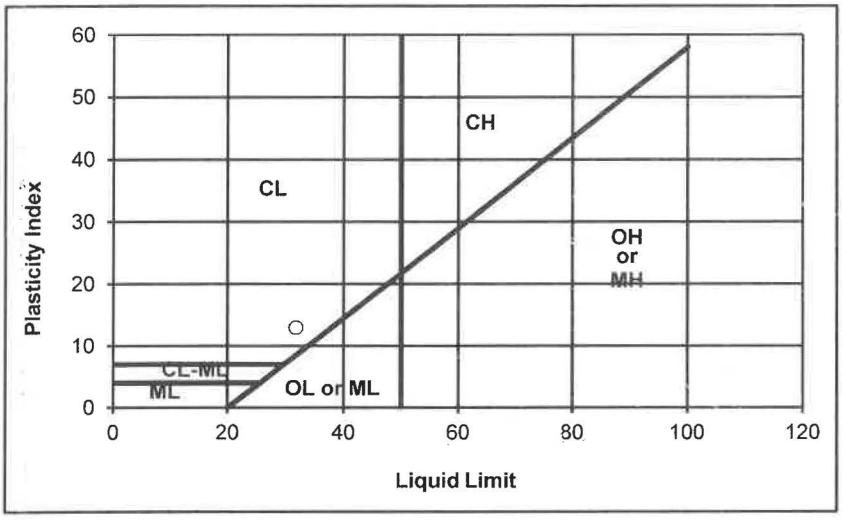
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/14/2023
Sampled By: DA
Sample Number: -
Sample Location: B8 @ 45-46'
Sample Description: SC/CL

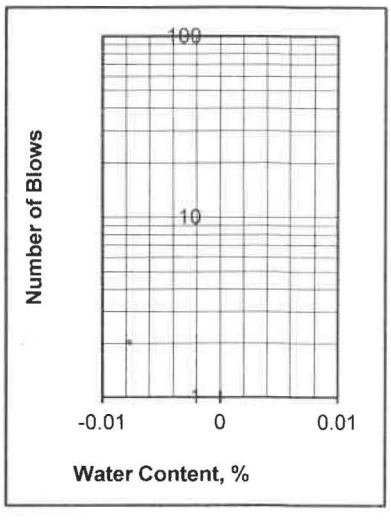
Date Tested: 2/22/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	31.60	33.14		35.39	39.80	
Weight of Dry Soil & Tare (g)	29.68	31.49		32.58	36.01	
Weight of Tare (g)	19.58	22.68		23.75	24.02	
Weight of water (g)	1.92	1.65		2.81	3.79	
Weight of Dry Soil (g)	10.10	8.81		8.83	11.99	
Water Content (% of dry wt.)	19.0%	18.7%		31.8%	31.6%	
Number of Blows				25	25	

Plastic Limit : 19 **Liquid Limit : 32**

Plasticity Index : 13
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

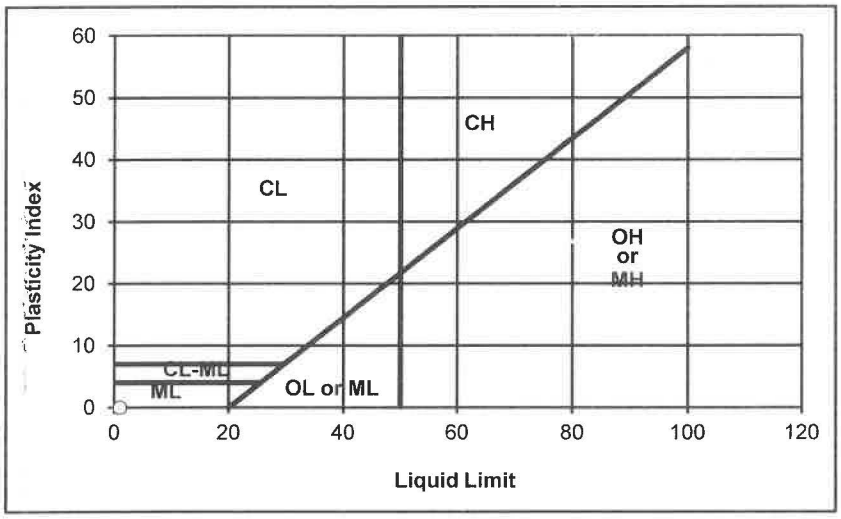
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B9 @ 2-3'
Sample Description: ML

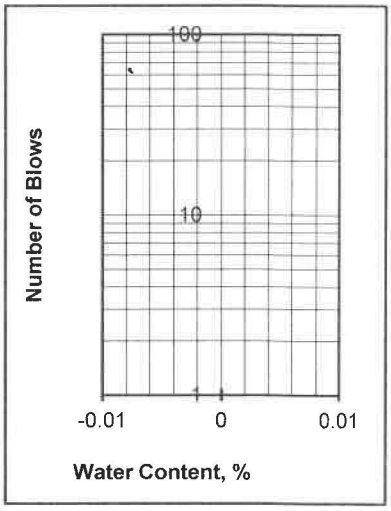
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

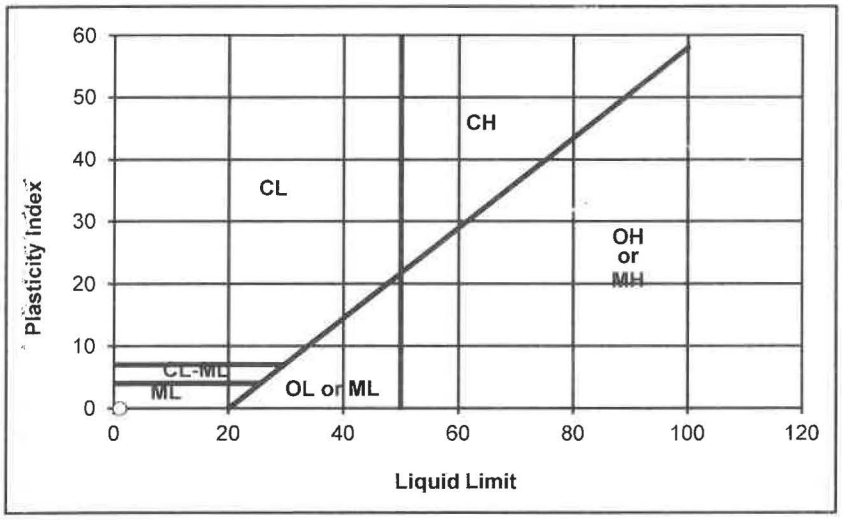
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B9 @ 5-6'
Sample Description: SM/ML

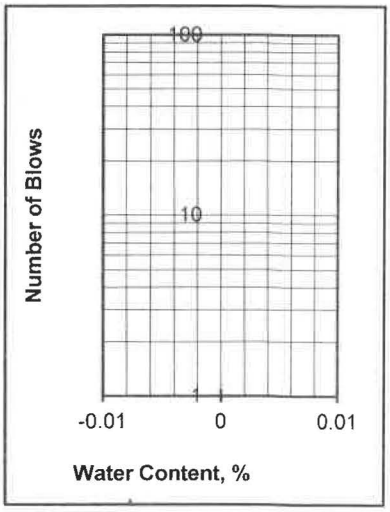
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

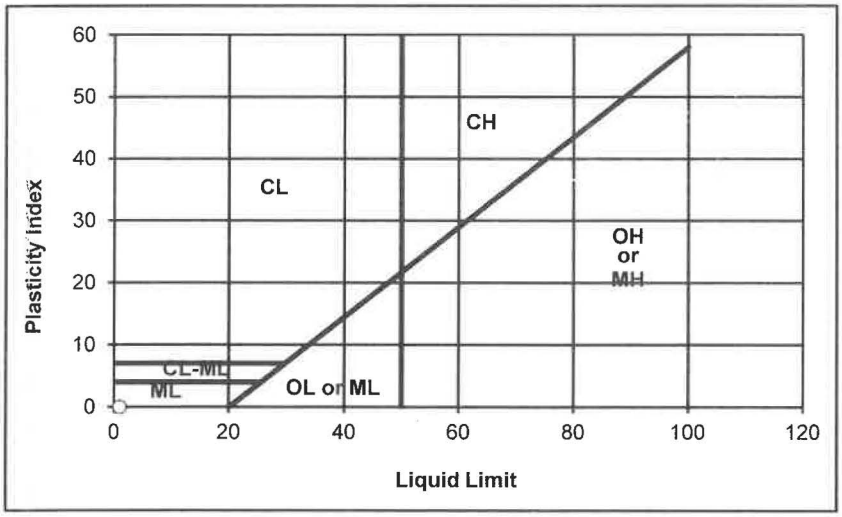
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B9 @ 25-26'
Sample Description: SM

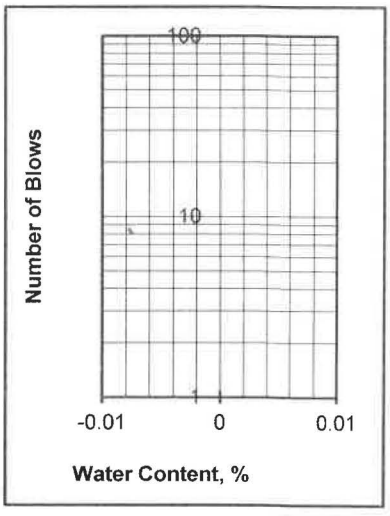
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

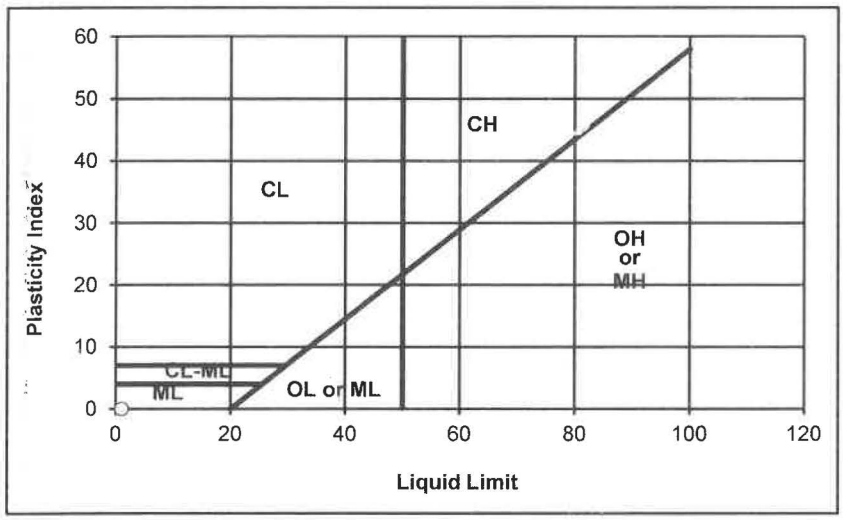
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B9 @ 30-31'
Sample Description: SM

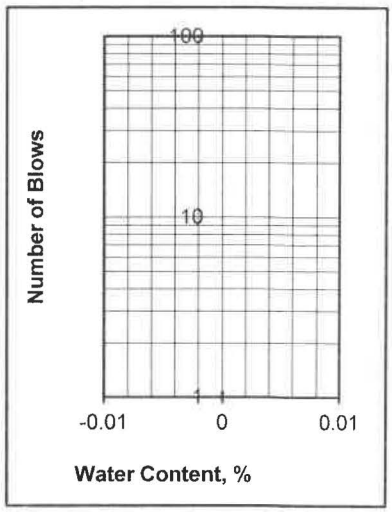
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

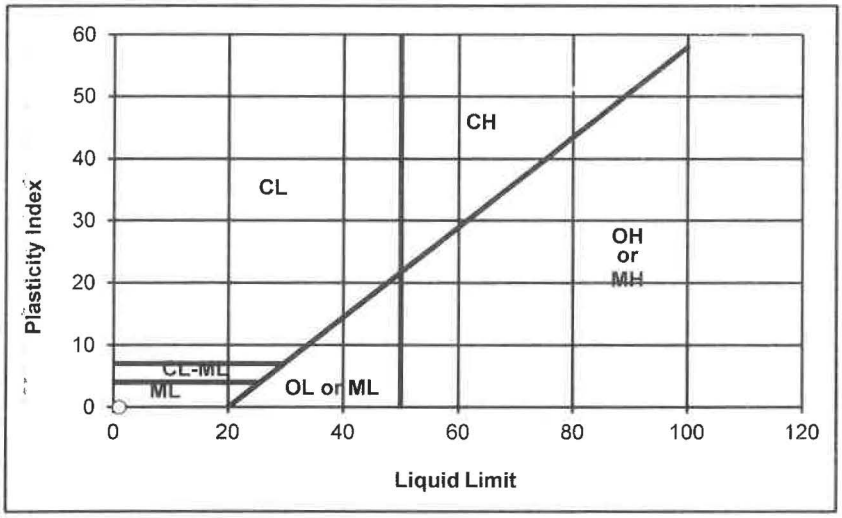
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B9 @ 35-36'
Sample Description: SM

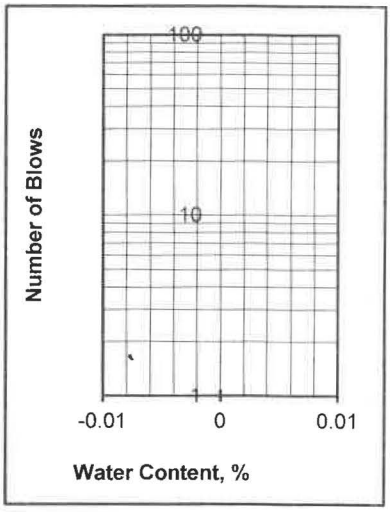
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

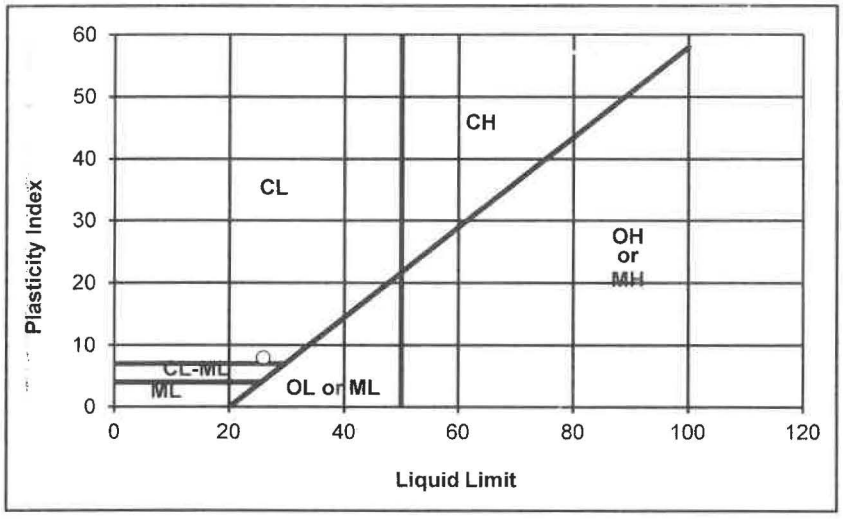
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B9 @ 40-41'
Sample Description: SC

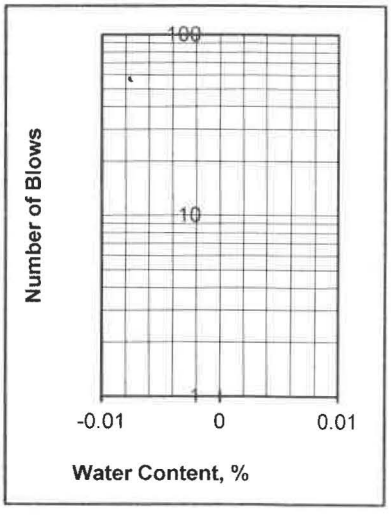
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	39.22	39.53		37.83	38.90	
Weight of Dry Soil & Tare (g)	36.92	37.27		35.02	36.02	
Weight of Tare (g)	24.10	24.18		24.08	25.00	
Weight of water (g)	2.30	2.26		2.81	2.88	
Weight of Dry Soil (g)	12.82	13.09		10.94	11.02	
Water Content (% of dry wt.)	17.9%	17.3%		25.7%	26.1%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 26**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

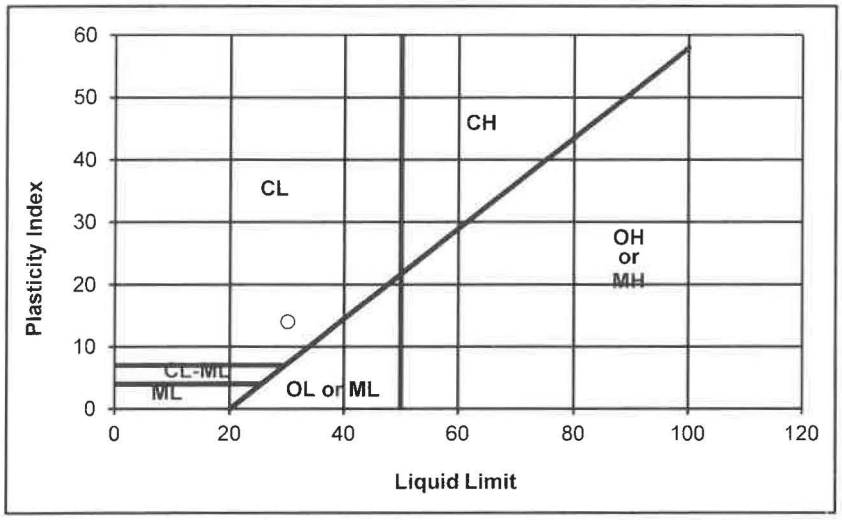
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B9 @ 45-46'
Sample Description: SC

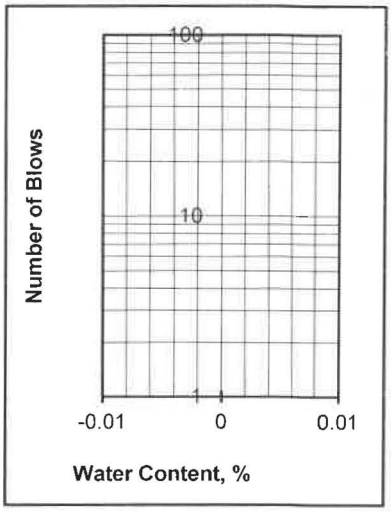
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	39.43	42.09		41.92	37.24	
Weight of Dry Soil & Tare (g)	37.23	39.59		37.75	34.39	
Weight of Tare (g)	24.07	24.15		23.96	24.89	
Weight of water (g)	2.20	2.50		4.17	2.85	
Weight of Dry Soil (g)	13.16	15.44		13.79	9.50	
Water Content (% of dry wt.)	16.7%	16.2%		30.2%	30.0%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 30**

Plasticity Index : 14
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

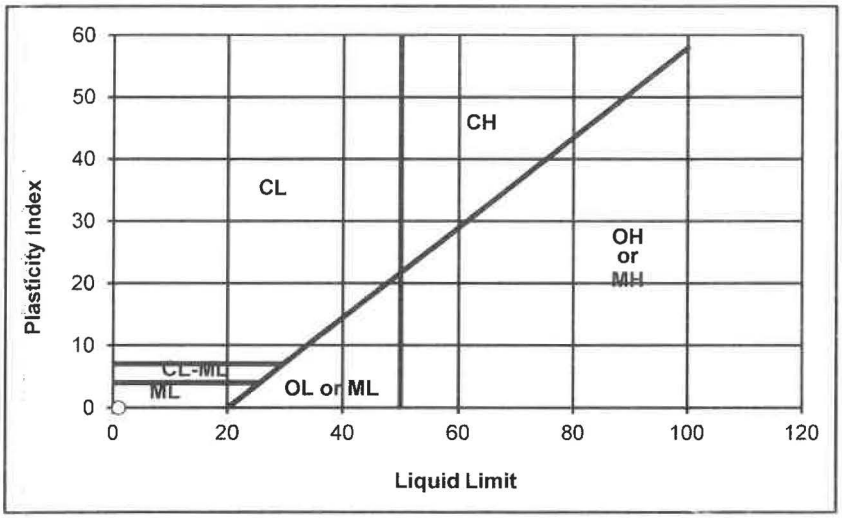
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B10 @ 2-3'
Sample Description: ML

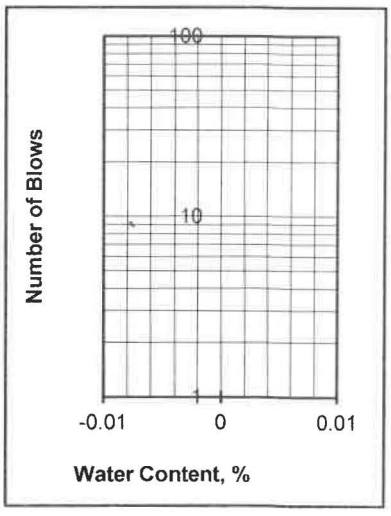
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

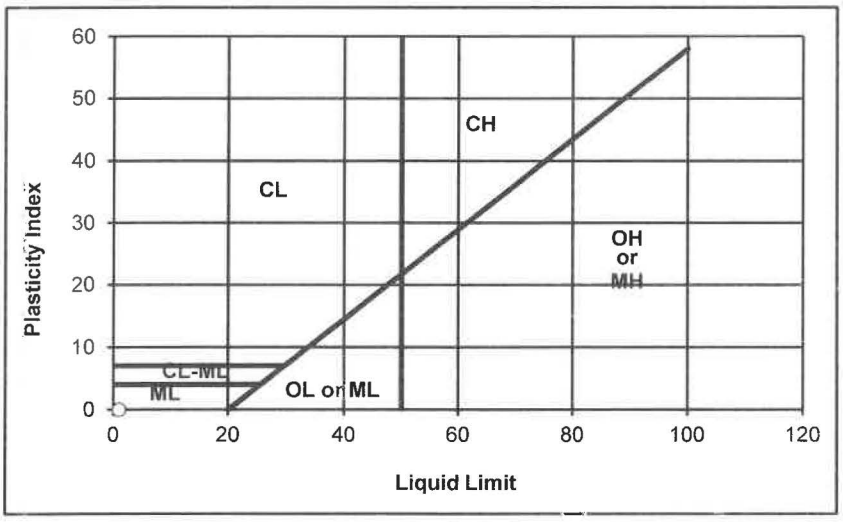
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B10 @ 5-6'
Sample Description: ML

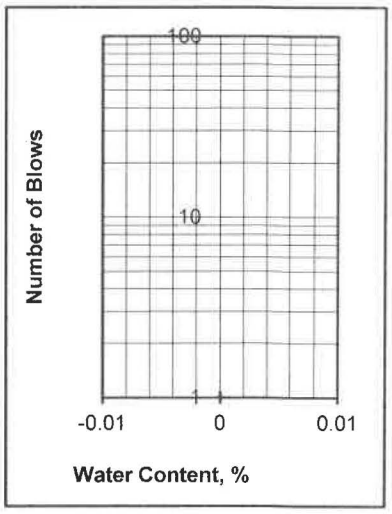
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

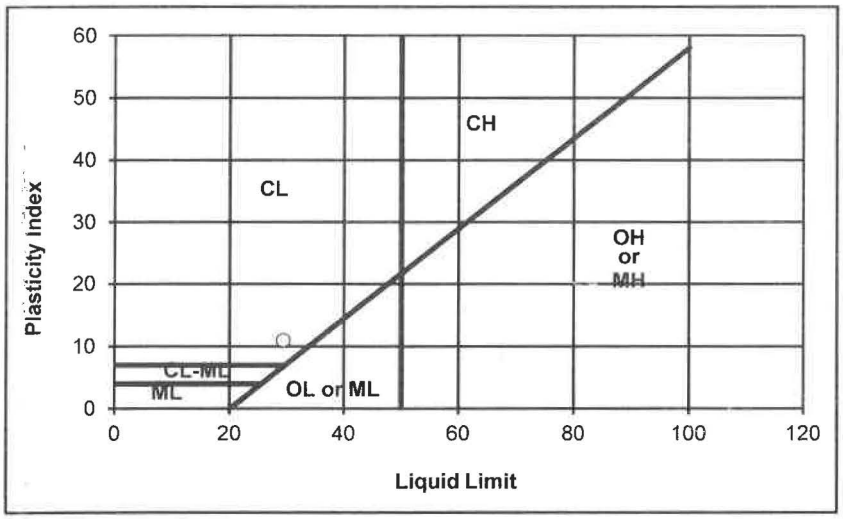
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B10 @ 15-16'
Sample Description: SC/CL

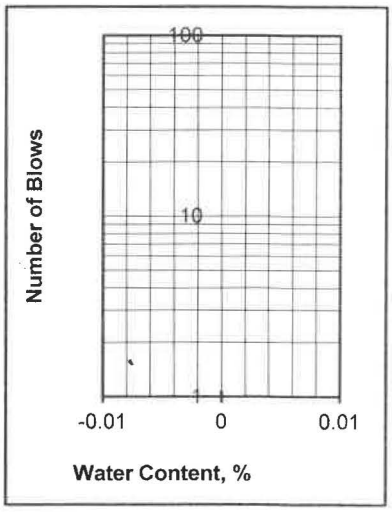
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	38.61	38.90		39.07	40.24	
Weight of Dry Soil & Tare (g)	37.10	36.66		35.65	36.78	
Weight of Tare (g)	28.61	24.16		24.05	24.96	
Weight of water (g)	1.51	2.24		3.42	3.46	
Weight of Dry Soil (g)	8.49	12.50		11.60	11.82	
Water Content (% of dry wt.)	17.8%	17.9%		29.5%	29.3%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 29**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

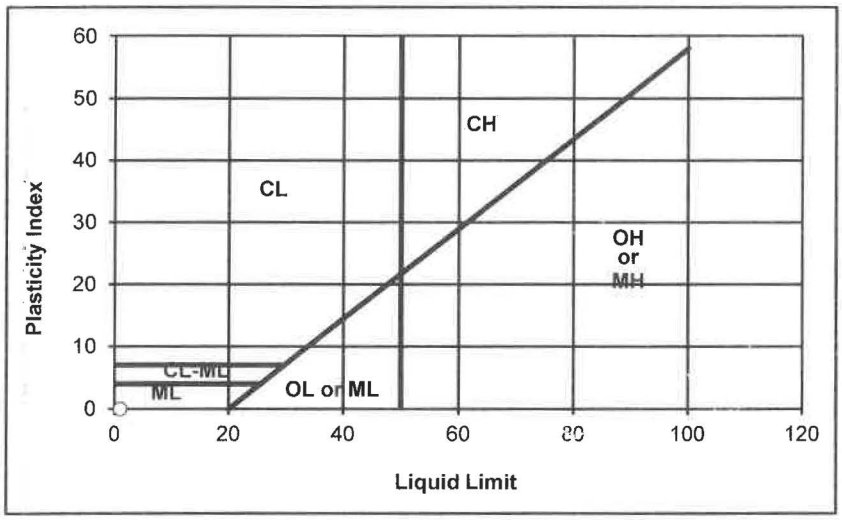
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B10 @ 20-21'
Sample Description: SM

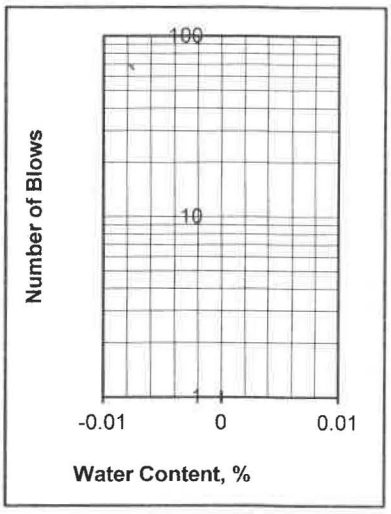
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

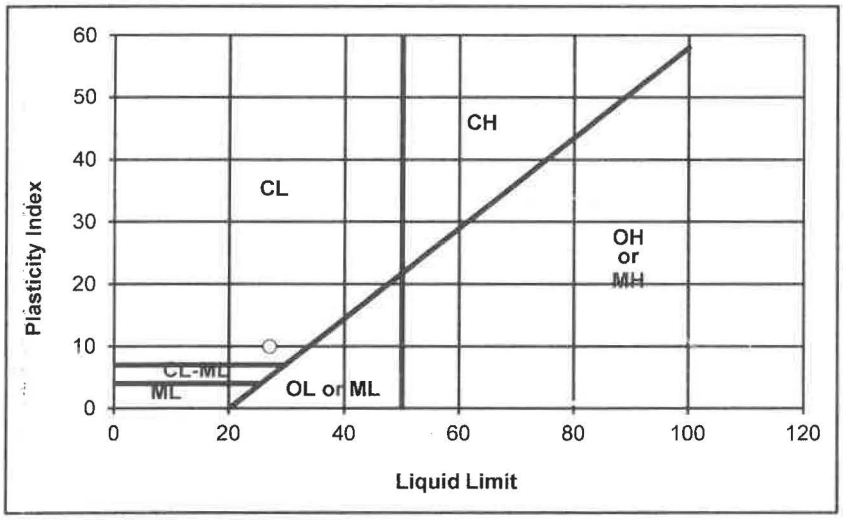
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B10 @ 25-26'
Sample Description: SC

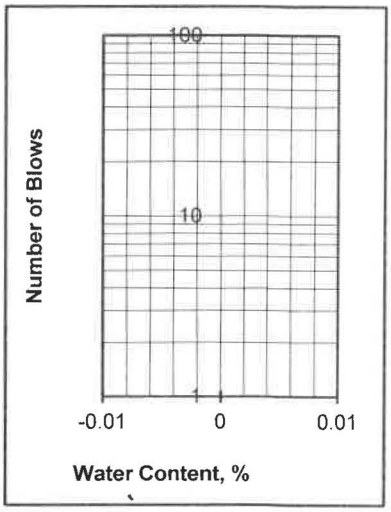
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	39.36	39.07		42.74	37.18	
Weight of Dry Soil & Tare (g)	37.00	36.57		38.61	34.00	
Weight of Tare (g)	23.44	21.81		23.38	22.19	
Weight of water (g)	2.36	2.50		4.13	3.18	
Weight of Dry Soil (g)	13.56	14.76		15.23	11.81	
Water Content (% of dry wt.)	17.4%	16.9%		27.1%	26.9%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 27**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

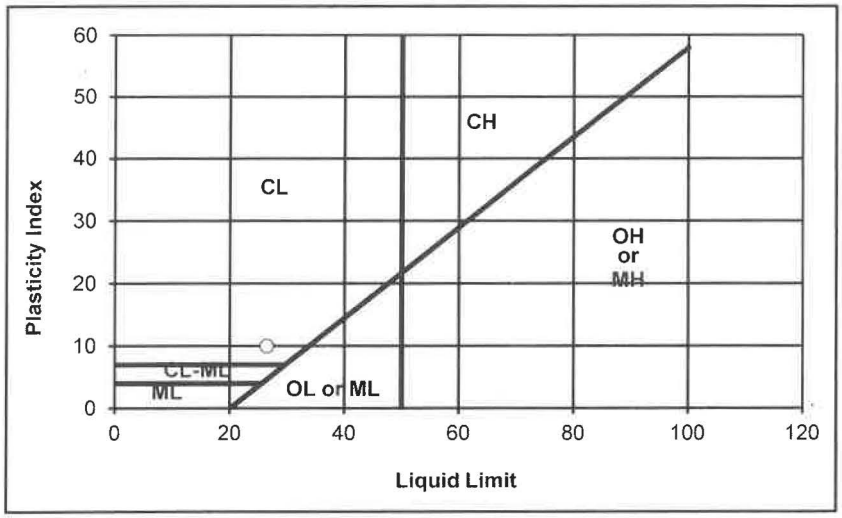
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B10 @ 30-31'
Sample Description: SC

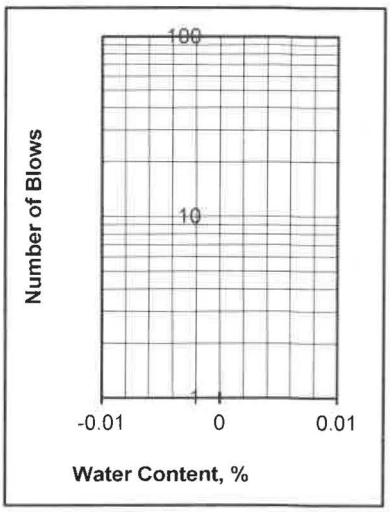
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

Trial Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	42.12	39.88		42.14	38.39	
Weight of Dry Soil & Tare (g)	39.66	37.72		38.40	35.51	
Weight of Tare (g)	23.80	23.87		24.23	24.62	
Weight of water (g)	2.46	2.16		3.74	2.88	
Weight of Dry Soil (g)	15.86	13.85		14.17	10.89	
Water Content (% of dry wt.)	15.5%	15.6%		26.4%	26.4%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 26**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

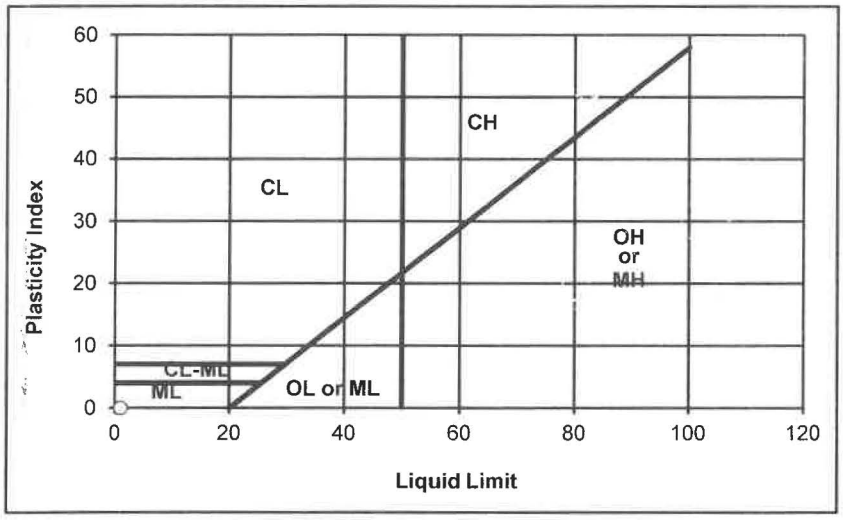
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 2-3'
Sample Description: SM/ML

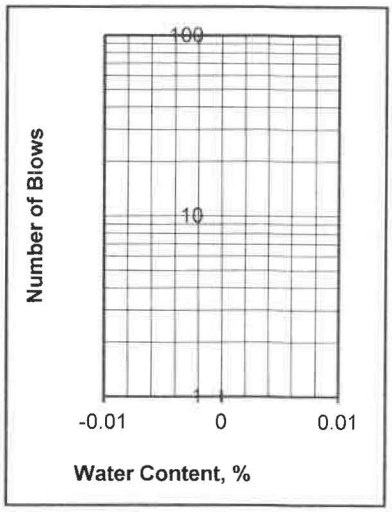
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

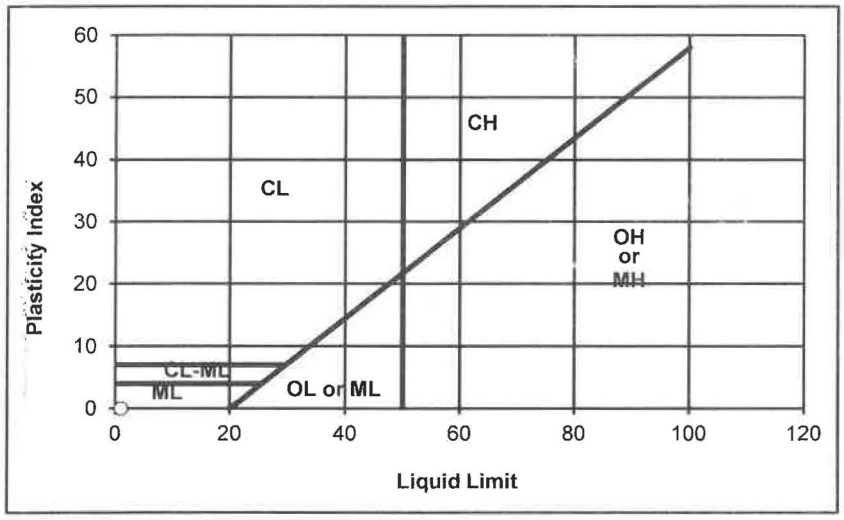
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 5-6'
Sample Description: ML

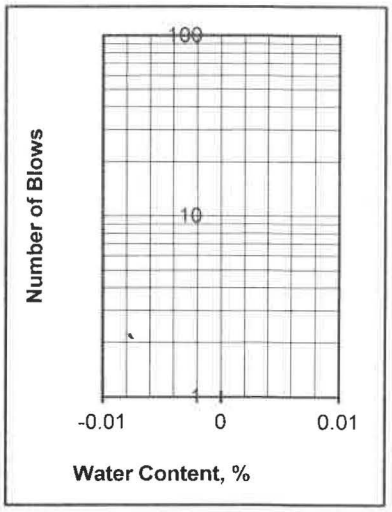
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

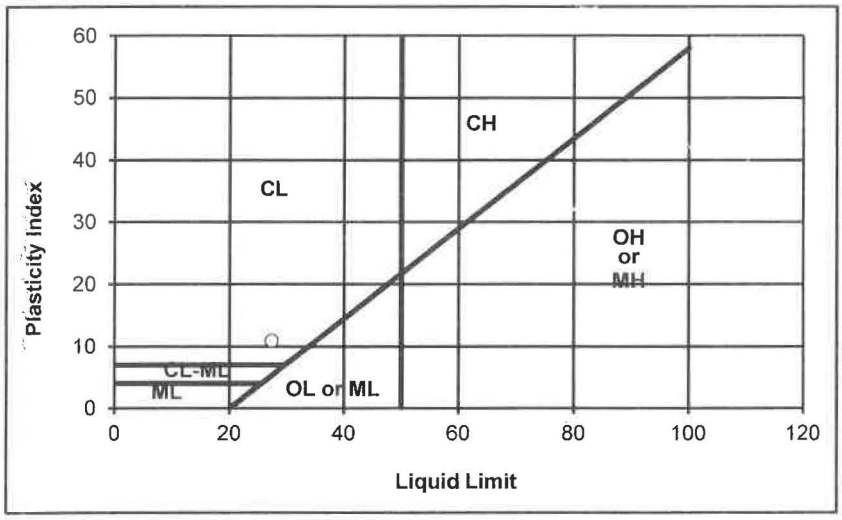
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 10-11'
Sample Description: SC/CL

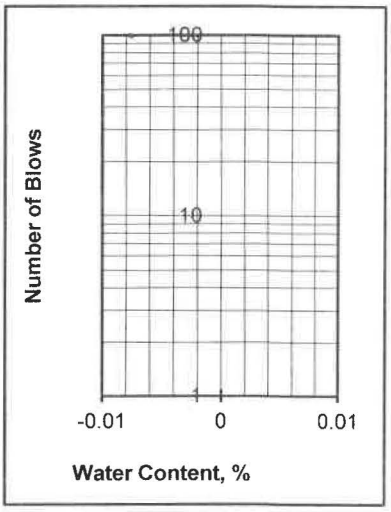
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	40.17	40.11		38.15	38.17	
Weight of Dry Soil & Tare (g)	37.93	37.92		35.07	35.32	
Weight of Tare (g)	24.02	24.18		23.88	24.79	
Weight of water (g)	2.24	2.19		3.08	2.85	
Weight of Dry Soil (g)	13.91	13.74		11.19	10.53	
Water Content (% of dry wt.)	16.1%	15.9%		27.5%	27.1%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 27**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

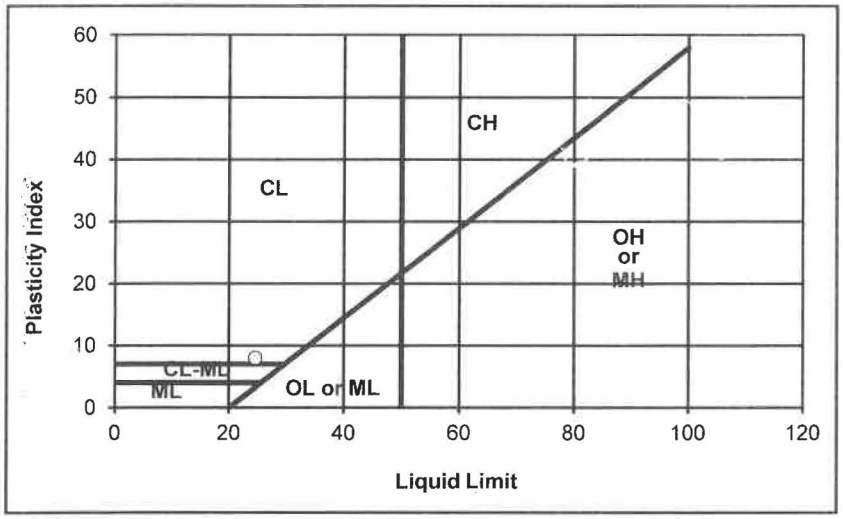
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 15-16'
Sample Description: SC

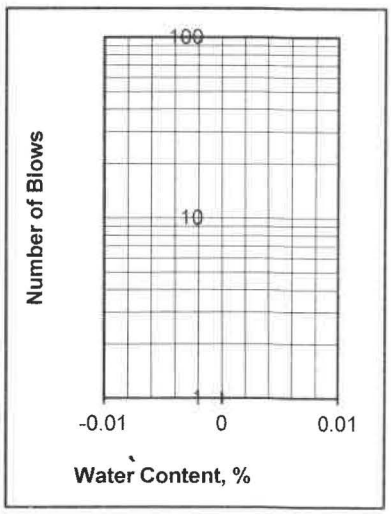
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	42.45	39.48		46.48	38.25	
Weight of Dry Soil & Tare (g)	39.67	37.17		42.11	35.56	
Weight of Tare (g)	23.75	23.83		24.43	24.49	
Weight of water (g)	2.78	2.31		4.37	2.69	
Weight of Dry Soil (g)	15.92	13.34		17.68	11.07	
Water Content (% of dry wt.)	17.5%	17.3%		24.7%	24.3%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 25**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

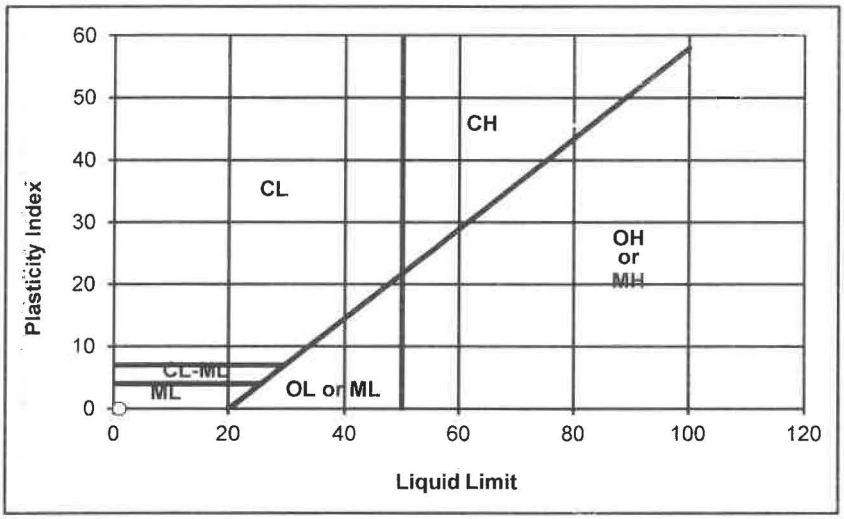
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 20-21'
Sample Description: SM

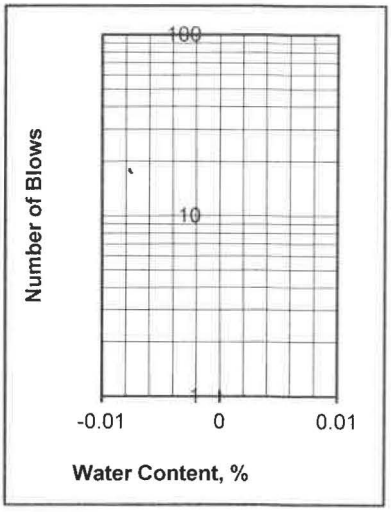
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

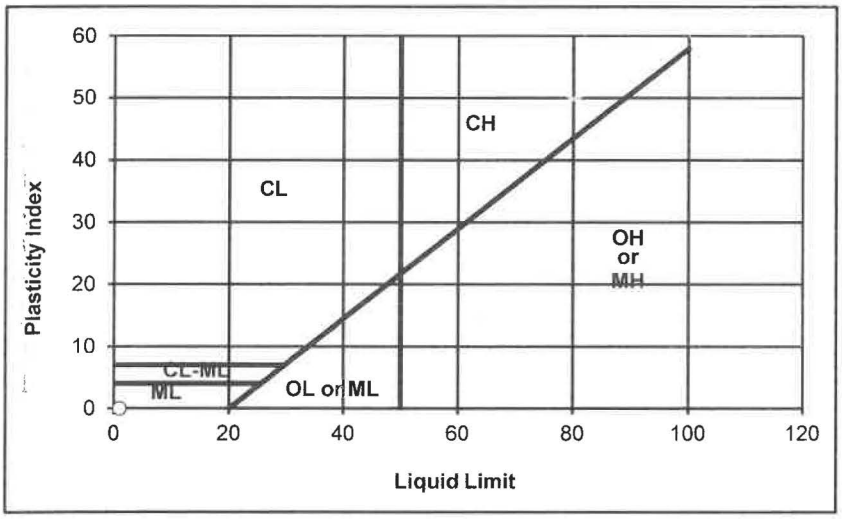
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 25-26'
Sample Description: SM

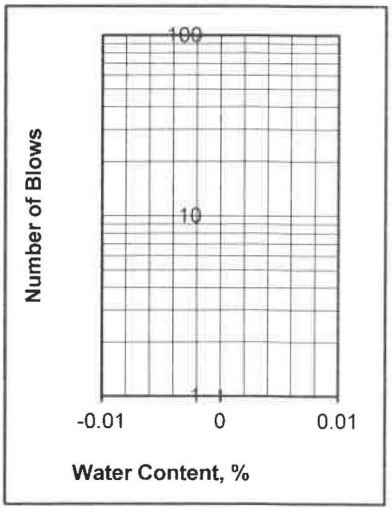
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

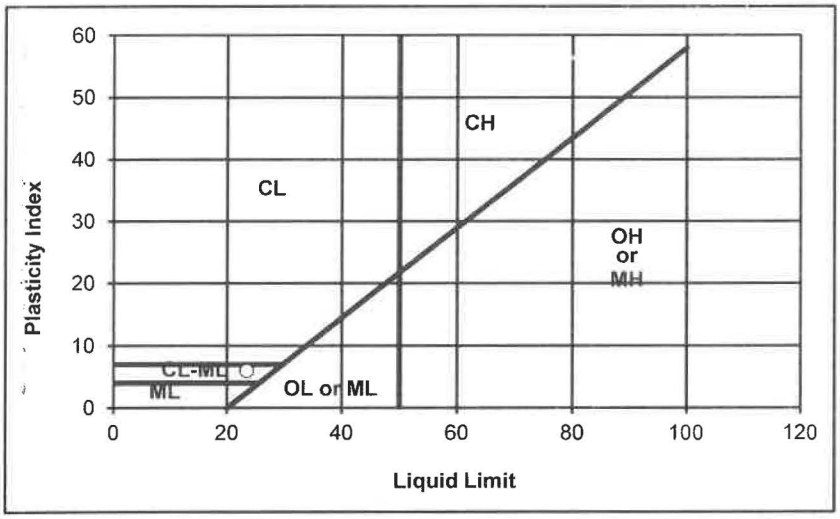
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 30-31'
Sample Description: SC/SM

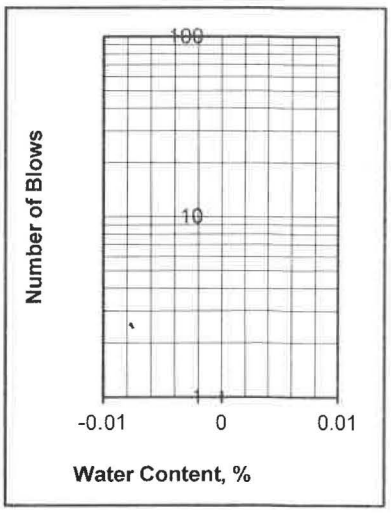
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	32.51	41.01		43.10	44.57	
Weight of Dry Soil & Tare (g)	30.62	38.30		39.41	40.67	
Weight of Tare (g)	19.60	22.68		23.82	23.83	
Weight of water (g)	1.89	2.71		3.69	3.90	
Weight of Dry Soil (g)	11.02	15.62		15.59	16.84	
Water Content (% of dry wt.)	17.2%	17.3%		23.7%	23.2%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 23**

Plasticity Index : 6
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

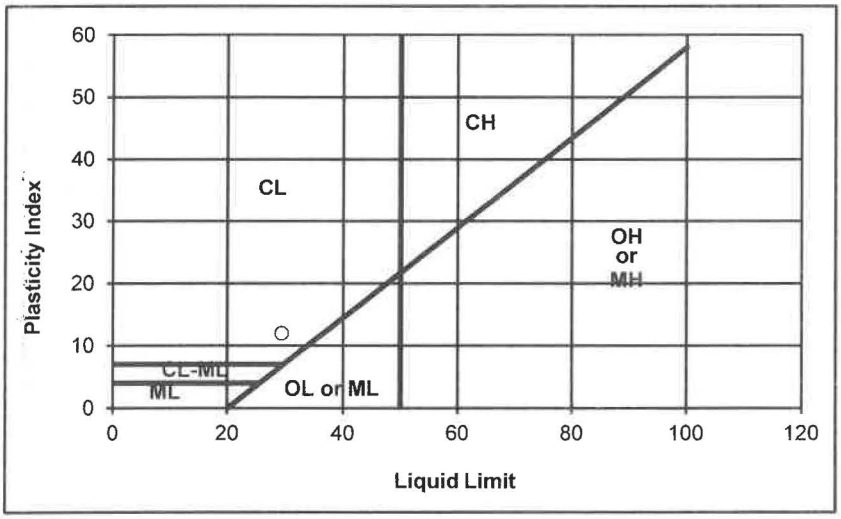
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 35-36'
Sample Description: SC/CL

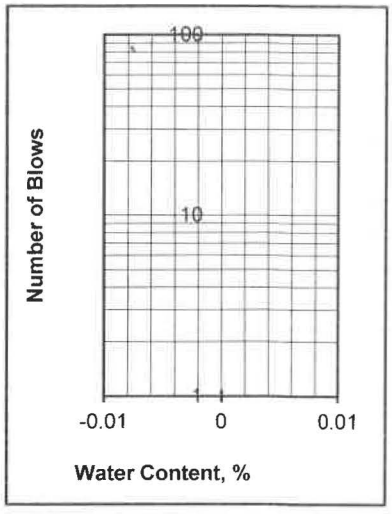
Date Tested: 3/6/2023
Tested By: JM`
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	44.36	39.10		40.85	38.00	
Weight of Dry Soil & Tare (g)	41.37	36.63		36.86	34.43	
Weight of Tare (g)	23.45	21.83		23.39	22.20	
Weight of water (g)	2.99	2.47		3.99	3.57	
Weight of Dry Soil (g)	17.92	14.80		13.47	12.23	
Water Content (% of dry wt.)	16.7%	16.7%		29.6%	29.2%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 29**

Plasticity Index : 12
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

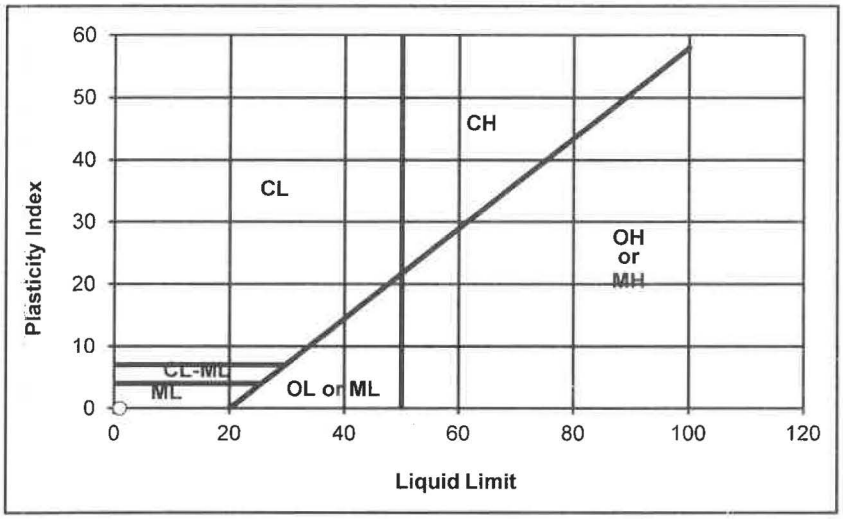
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 40-41'
Sample Description: SM

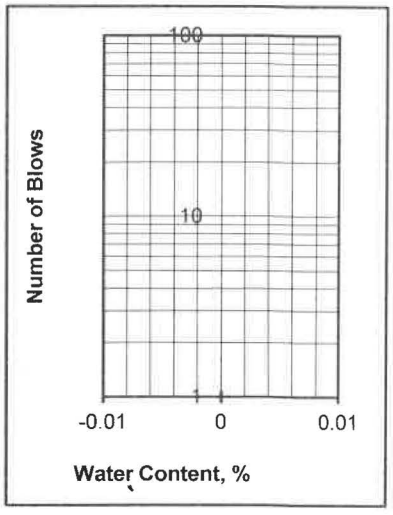
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

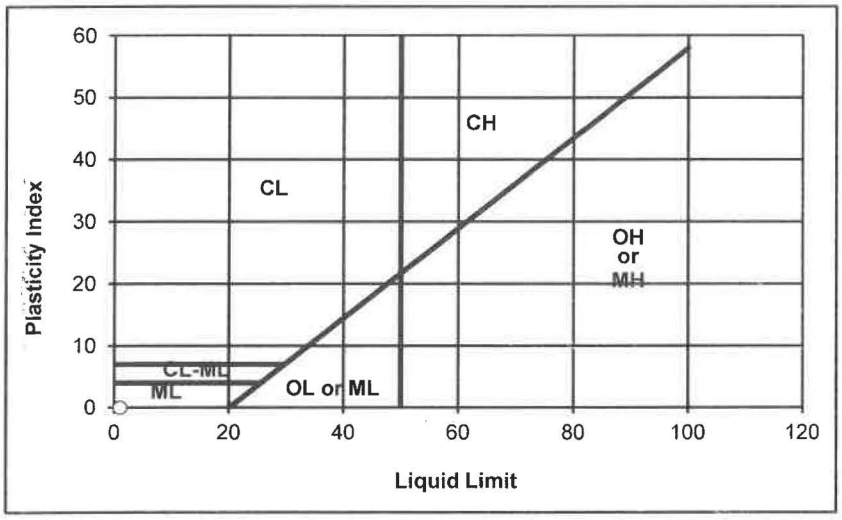
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B11 @ 45-46'
Sample Description: SM

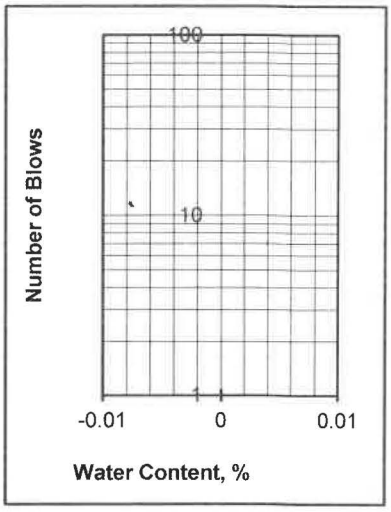
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

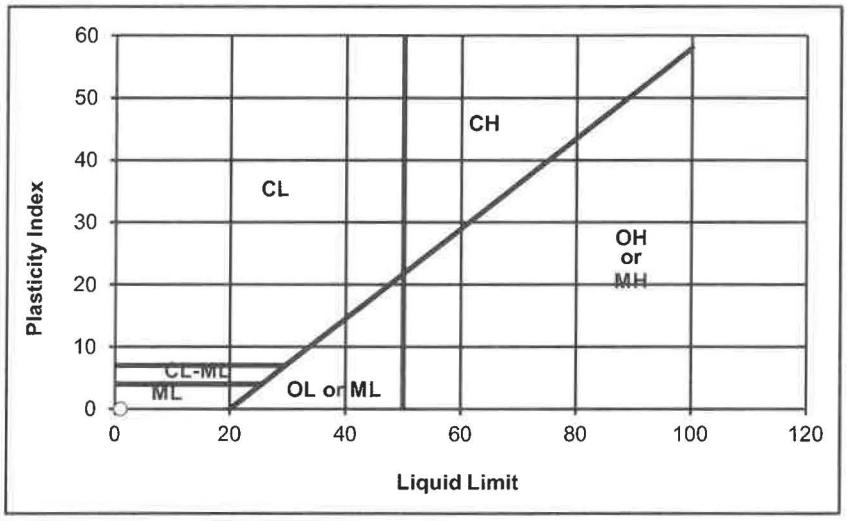
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 2-3'
Sample Description: SM/ML

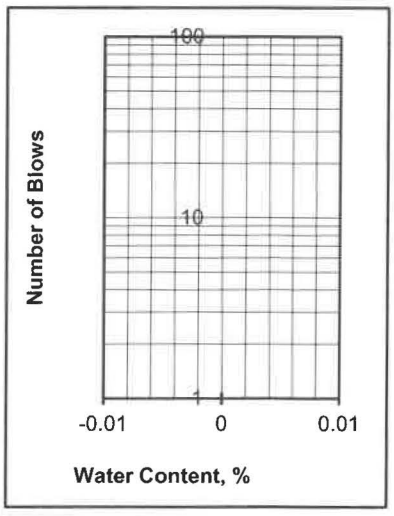
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

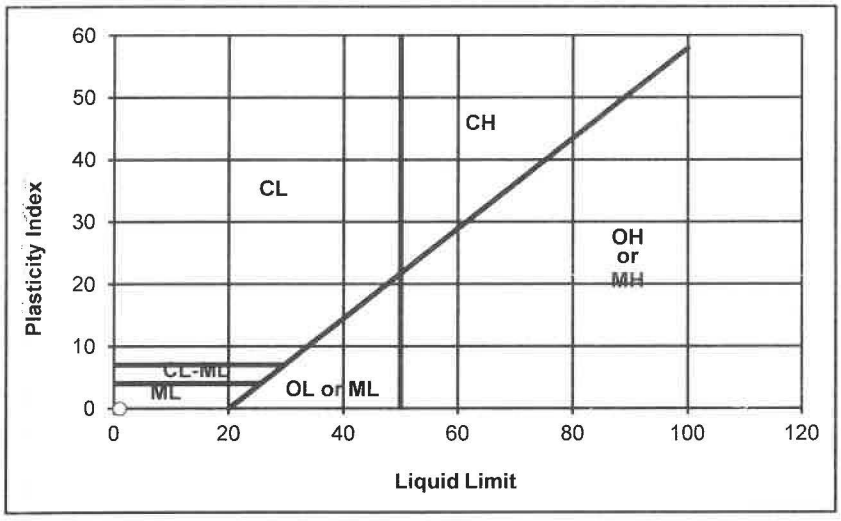
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 5-6'
Sample Description: SM/ML

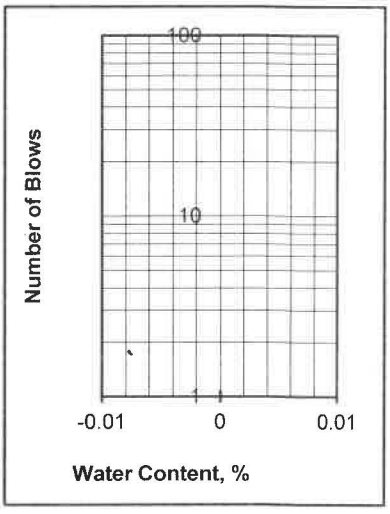
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

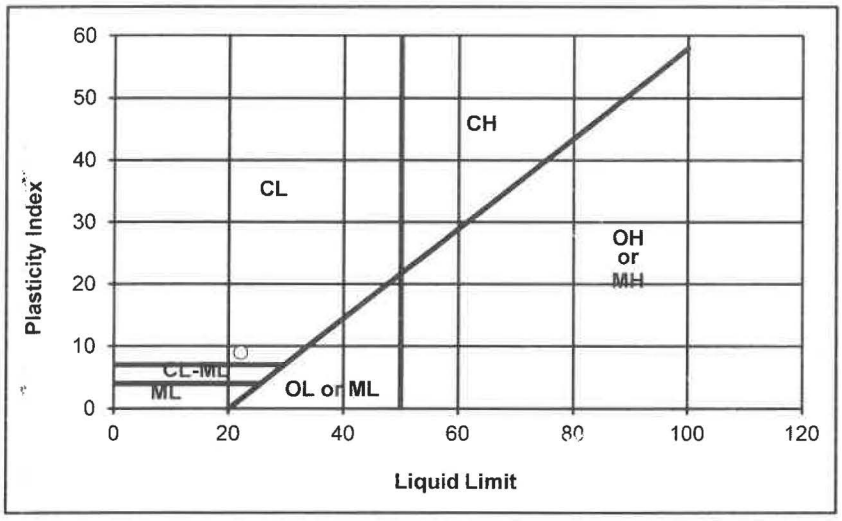
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 10-11'
Sample Description: SC/CL

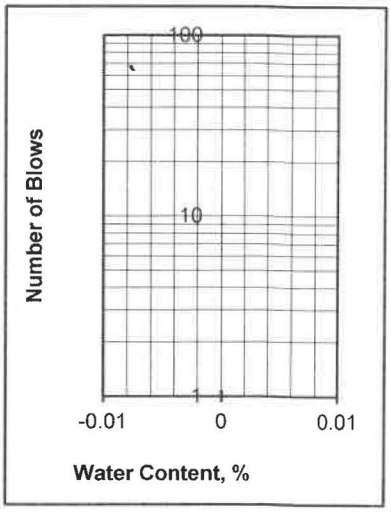
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	34.95	38.98		40.04	42.16	
Weight of Dry Soil & Tare (g)	33.62	37.18		37.20	38.97	
Weight of Tare (g)	23.73	23.82		24.39	24.48	
Weight of water (g)	1.33	1.80		2.84	3.19	
Weight of Dry Soil (g)	9.89	13.36		12.81	14.49	
Water Content (% of dry wt.)	13.4%	13.5%		22.2%	22.0%	
Number of Blows				25	25	

Plastic Limit : 13 **Liquid Limit : 22**

Plasticity Index : 9
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

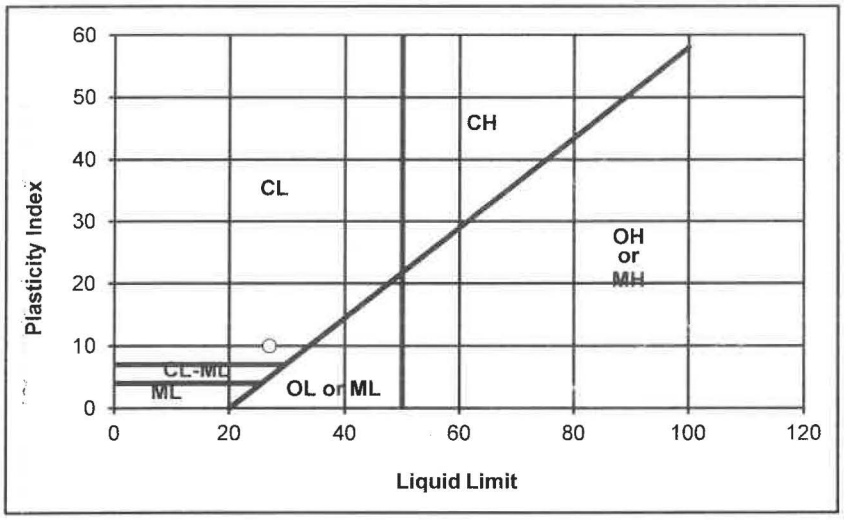
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 15-16'
Sample Description: SC

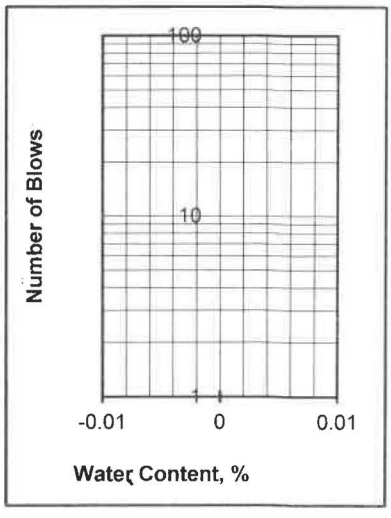
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	34.72	36.19		42.75	40.95	
Weight of Dry Soil & Tare (g)	32.49	34.20		38.75	37.36	
Weight of Tare (g)	19.59	22.68		23.80	24.06	
Weight of water (g)	2.23	1.99		4.00	3.59	
Weight of Dry Soil (g)	12.90	11.52		14.95	13.30	
Water Content (% of dry wt.)	17.3%	17.3%		26.8%	27.0%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 27**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

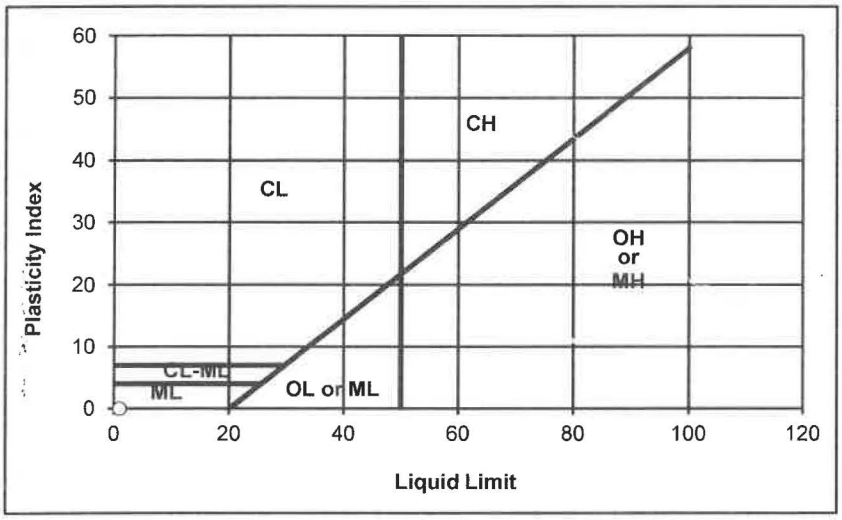
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 20-21'
Sample Description: SM

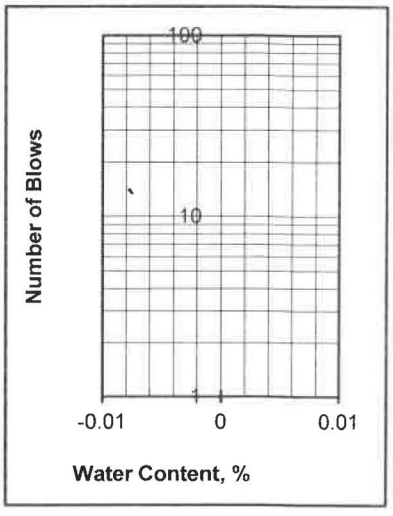
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

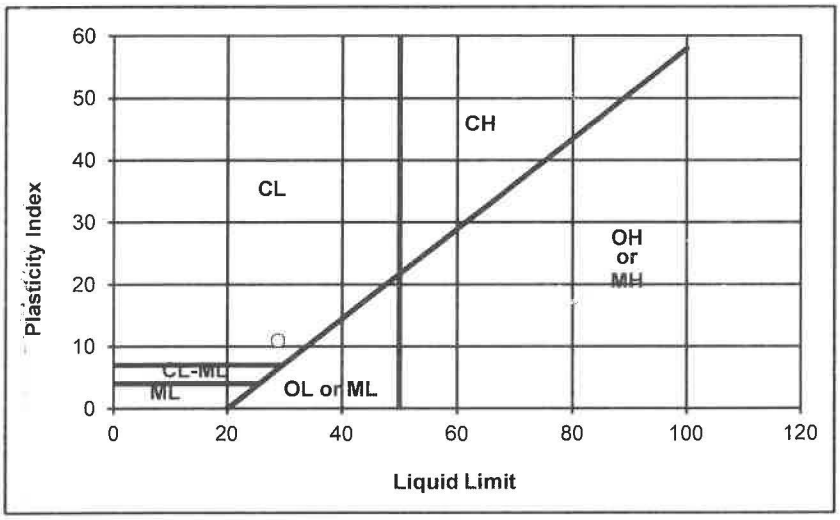
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 25-26'
Sample Description: SC

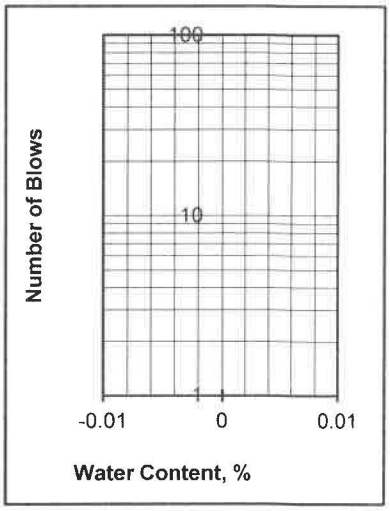
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	34.29	37.48		41.38	40.17	
Weight of Dry Soil & Tare (g)	32.49	35.06		37.43	36.22	
Weight of Tare (g)	22.45	21.07		23.62	22.62	
Weight of water (g)	1.80	2.42		3.95	3.95	
Weight of Dry Soil (g)	10.04	13.99		13.81	13.60	
Water Content (% of dry wt.)	17.9%	17.3%		28.6%	29.0%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 29**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

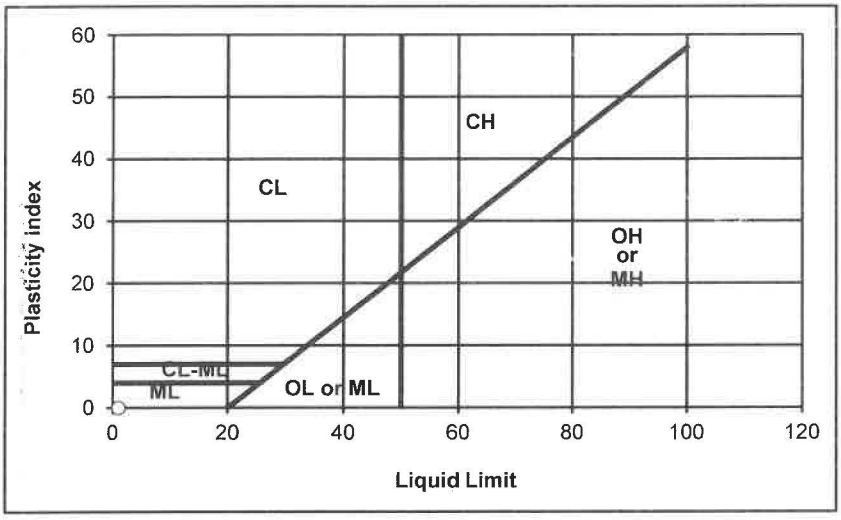
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 30-31'
Sample Description: SM

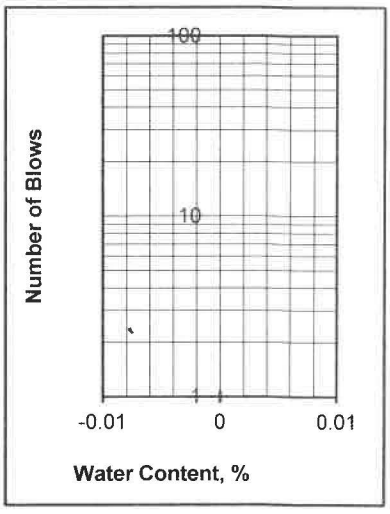
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

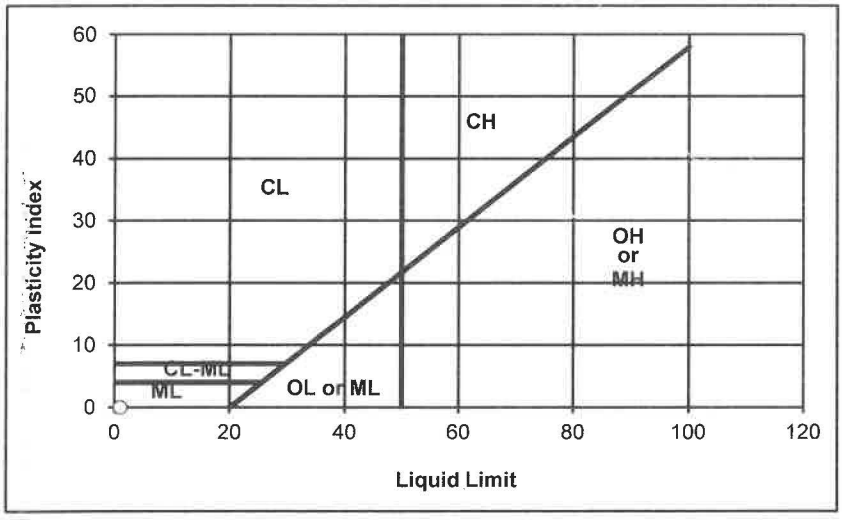
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 35-36'
Sample Description: SM

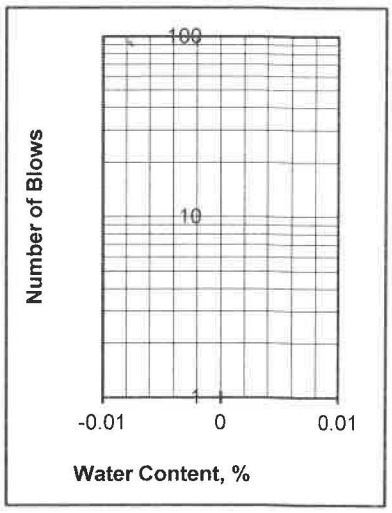
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

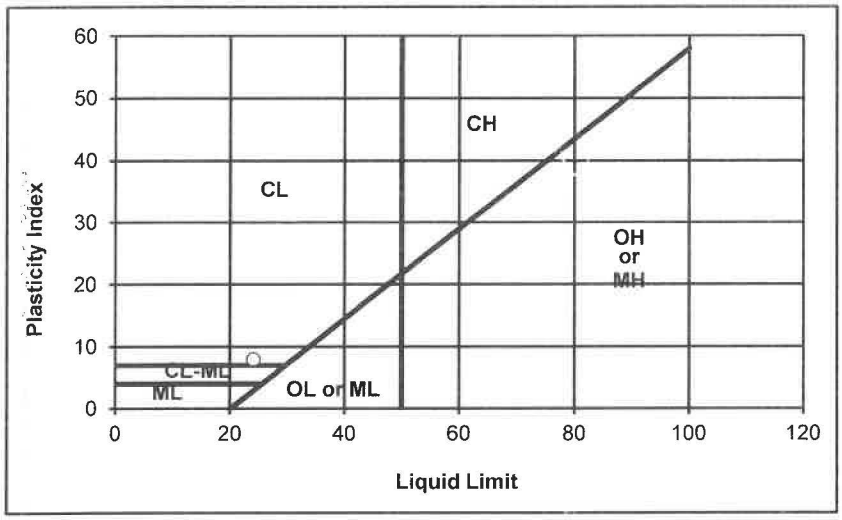
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 40-41'
Sample Description: SC

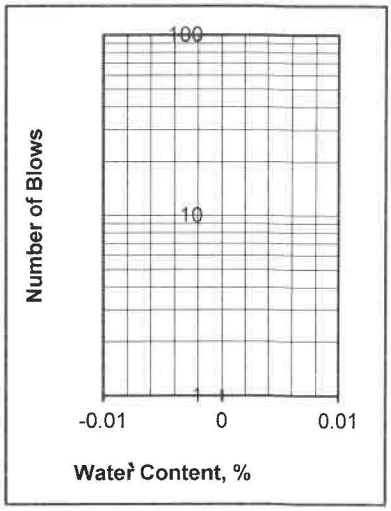
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	42.93	45.71		40.33	38.96	
Weight of Dry Soil & Tare (g)	40.31	42.74		37.14	36.23	
Weight of Tare (g)	24.03	24.12		23.90	24.81	
Weight of water (g)	2.62	2.97		3.19	2.73	
Weight of Dry Soil (g)	16.28	18.62		13.24	11.42	
Water Content (% of dry wt.)	16.1%	16.0%		24.1%	23.9%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 24**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

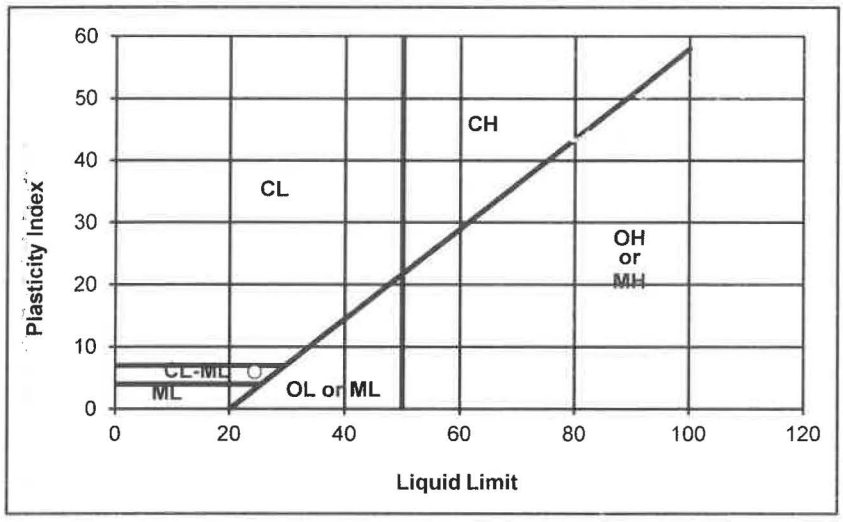
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 2/16/2023
Sampled By: DA
Sample Number: -
Sample Location: B12 @ 45-46'
Sample Description: SC/SM

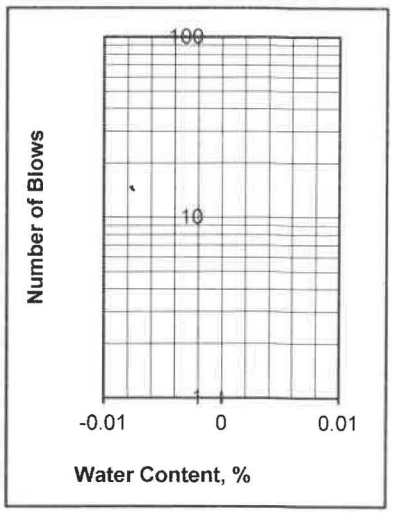
Date Tested: 3/6/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.47	41.24		41.53	38.89	
Weight of Dry Soil & Tare (g)	32.98	38.38		38.10	35.93	
Weight of Tare (g)	19.59	22.69		23.87	23.88	
Weight of water (g)	2.49	2.86		3.43	2.96	
Weight of Dry Soil (g)	13.39	15.69		14.23	12.05	
Water Content (% of dry wt.)	18.6%	18.2%		24.1%	24.6%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 24**

Plasticity Index : 6
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

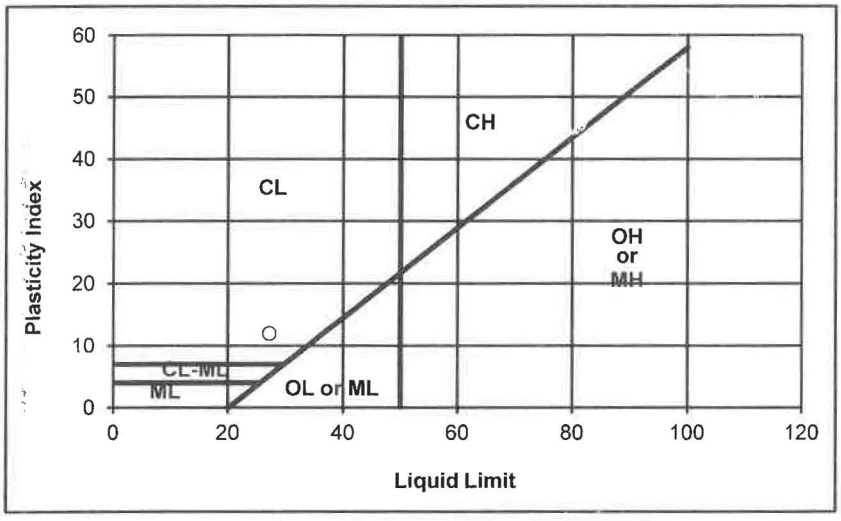
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B13 @ 25-26'
Sample Description: SC

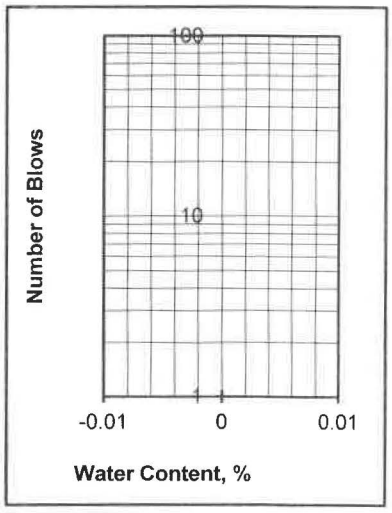
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

Trial Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	31.95	34.61		36.26	35.56	
Weight of Dry Soil & Tare (g)	30.35	33.02		32.79	32.17	
Weight of Tare (g)	19.74	22.80		20.06	19.64	
Weight of water (g)	1.60	1.59		3.47	3.39	
Weight of Dry Soil (g)	10.61	10.22		12.73	12.53	
Water Content (% of dry wt.)	15.1%	15.6%		27.3%	27.1%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 27**

Plasticity Index : 12
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

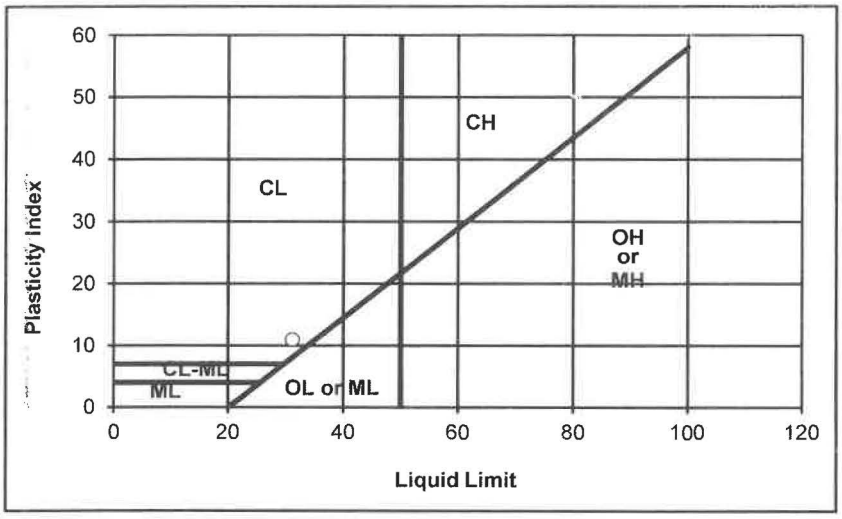
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B13 @ 40-41'
Sample Description: SC

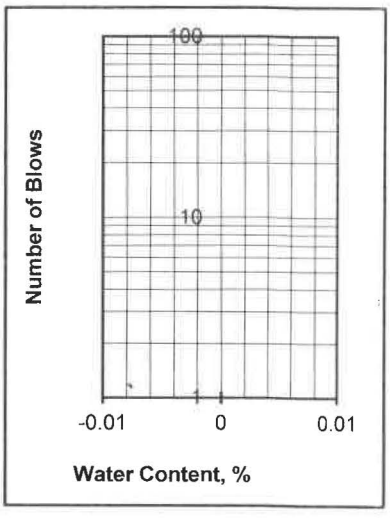
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.85	45.48		35.88	37.80	
Weight of Dry Soil & Tare (g)	33.93	41.87		33.00	33.58	
Weight of Tare (g)	24.31	24.30		23.79	20.01	
Weight of water (g)	1.92	3.61		2.88	4.22	
Weight of Dry Soil (g)	9.62	17.57		9.21	13.57	
Water Content (% of dry wt.)	20.0%	20.5%		31.3%	31.1%	
Number of Blows				25	25	

Plastic Limit : 20 **Liquid Limit : 31**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

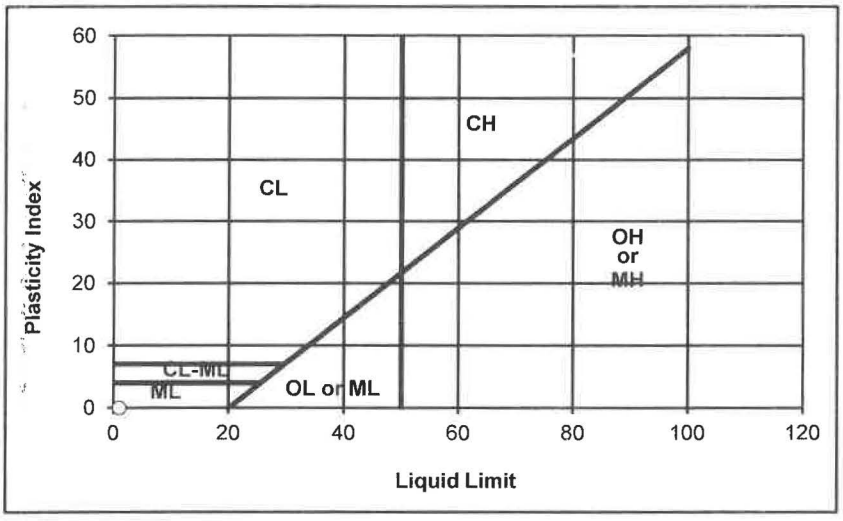
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B13 @ 45-46'
Sample Description: SM

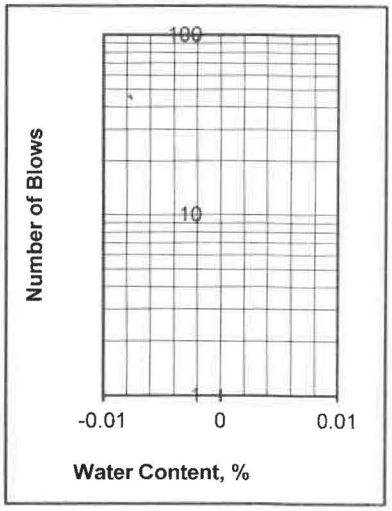
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

Trial Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

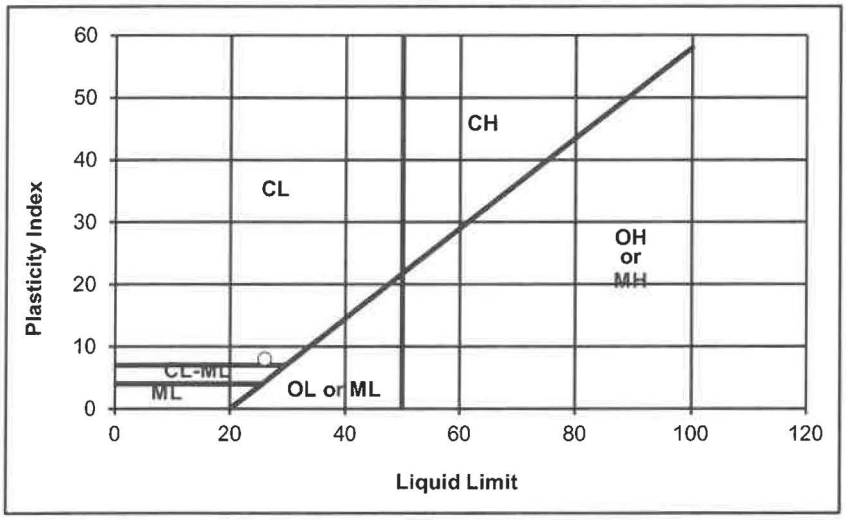
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B14 @ 35-36'
Sample Description: CL

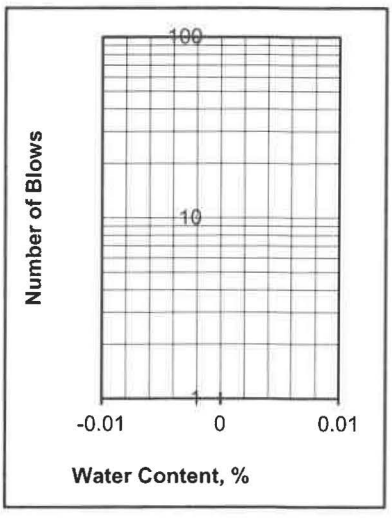
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	38.19	36.58		39.35	35.12	
Weight of Dry Soil & Tare (g)	36.08	34.69		36.15	32.02	
Weight of Tare (g)	24.34	24.34		23.83	20.04	
Weight of water (g)	2.11	1.89		3.20	3.10	
Weight of Dry Soil (g)	11.74	10.35		12.32	11.98	
Water Content (% of dry wt.)	18.0%	18.3%		26.0%	25.9%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 26**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

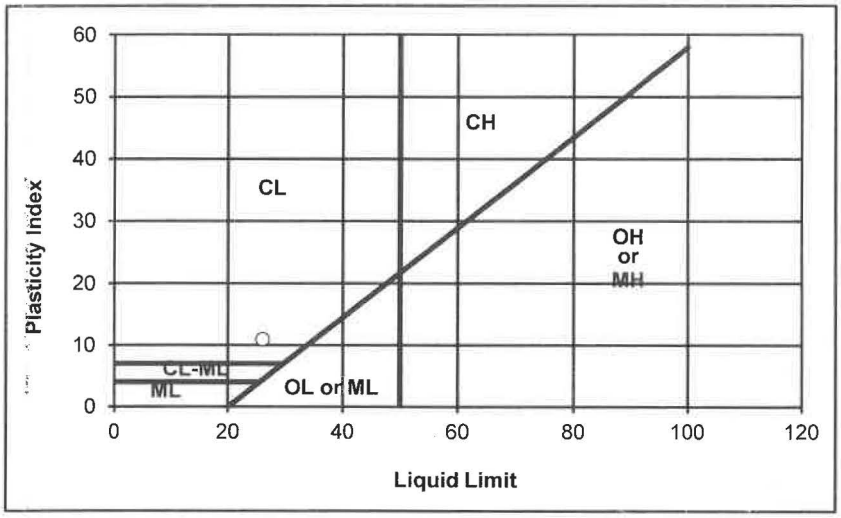
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B14 @ 40-41'
Sample Description: CL

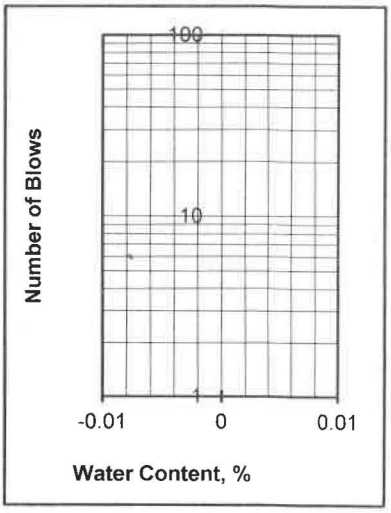
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	32.42	36.96		35.96	32.20	
Weight of Dry Soil & Tare (g)	30.42	35.15		33.34	29.99	
Weight of Tare (g)	16.49	23.04		23.30	21.50	
Weight of water (g)	2.00	1.81		2.62	2.21	
Weight of Dry Soil (g)	13.93	12.11		10.04	8.49	
Water Content (% of dry wt.)	14.4%	14.9%		26.1%	26.0%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 26**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

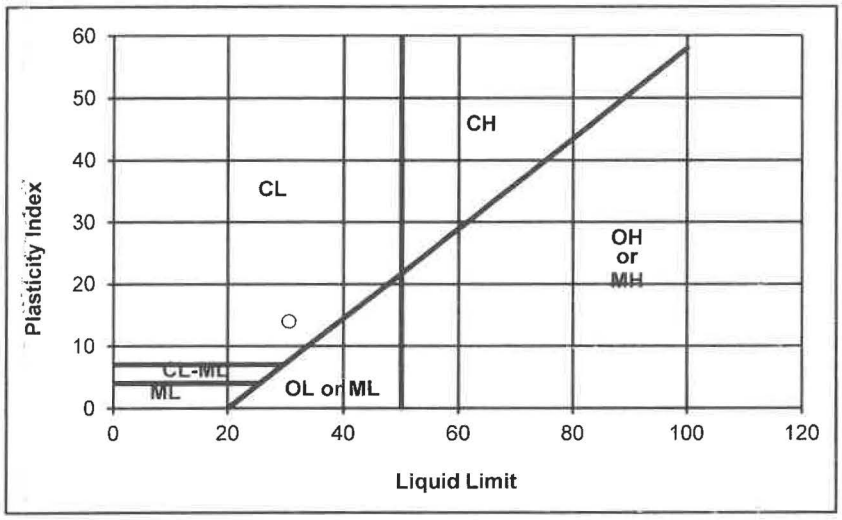
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B14 @ 45-46'
Sample Description: SC/CL

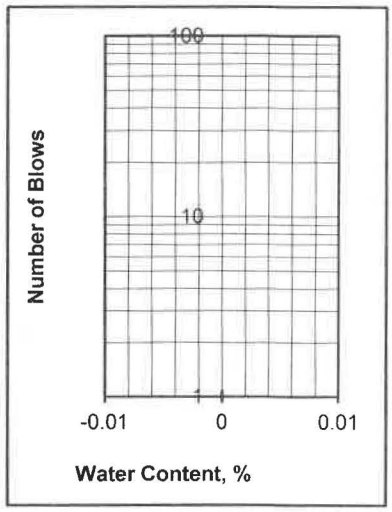
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	33.54	35.70		32.58	34.44	
Weight of Dry Soil & Tare (g)	32.13	34.01		30.19	31.33	
Weight of Tare (g)	24.05	24.07		22.26	21.28	
Weight of water (g)	1.41	1.69		2.39	3.11	
Weight of Dry Soil (g)	8.08	9.94		7.93	10.05	
Water Content (% of dry wt.)	17.5%	17.0%		30.1%	30.9%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 31**

Plasticity Index : 14
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

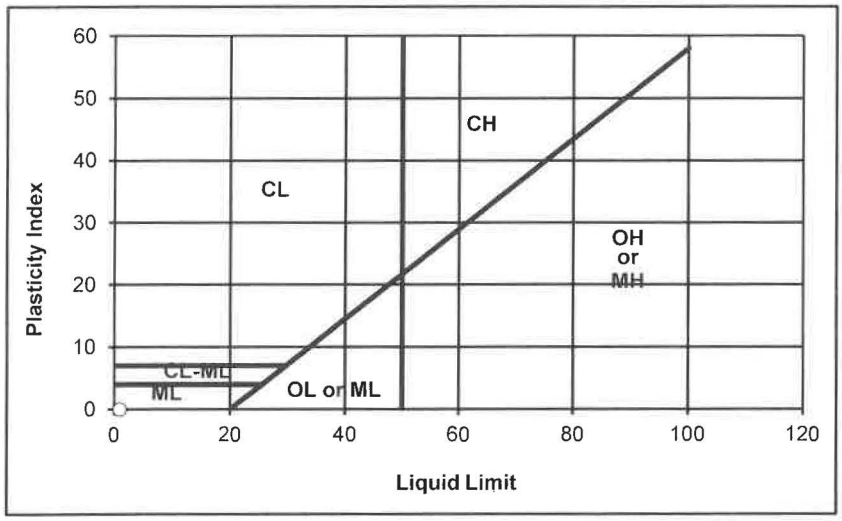
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B15 @ 30-31'
Sample Description: SM/ML

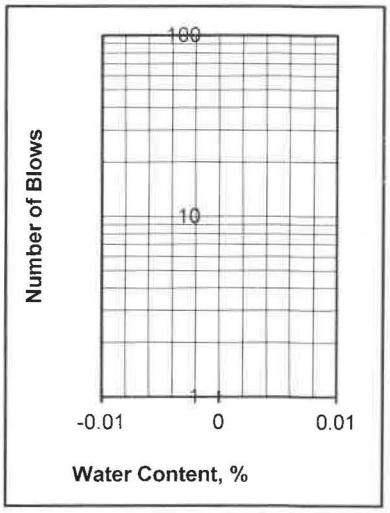
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

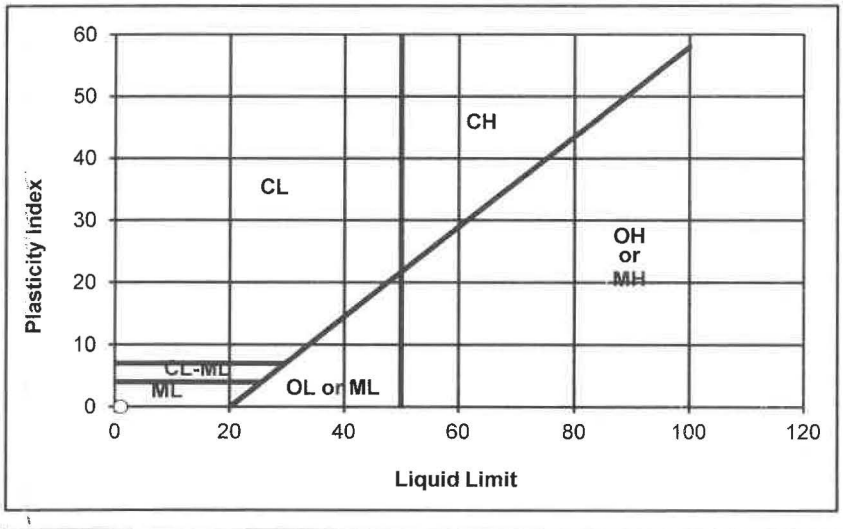
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B15 @ 35-36'
Sample Description: SM/ML

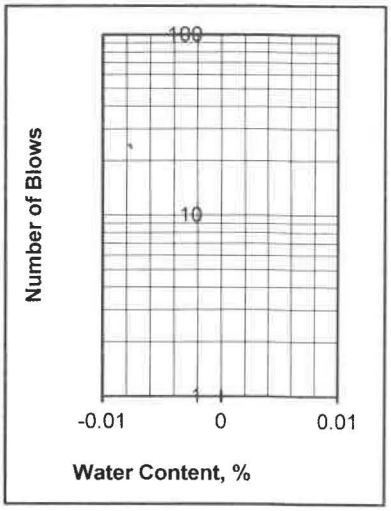
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

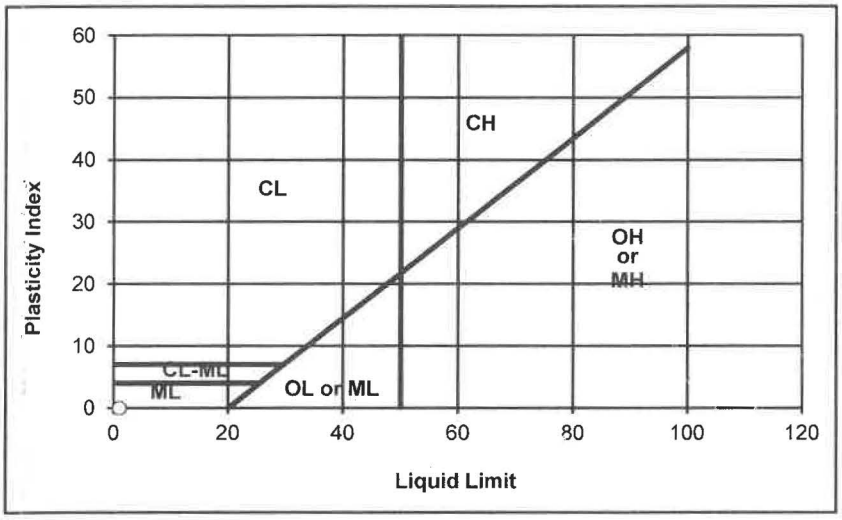
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B15 @ 45-46'
Sample Description: SM/ML w/ trace of clay

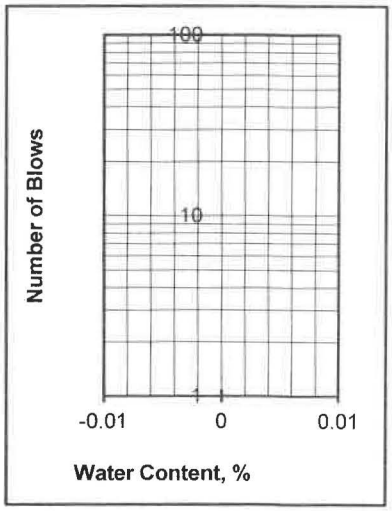
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

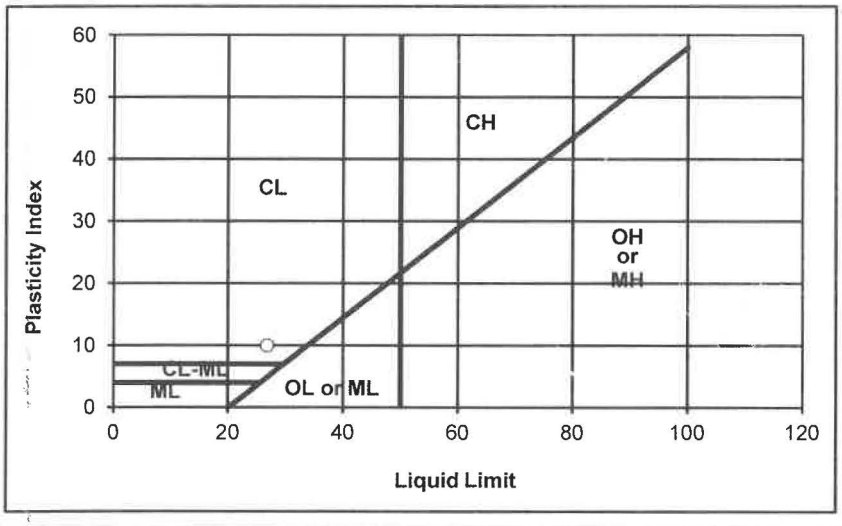
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B17 @ 20-21'
Sample Description: CL

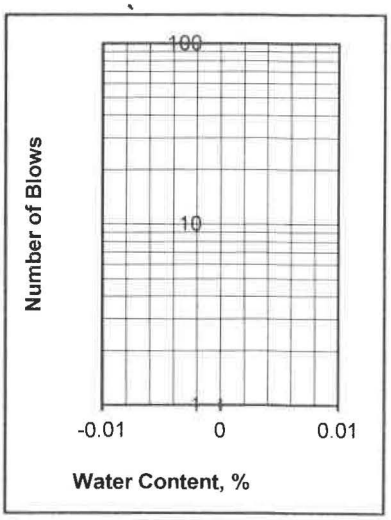
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	42.15	39.95		33.71	32.71	
Weight of Dry Soil & Tare (g)	39.60	37.68		31.26	30.30	
Weight of Tare (g)	24.03	24.06		22.16	21.24	
Weight of water (g)	2.55	2.27		2.45	2.41	
Weight of Dry Soil (g)	15.57	13.62		9.10	9.06	
Water Content (% of dry wt.)	16.4%	16.7%		26.9%	26.6%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 27**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

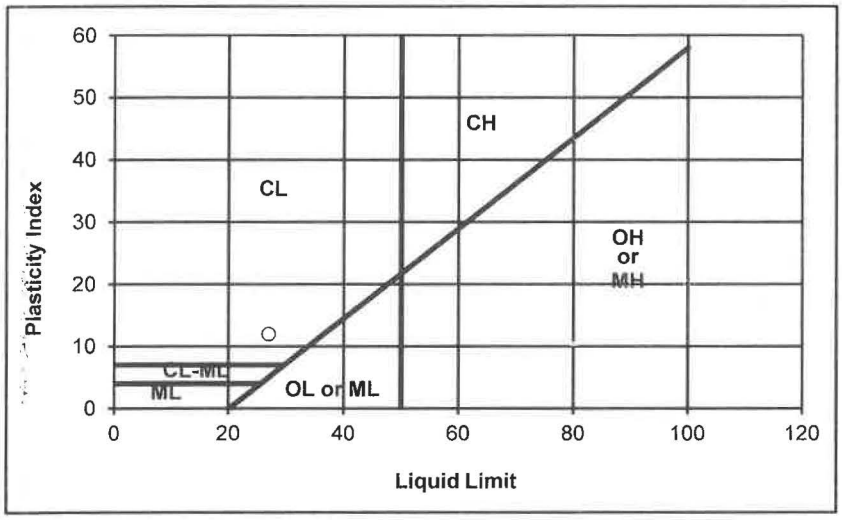
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B17 @ 25-26'
Sample Description: SC

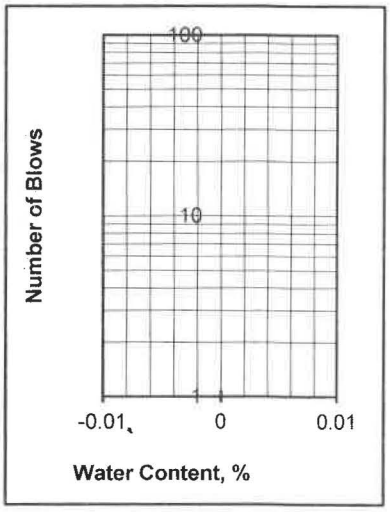
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.01	38.77		40.20	37.81	
Weight of Dry Soil & Tare (g)	33.55	36.80		36.40	34.27	
Weight of Tare (g)	24.04	24.05		22.22	21.20	
Weight of water (g)	1.46	1.97		3.80	3.54	
Weight of Dry Soil (g)	9.51	12.75		14.18	13.07	
Water Content (% of dry wt.)	15.4%	15.5%		26.8%	27.1%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 27**

Plasticity Index : 12
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

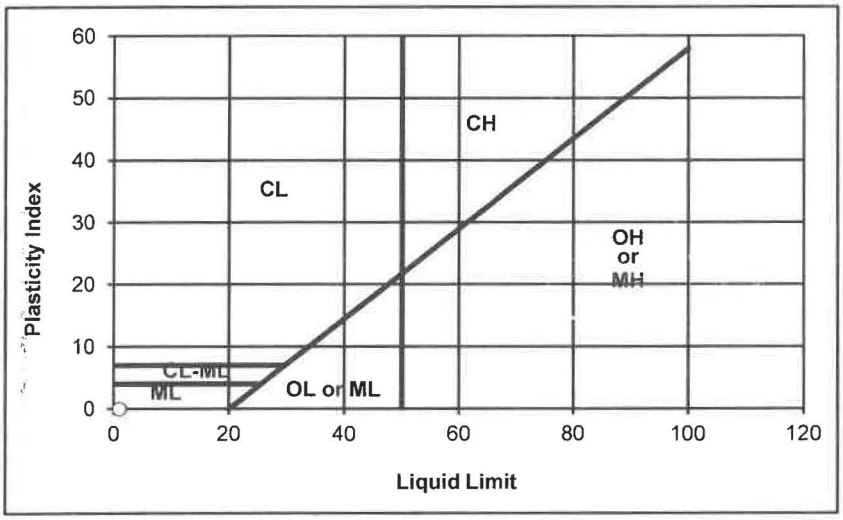
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B17 @ 30-31'
Sample Description: SM

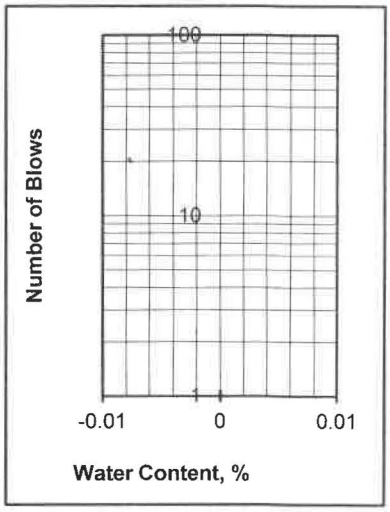
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

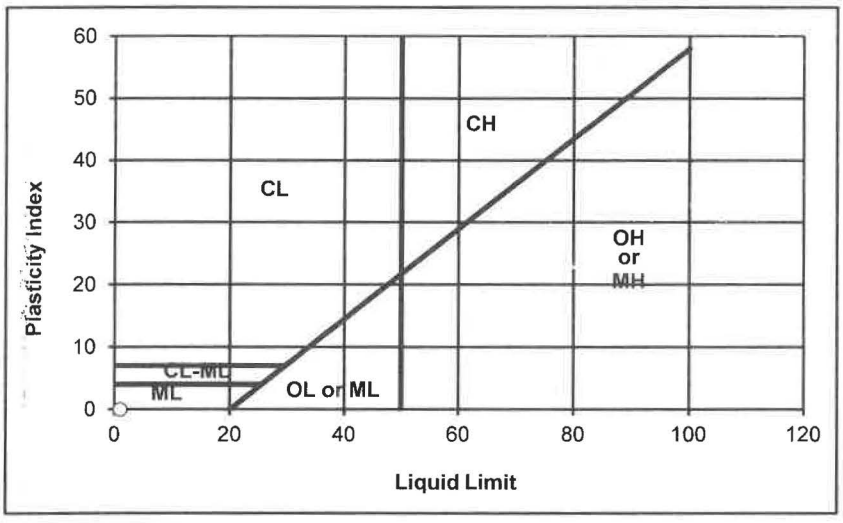
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B18 @ 10-11'
Sample Description: SM

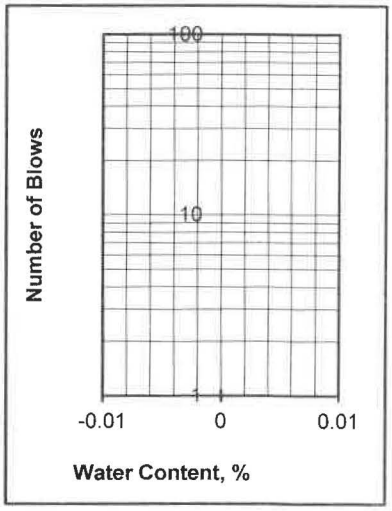
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

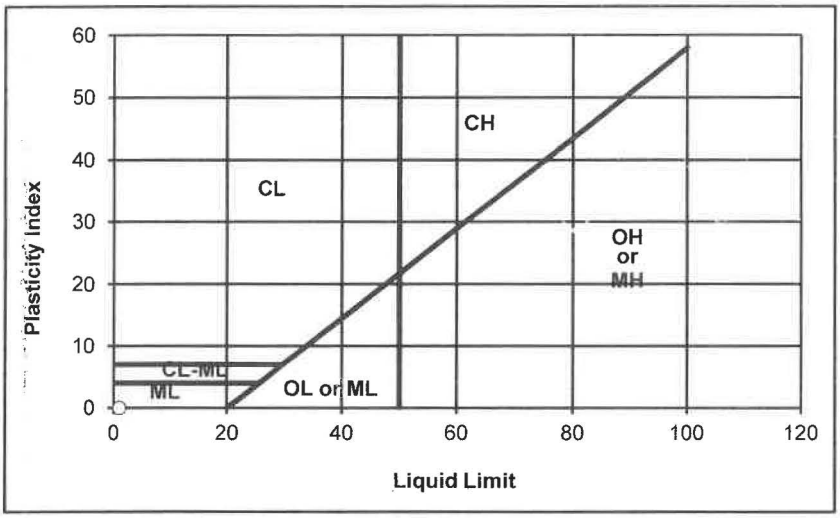
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B18 @ 20-21'
Sample Description: SM

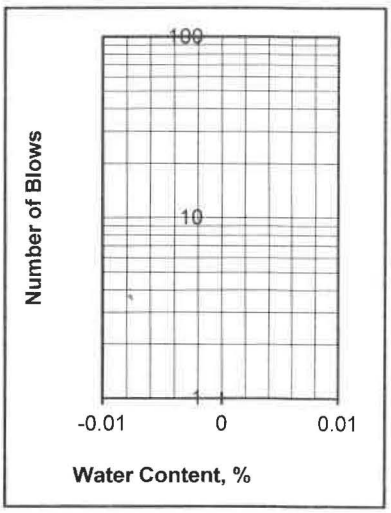
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

Trial Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

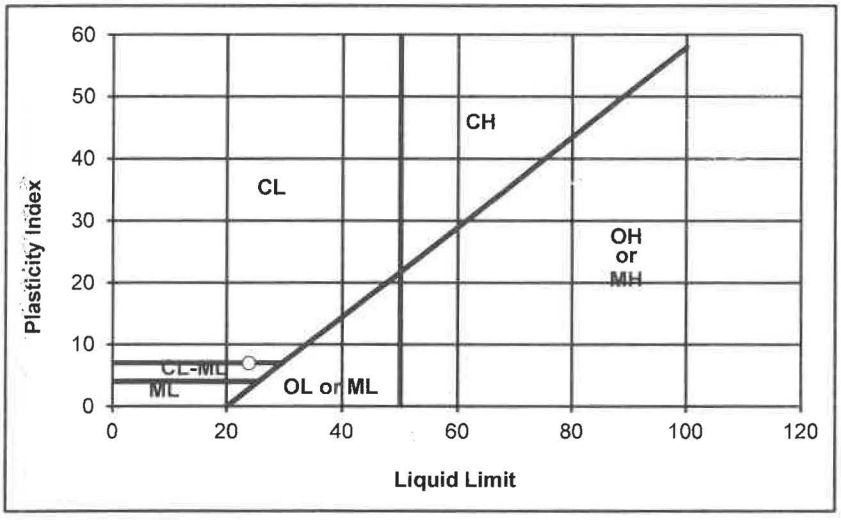
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B18 @ 30-31'
Sample Description: SM/ML

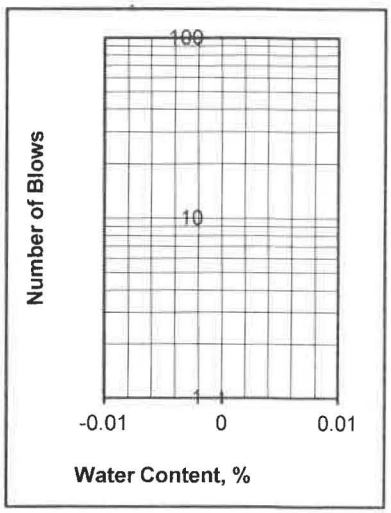
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.16	39.36		29.48	31.55	
Weight of Dry Soil & Tare (g)	32.91	36.91		27.65	29.26	
Weight of Tare (g)	19.70	22.77		20.02	19.61	
Weight of water (g)	2.25	2.46		1.83	2.29	
Weight of Dry Soil (g)	13.21	14.14		7.63	9.65	
Water Content (% of dry wt.)	17.0%	17.4%		24.0%	23.7%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 24**

Plasticity Index : 7
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

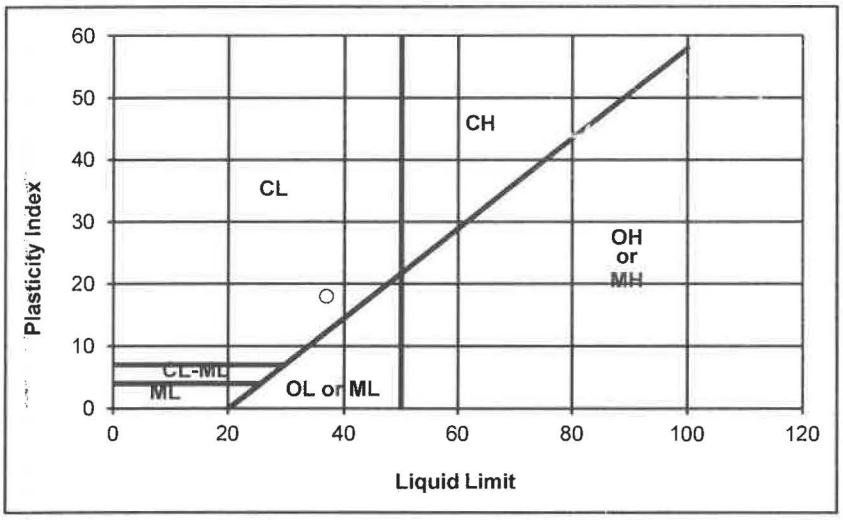
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B18 @ 35-36'
Sample Description: SC/CL

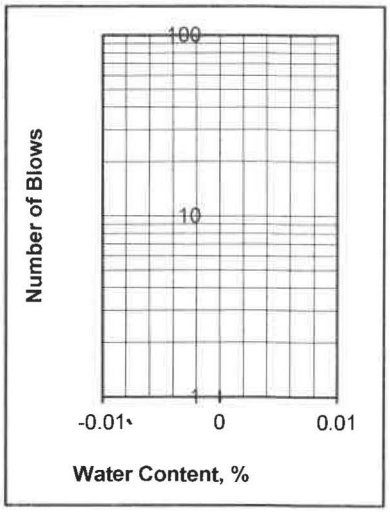
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	36.27	40.42		40.61	32.07	
Weight of Dry Soil & Tare (g)	33.94	37.70		35.80	27.92	
Weight of Tare (g)	21.47	23.29		23.02	16.46	
Weight of water (g)	2.33	2.72		4.81	4.15	
Weight of Dry Soil (g)	12.47	14.41		12.78	11.46	
Water Content (% of dry wt.)	18.7%	18.9%		37.6%	36.2%	
Number of Blows				25	25	

Plastic Limit : 19 **Liquid Limit : 37**

Plasticity Index : 18
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

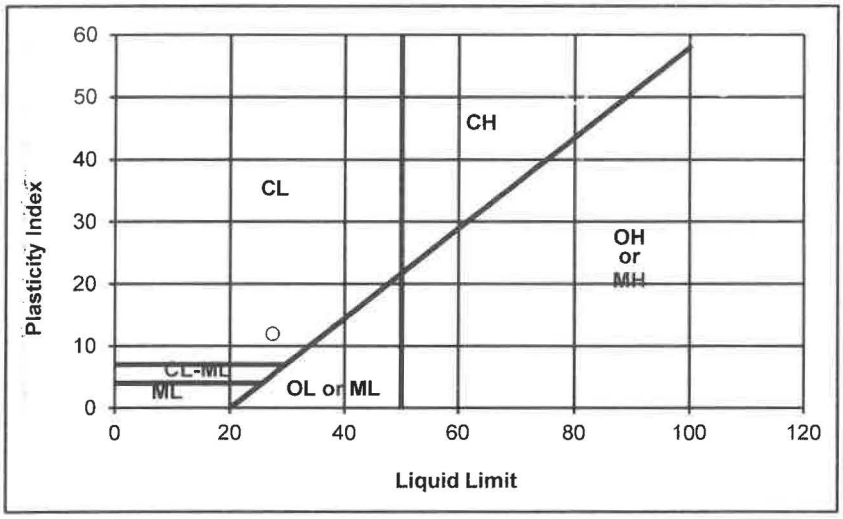
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B18 @ 40-41'
Sample Description: SC

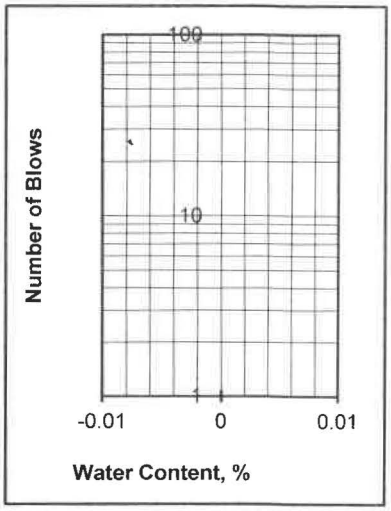
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	40.36	38.40		40.48	33.35	
Weight of Dry Soil & Tare (g)	38.22	36.57		36.85	30.51	
Weight of Tare (g)	24.31	24.31		23.76	20.01	
Weight of water (g)	2.14	1.83		3.63	2.84	
Weight of Dry Soil (g)	13.91	12.26		13.09	10.50	
Water Content (% of dry wt.)	15.4%	14.9%		27.7%	27.0%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 27**

Plasticity Index : 12
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

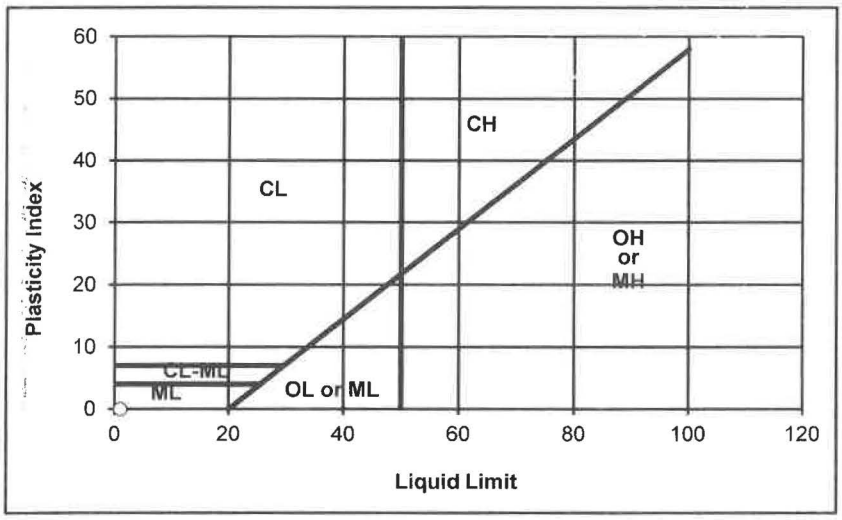
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B18 @ 45-46'
Sample Description: SM w/ trace of clay

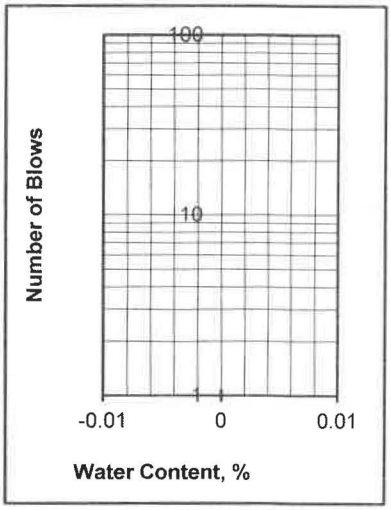
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

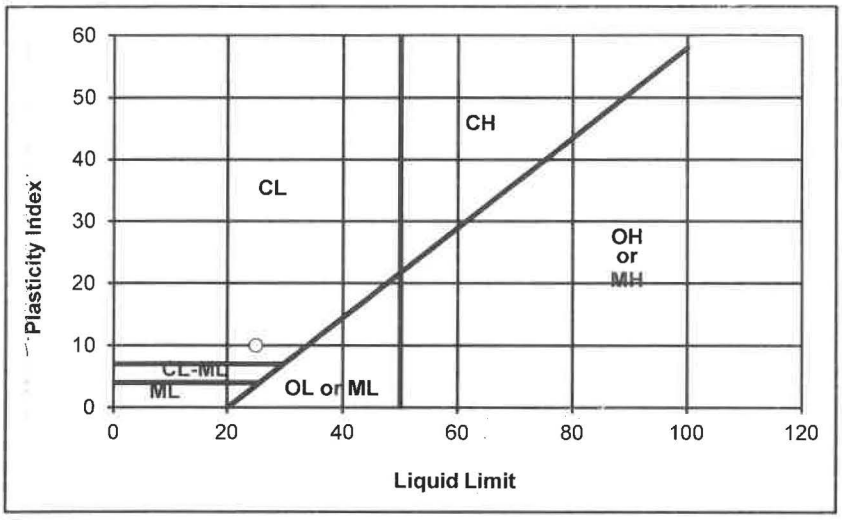
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B19 @ 10-11'
Sample Description: CL

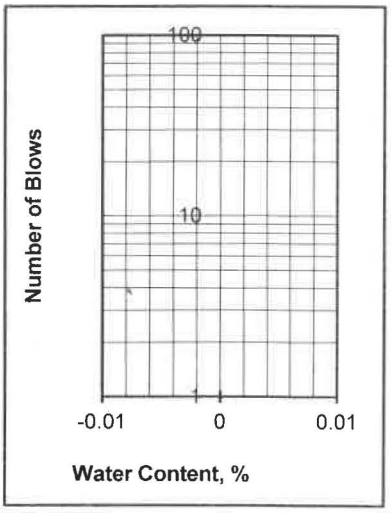
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

Trial Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.35	37.27		34.63	40.18	
Weight of Dry Soil & Tare (g)	33.87	35.57		32.10	36.49	
Weight of Tare (g)	24.03	24.07		22.18	21.28	
Weight of water (g)	1.48	1.70		2.53	3.69	
Weight of Dry Soil (g)	9.84	11.50		9.92	15.21	
Water Content (% of dry wt.)	15.0%	14.8%		25.5%	24.3%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 25**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

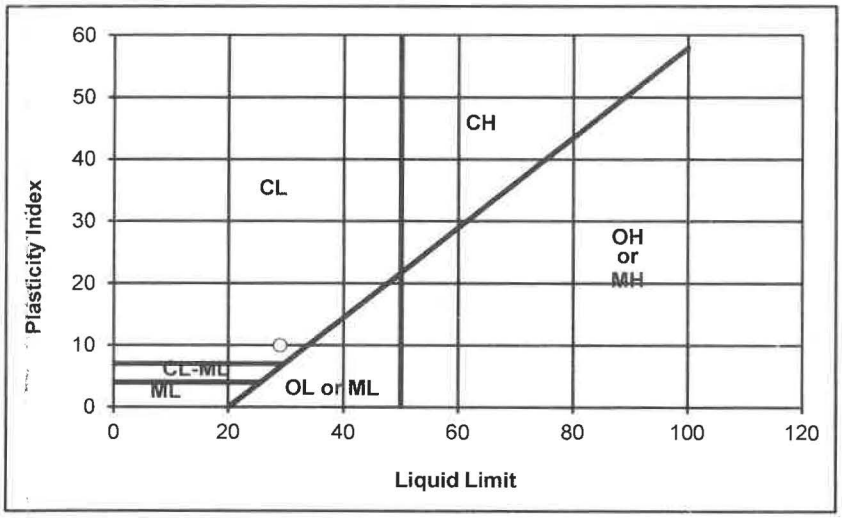
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B19 @ 15-16'
Sample Description: SC

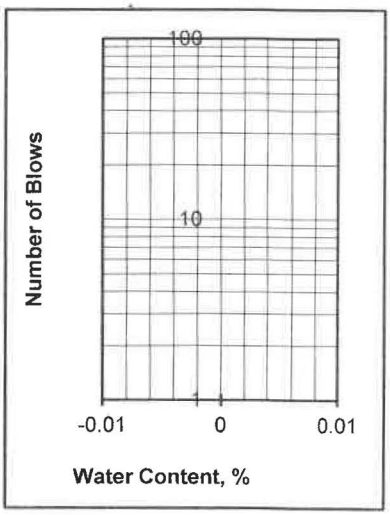
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	30.57	35.76		36.27	31.00	
Weight of Dry Soil & Tare (g)	28.86	33.73		32.62	28.44	
Weight of Tare (g)	19.71	22.78		20.01	19.60	
Weight of water (g)	1.71	2.03		3.65	2.56	
Weight of Dry Soil (g)	9.15	10.95		12.61	8.84	
Water Content (% of dry wt.)	18.7%	18.5%		28.9%	28.9%	
Number of Blows				25	25	

Plastic Limit : 19 **Liquid Limit : 29**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

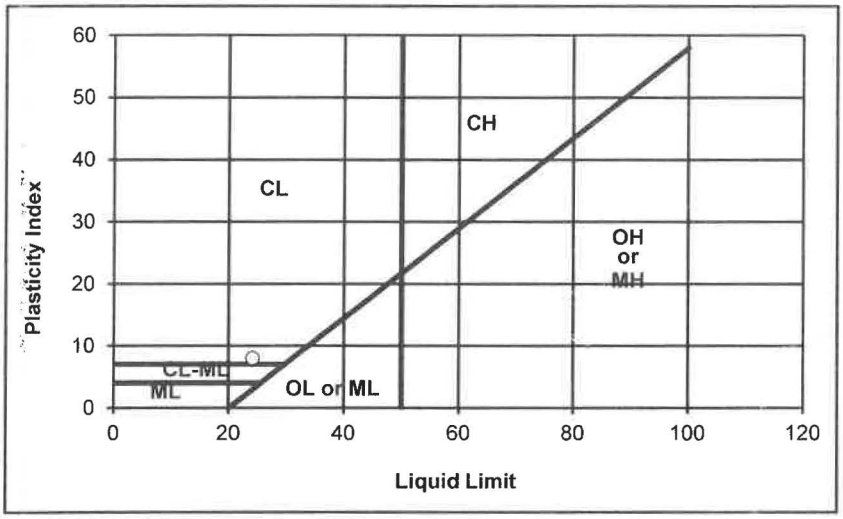
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B19 @ 20-21'
Sample Description: SC/CL

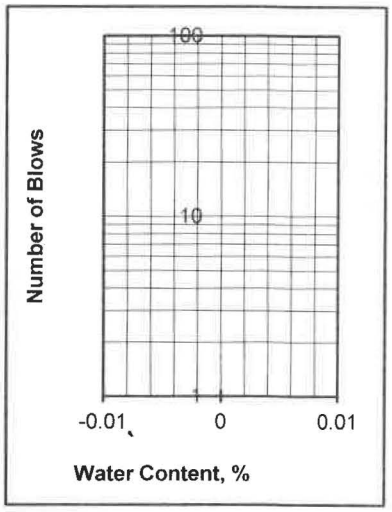
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.49	35.72		43.53	38.14	
Weight of Dry Soil & Tare (g)	32.88	33.96		39.62	34.89	
Weight of Tare (g)	16.46	23.01		23.29	21.47	
Weight of water (g)	2.61	1.76		3.91	3.25	
Weight of Dry Soil (g)	16.42	10.95		16.33	13.42	
Water Content (% of dry wt.)	15.9%	16.1%		23.9%	24.2%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 24**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

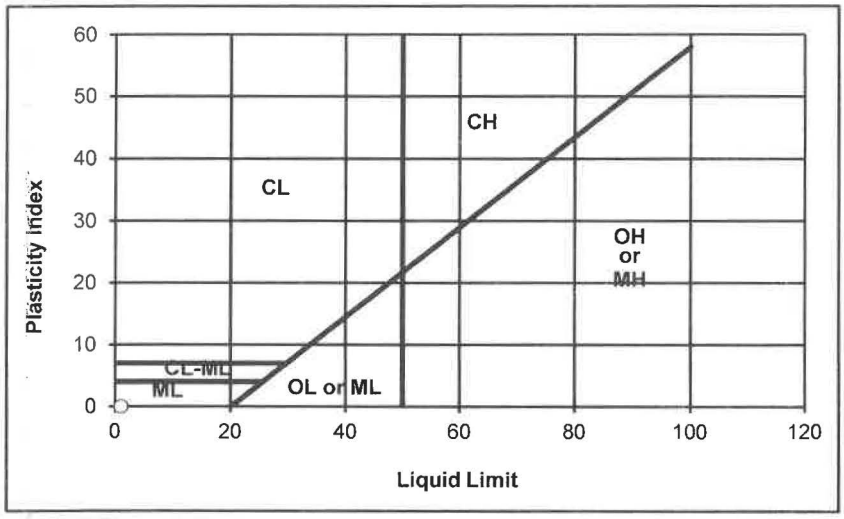
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B19 @ 25-26'
Sample Description: SM w/ trace of clay

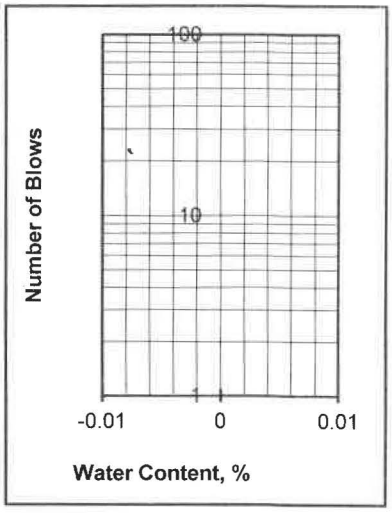
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

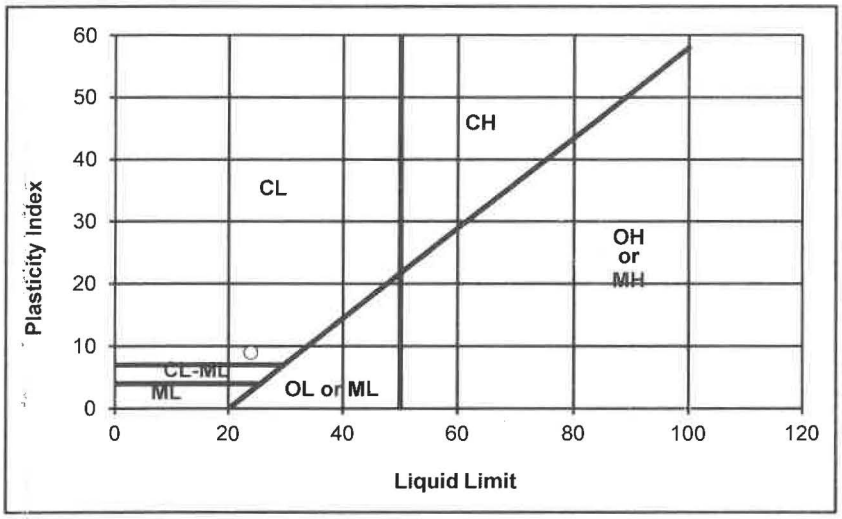
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B19 @ 30-31'
Sample Description: SC

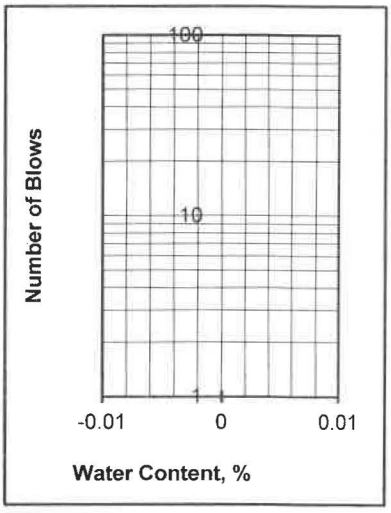
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	30.86	37.09		33.32	37.10	
Weight of Dry Soil & Tare (g)	28.99	35.19		31.04	34.44	
Weight of Tare (g)	16.46	23.02		21.47	23.29	
Weight of water (g)	1.87	1.90		2.28	2.66	
Weight of Dry Soil (g)	12.53	12.17		9.57	11.15	
Water Content (% of dry wt.)	14.9%	15.6%		23.8%	23.9%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 24**

Plasticity Index : 9
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

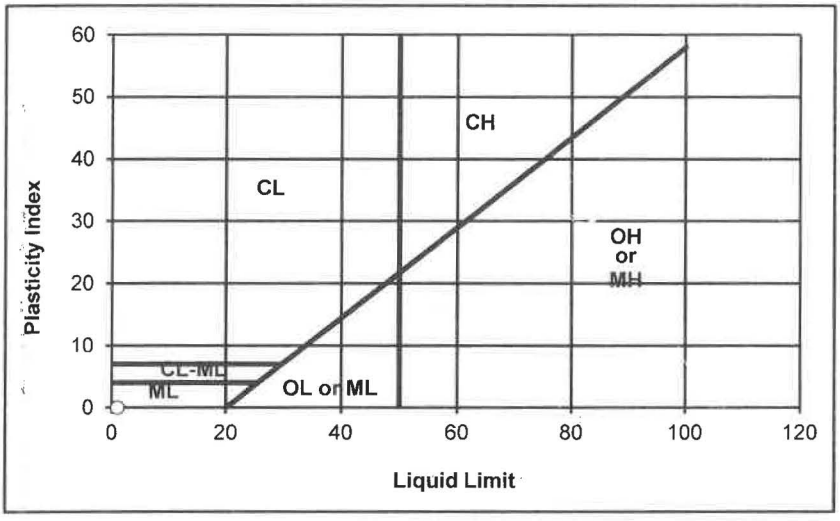
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B19 @ 35-36'
Sample Description: SM/ML

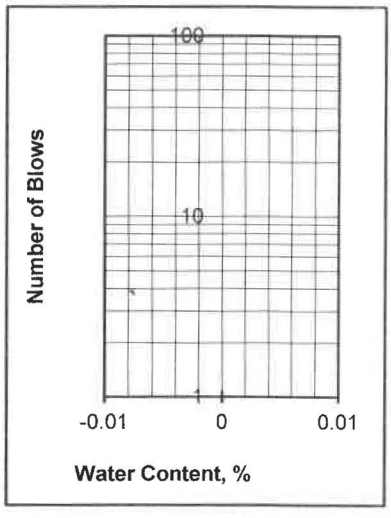
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

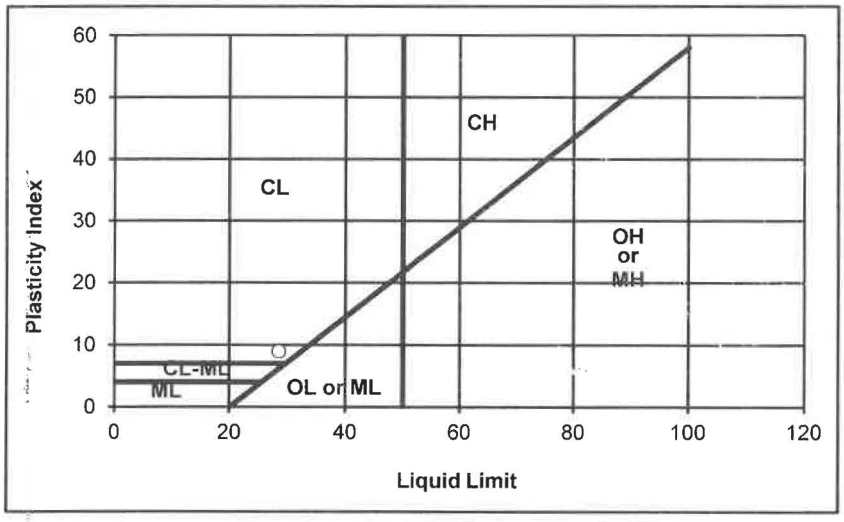
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B20 @ 15-16'
Sample Description: CL

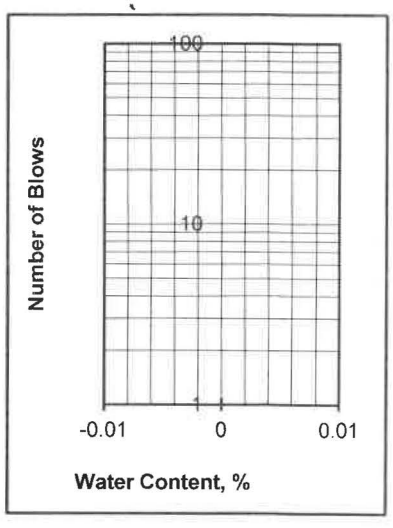
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	40.20	36.80		38.22	40.39	
Weight of Dry Soil & Tare (g)	37.60	34.76		34.65	36.14	
Weight of Tare (g)	24.03	24.06		22.13	21.22	
Weight of water (g)	2.60	2.04		3.57	4.25	
Weight of Dry Soil (g)	13.57	10.70		12.52	14.92	
Water Content (% of dry wt.)	19.2%	19.1%		28.5%	28.5%	
Number of Blows				25	25	

Plastic Limit : 19 **Liquid Limit : 28**

Plasticity Index : 9
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

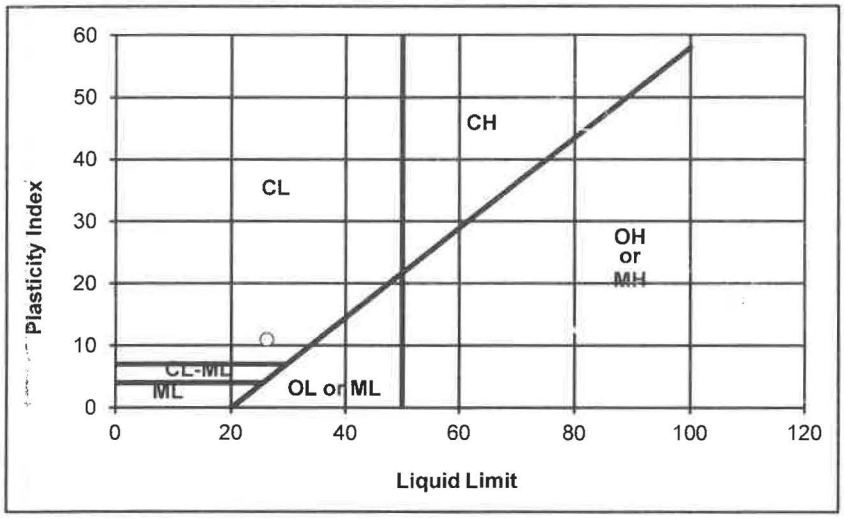
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B20 @ 20-21'
Sample Description: CL

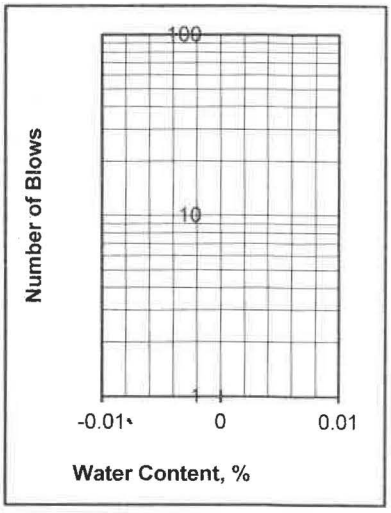
Date Tested: 4/28/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	40.05	43.85		38.81	36.58	
Weight of Dry Soil & Tare (g)	37.97	41.30		35.69	33.12	
Weight of Tare (g)	24.29	24.29		23.75	19.94	
Weight of water (g)	2.08	2.55		3.12	3.46	
Weight of Dry Soil (g)	13.68	17.01		11.94	13.18	
Water Content (% of dry wt.)	15.2%	15.0%		26.1%	26.3%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 26**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

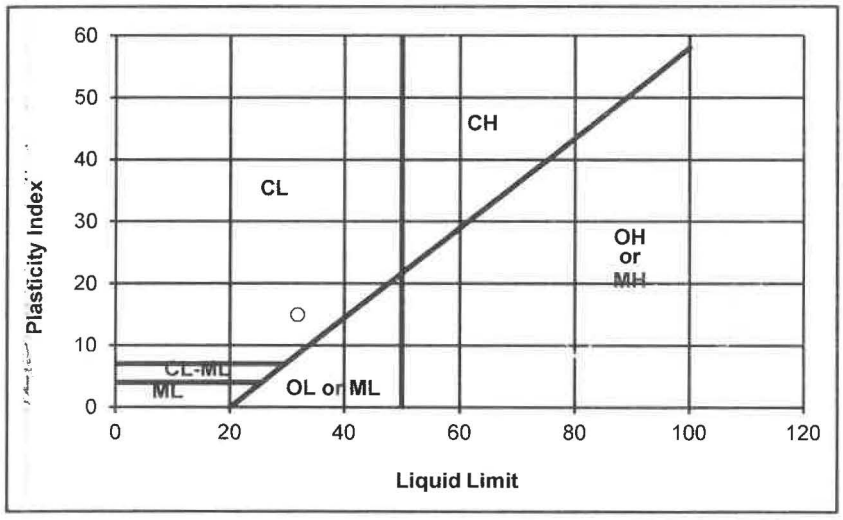
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B21 @ 12.5-13.5'
Sample Description: CL

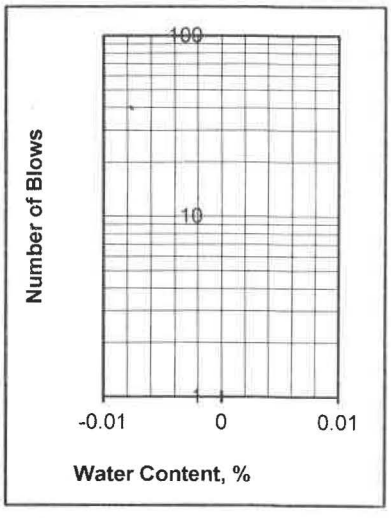
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	32.34	37.57		38.83	40.28	
Weight of Dry Soil & Tare (g)	30.14	35.43		35.03	35.76	
Weight of Tare (g)	16.87	22.74		23.27	21.37	
Weight of water (g)	2.20	2.14		3.80	4.52	
Weight of Dry Soil (g)	13.27	12.69		11.76	14.39	
Water Content (% of dry wt.)	16.6%	16.9%		32.3%	31.4%	
Number of Blows				25	25	

Plastic Limit : 17 **Liquid Limit : 32**

Plasticity Index : 15
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

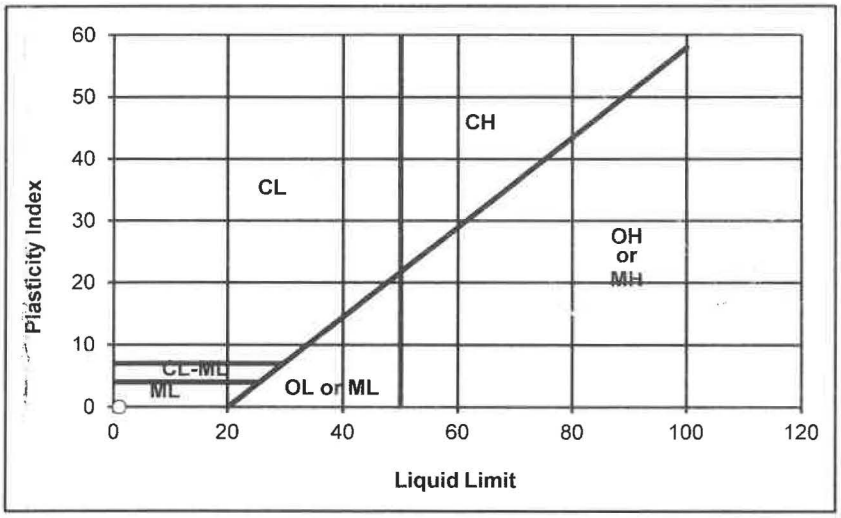
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B21 @ 25-26'
Sample Description: SM w/ clay

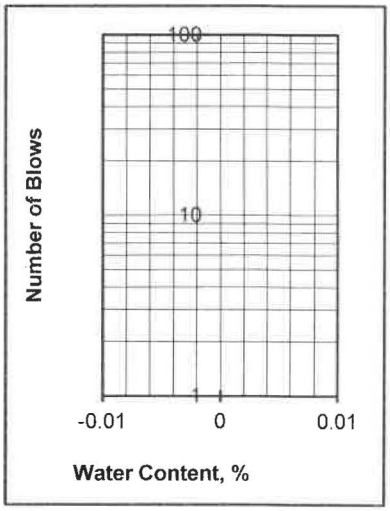
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

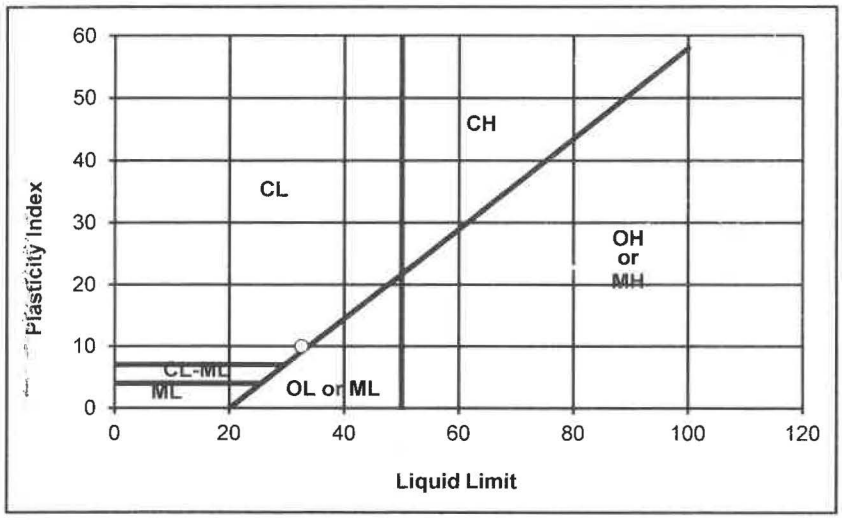
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B21 @ 30-31'
Sample Description: CL

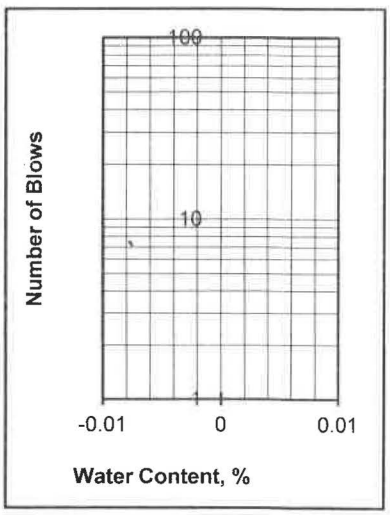
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	40.99	39.90		29.89	39.12	
Weight of Dry Soil & Tare (g)	37.40	36.89		26.17	35.20	
Weight of Tare (g)	21.97	23.29		14.72	23.21	
Weight of water (g)	3.59	3.01		3.72	3.92	
Weight of Dry Soil (g)	15.43	13.60		11.45	11.99	
Water Content (% of dry wt.)	23.3%	22.1%		32.5%	32.7%	
Number of Blows				25	25	

Plastic Limit : 23 **Liquid Limit : 33**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

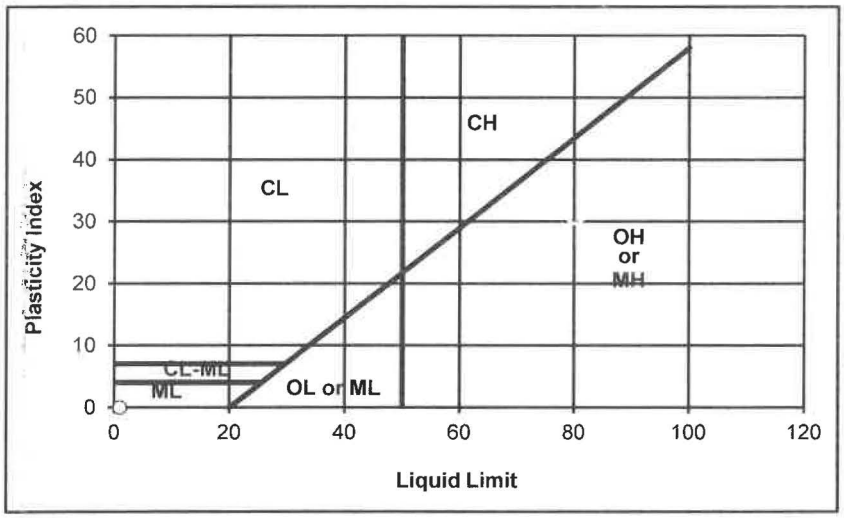
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B22 @ 2-3'
Sample Description: SM

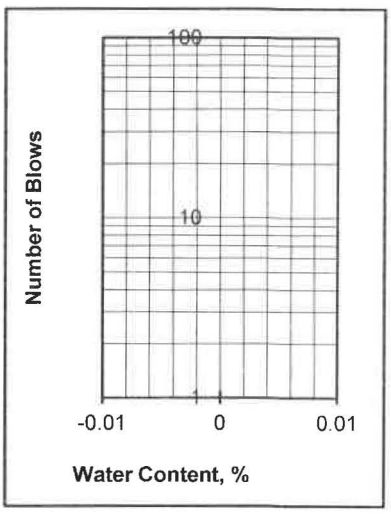
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

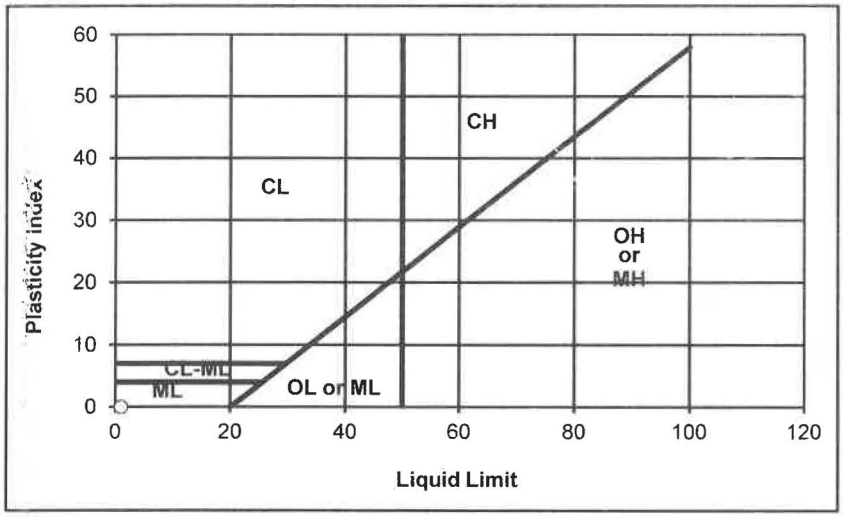
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B22 @ 5-6'
Sample Description: SM

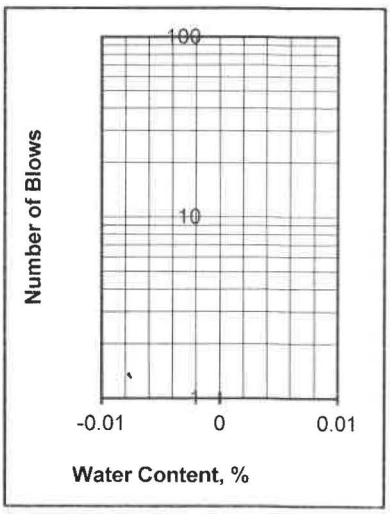
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

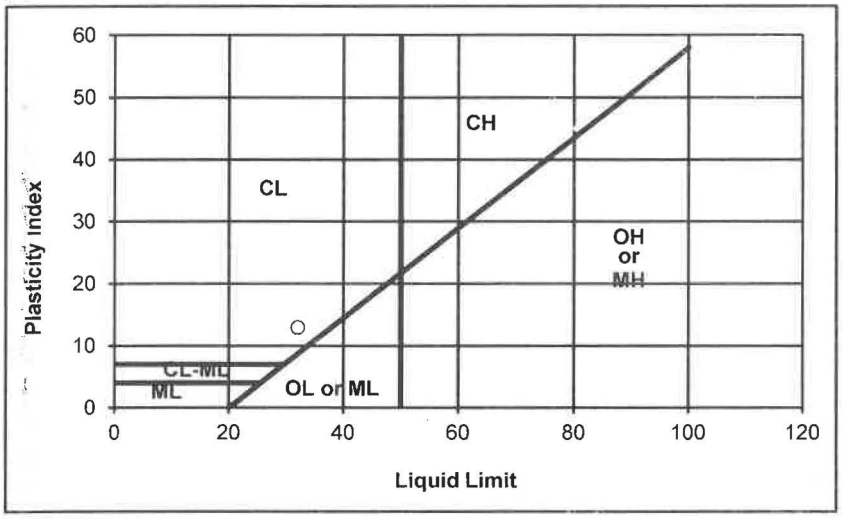
ASTM D4318/AASHTO T89 T90/CT 204

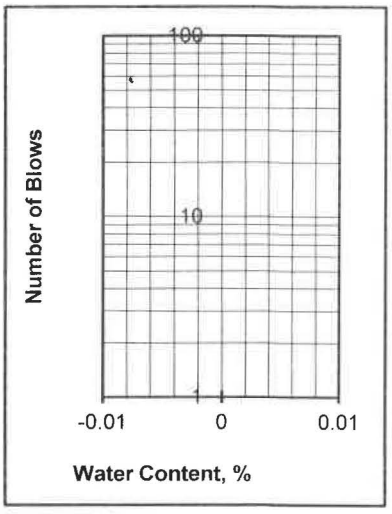
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B22 @ 10-11'
Sample Description: SC

Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

Trial Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	25.83	28.37		39.03	36.05	
Weight of Dry Soil & Tare (g)	24.87	27.49		34.65	32.07	
Weight of Tare (g)	19.83	22.79		20.99	19.68	
Weight of water (g)	0.96	0.88		4.38	3.98	
Weight of Dry Soil (g)	5.04	4.70		13.66	12.39	
Water Content (% of dry wt.)	19.0%	18.7%		32.1%	32.1%	
Number of Blows				25	25	
	Plastic Limit : 19			**Liquid Limit : 32**		

Plasticity Index : 13
Unified Soil Classification : CL
Requirement:
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

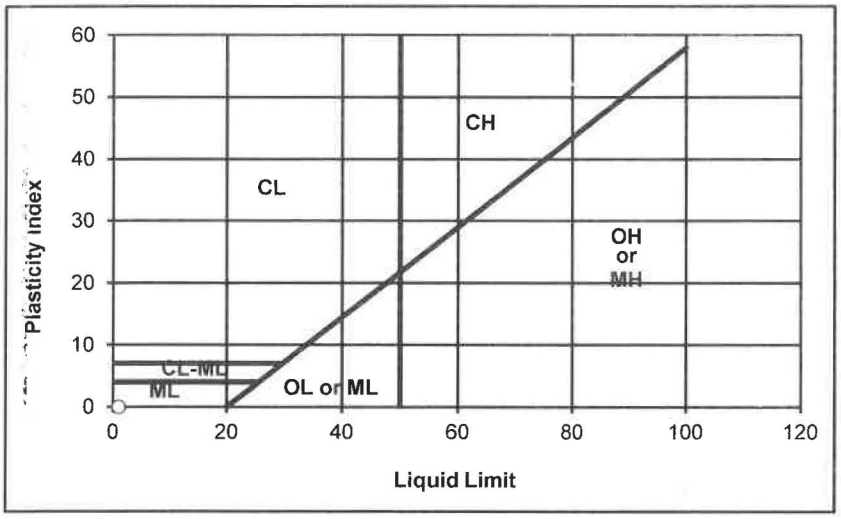
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B22 @ 15-16'
Sample Description: SM

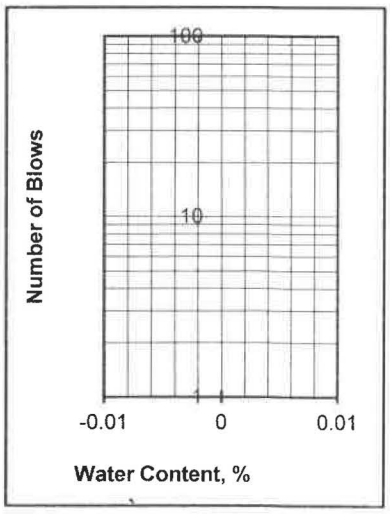
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

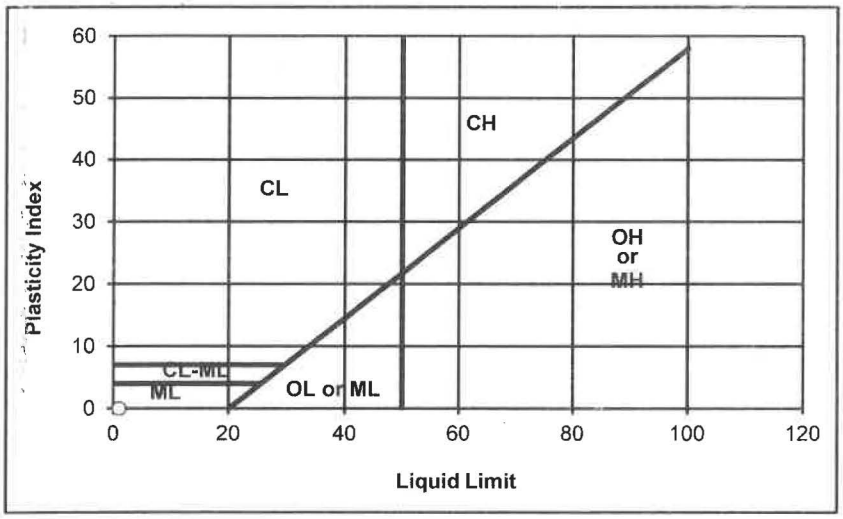
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B23 @ 5-6'
Sample Description: SM

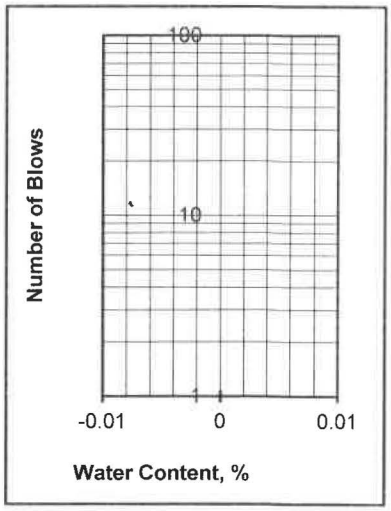
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

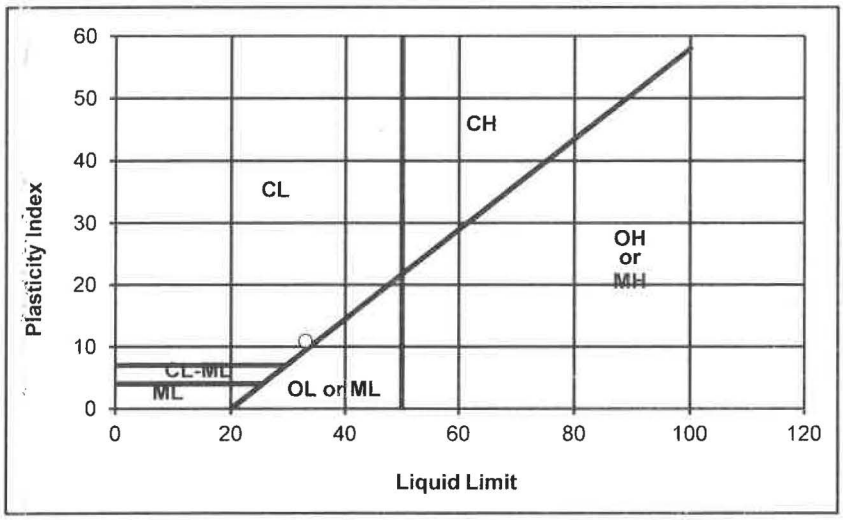
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B23 @ 7.5-8.5'
Sample Description: CL

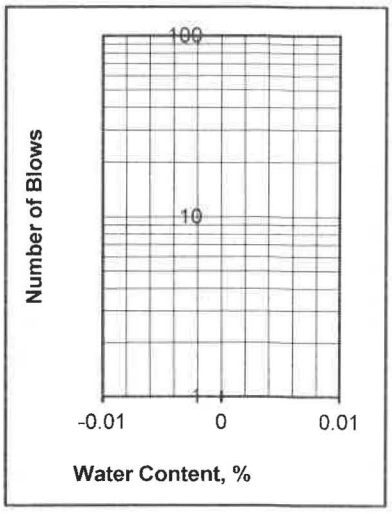
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.41	39.90		37.35	45.00	
Weight of Dry Soil & Tare (g)	32.56	36.79		33.14	38.69	
Weight of Tare (g)	19.83	22.81		20.34	19.66	
Weight of water (g)	2.85	3.11		4.21	6.31	
Weight of Dry Soil (g)	12.73	13.98		12.80	19.03	
Water Content (% of dry wt.)	22.4%	22.2%		32.9%	33.2%	
Number of Blows				25	25	

Plastic Limit : 22 **Liquid Limit : 33**

Plasticity Index : 11
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

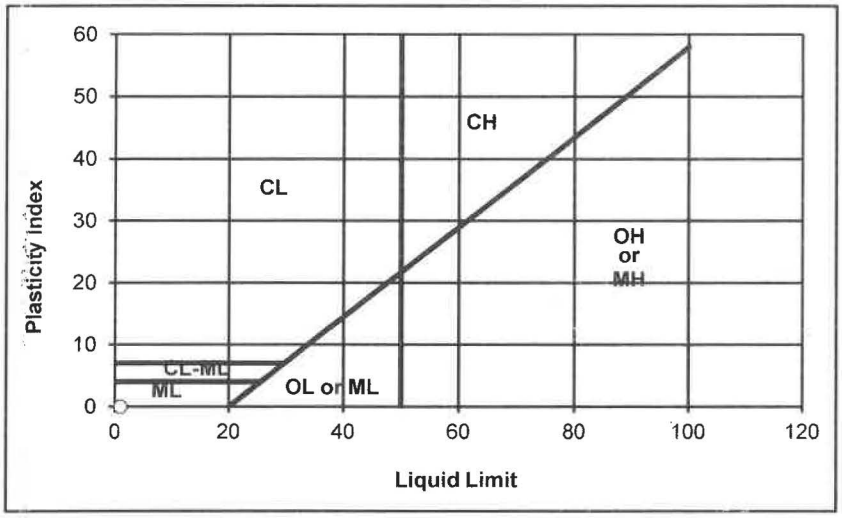
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B23 @ 15-16'
Sample Description: ML

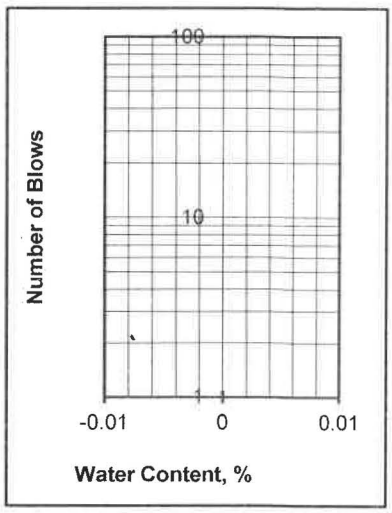
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

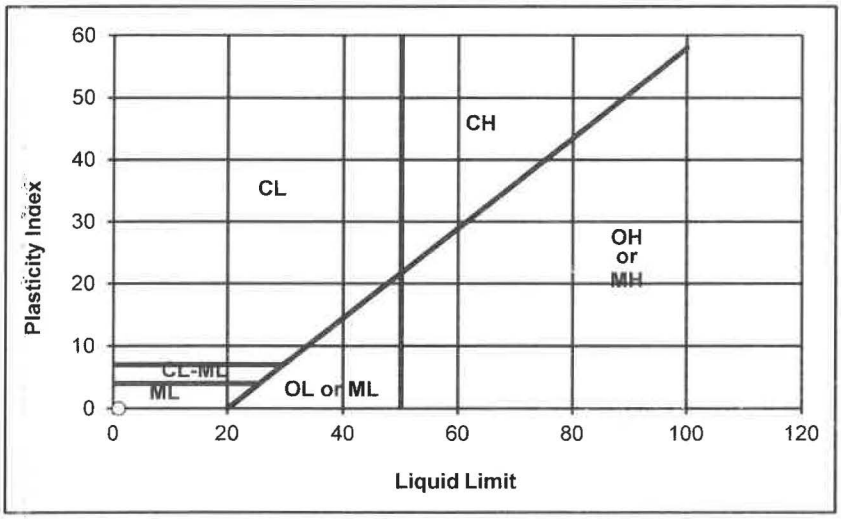
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B23 @ 20-21'
Sample Description: SM/ML

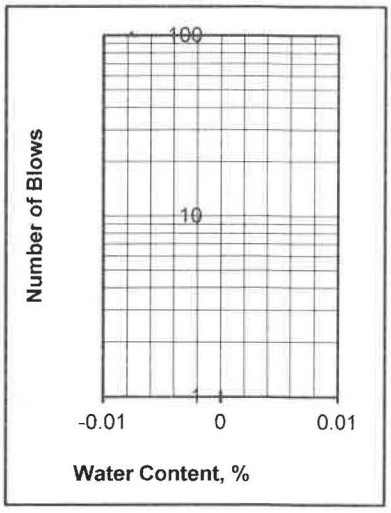
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

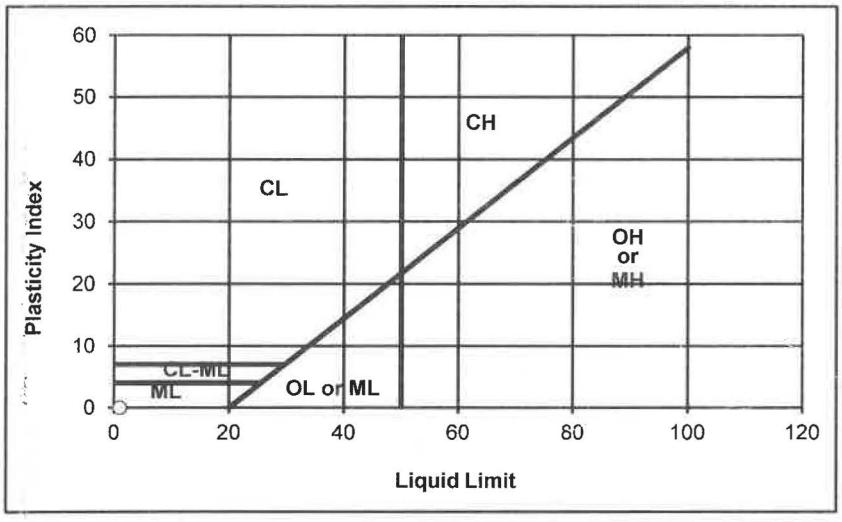
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B24 @ 5-6'
Sample Description: SM w/ clay

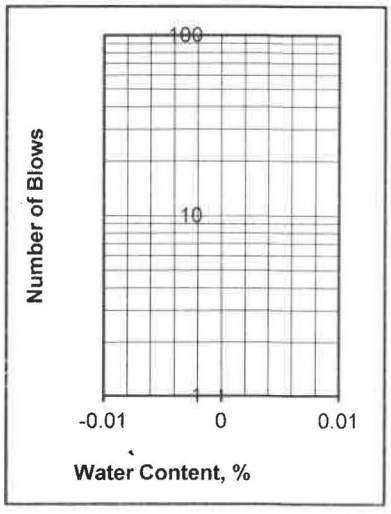
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

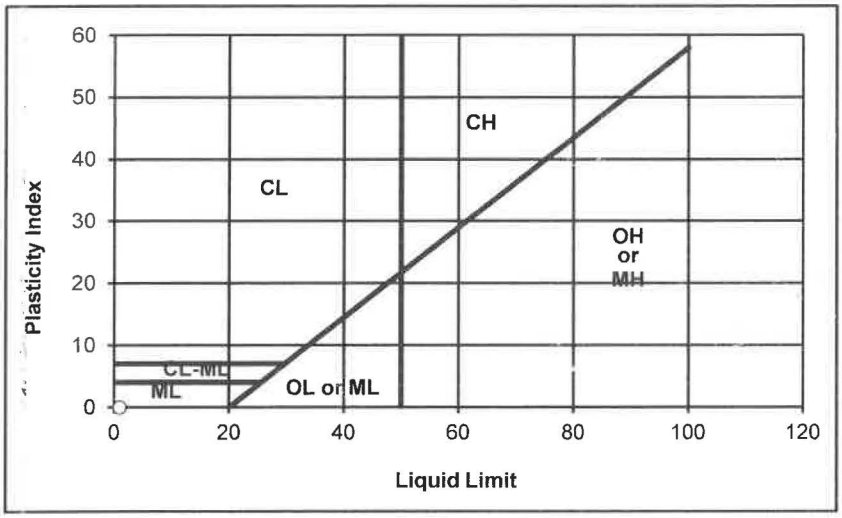
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B24 @ 10-11'
Sample Description: SM

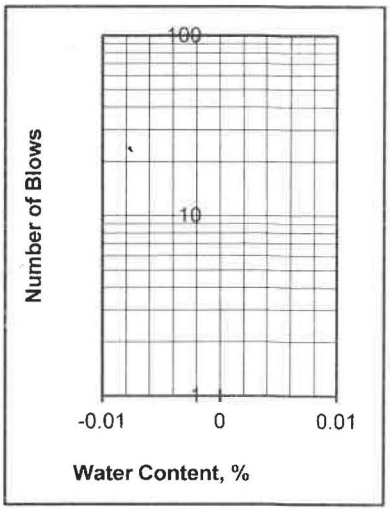
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

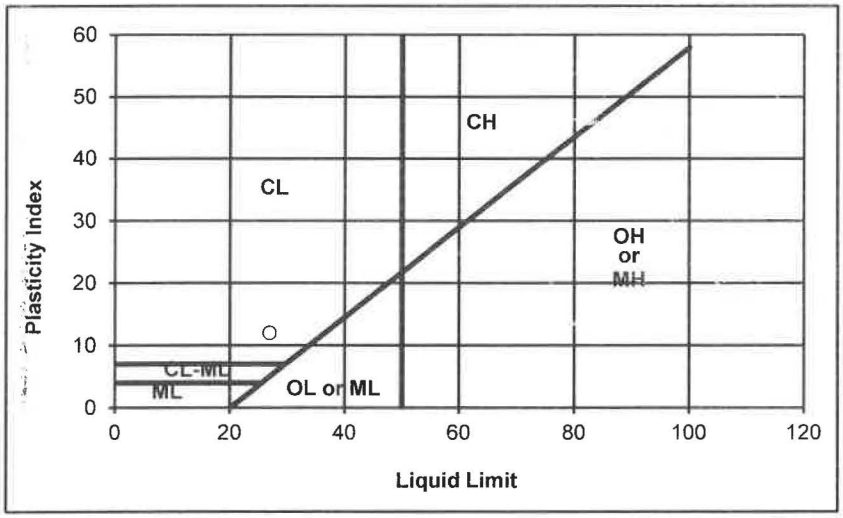
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B24 @ 15-16'
Sample Description: CL

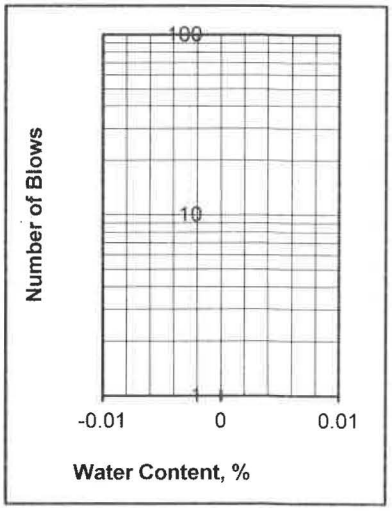
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	36.77	29.00		31.63	41.90	
Weight of Dry Soil & Tare (g)	34.81	28.25		28.05	37.95	
Weight of Tare (g)	21.96	23.24		14.75	23.30	
Weight of water (g)	1.96	0.75		3.58	3.95	
Weight of Dry Soil (g)	12.85	5.01		13.30	14.65	
Water Content (% of dry wt.)	15.3%	15.0%		26.9%	27.0%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 27**

Plasticity Index : 12
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

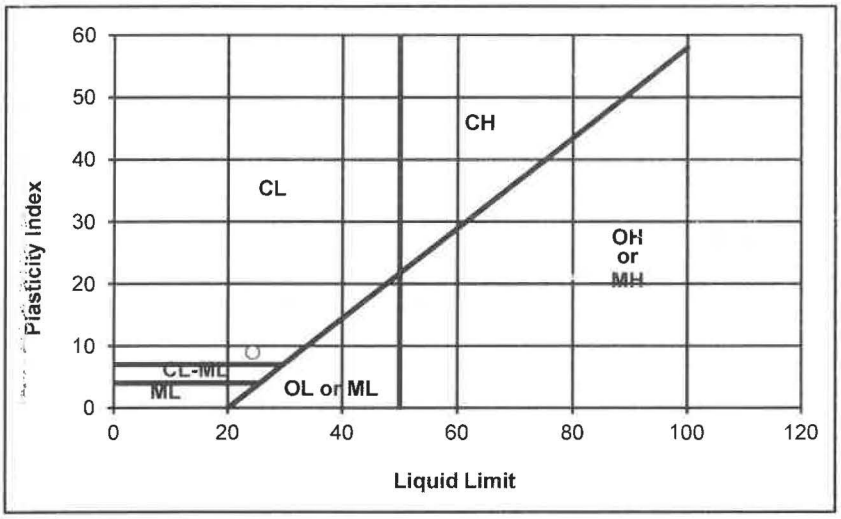
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B24 @ 20-21'
Sample Description: SC/CL

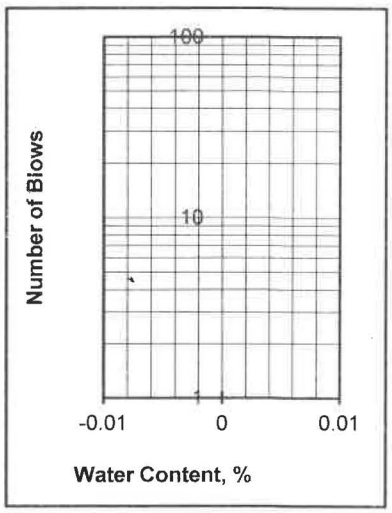
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.08	39.11		35.90	39.24	
Weight of Dry Soil & Tare (g)	33.68	37.21		32.21	35.55	
Weight of Tare (g)	24.37	24.31		17.19	20.20	
Weight of water (g)	1.40	1.90		3.69	3.69	
Weight of Dry Soil (g)	9.31	12.90		15.02	15.35	
Water Content (% of dry wt.)	15.0%	14.7%		24.6%	24.0%	
Number of Blows				25	25	

Plastic Limit : 15 **Liquid Limit : 24**

Plasticity Index : 9
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

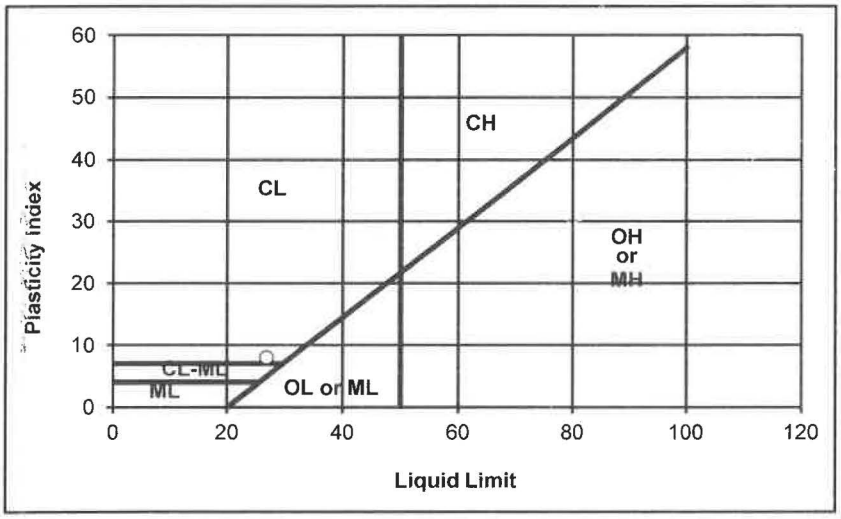
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B24 @ 25-26'
Sample Description: SC

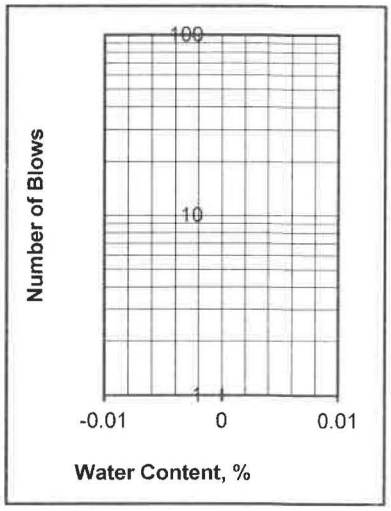
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	40.60	45.86		34.48	36.26	
Weight of Dry Soil & Tare (g)	37.94	42.41		31.95	33.14	
Weight of Tare (g)	24.07	24.07		22.56	21.46	
Weight of water (g)	2.66	3.45		2.53	3.12	
Weight of Dry Soil (g)	13.87	18.34		9.39	11.68	
Water Content (% of dry wt.)	19.2%	18.8%		26.9%	26.7%	
Number of Blows				25	25	

Plastic Limit : 19 **Liquid Limit : 27**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

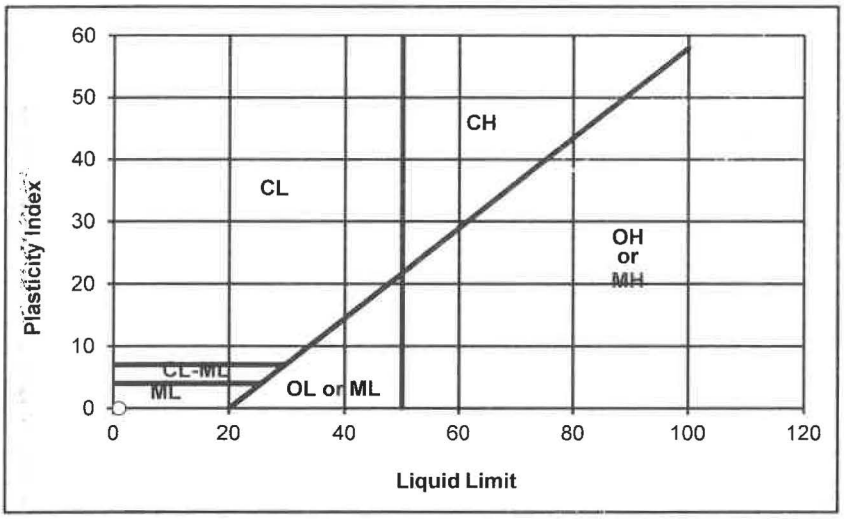
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B24 @ 30-31'
Sample Description: SM

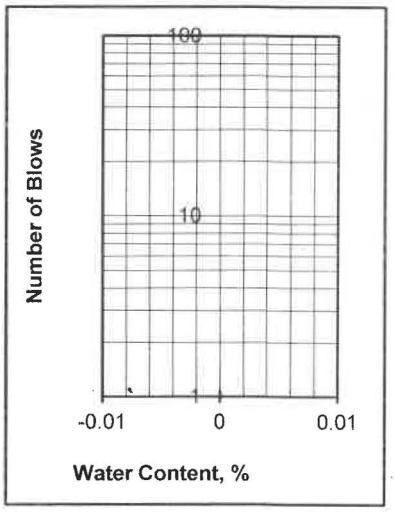
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

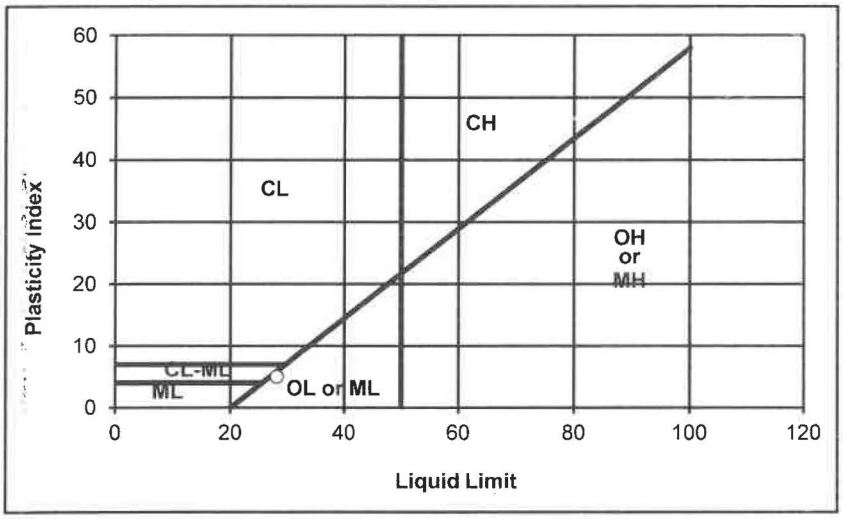
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B24 @ 35-36'
Sample Description: ML

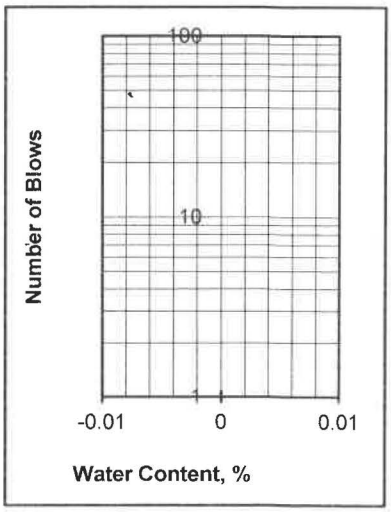
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	35.85	40.88		37.30	36.71	
Weight of Dry Soil & Tare (g)	33.70	37.83		33.54	32.45	
Weight of Tare (g)	24.35	24.31		20.19	17.35	
Weight of water (g)	2.15	3.05		3.76	4.26	
Weight of Dry Soil (g)	9.35	13.52		13.35	15.10	
Water Content (% of dry wt.)	23.0%	22.6%		28.2%	28.2%	
Number of Blows				25	25	

Plastic Limit : 23 **Liquid Limit : 28**

Plasticity Index : 5
Unified Soil Classification : ML or OL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

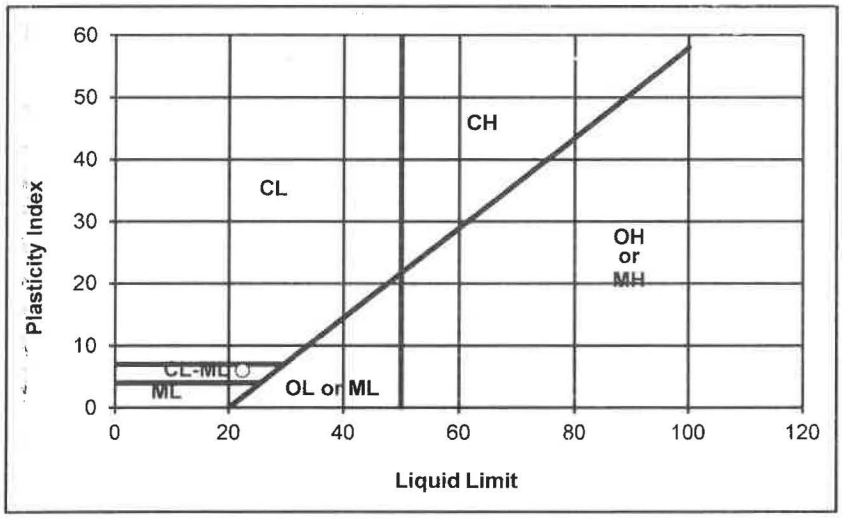
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B25 @ 2-3'
Sample Description: SC/SM

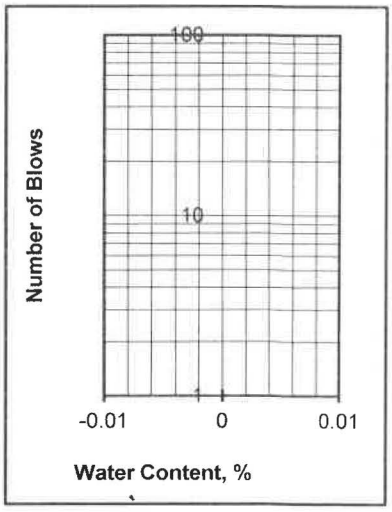
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	39.30	37.70		39.16	39.32	
Weight of Dry Soil & Tare (g)	36.72	35.65		35.64	35.82	
Weight of Tare (g)	19.80	22.80		20.27	19.73	
Weight of water (g)	2.58	2.05		3.52	3.50	
Weight of Dry Soil (g)	16.92	12.85		15.37	16.09	
Water Content (% of dry wt.)	15.2%	16.0%		22.9%	21.8%	
Number of Blows				25	25	

Plastic Limit : 16 **Liquid Limit : 22**

Plasticity Index : 6
Unified Soil Classification : CL-ML **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

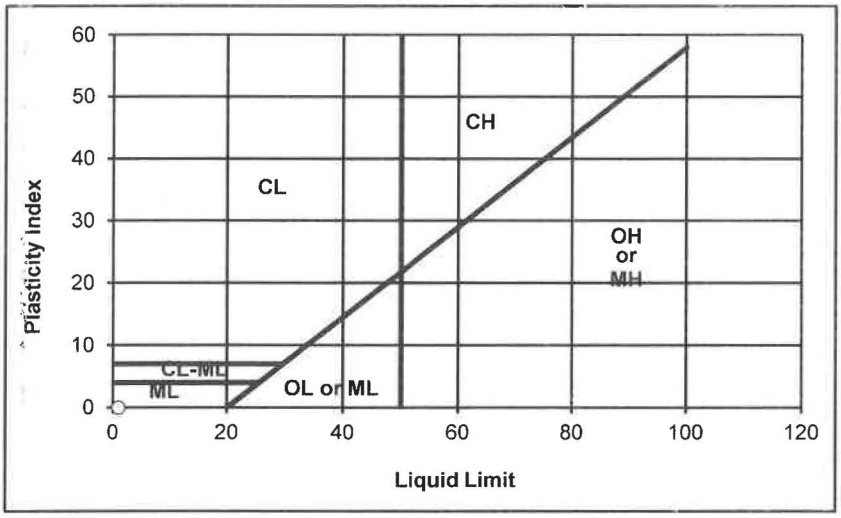
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B25 @ 12.5-13.5'
Sample Description: SM

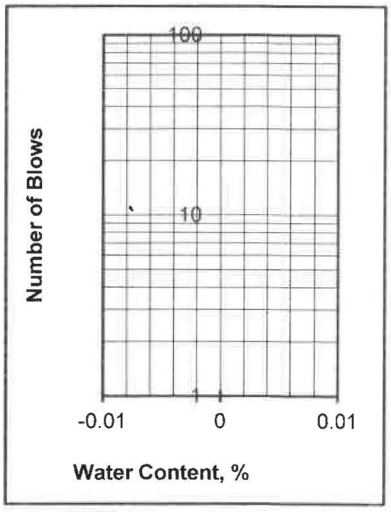
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

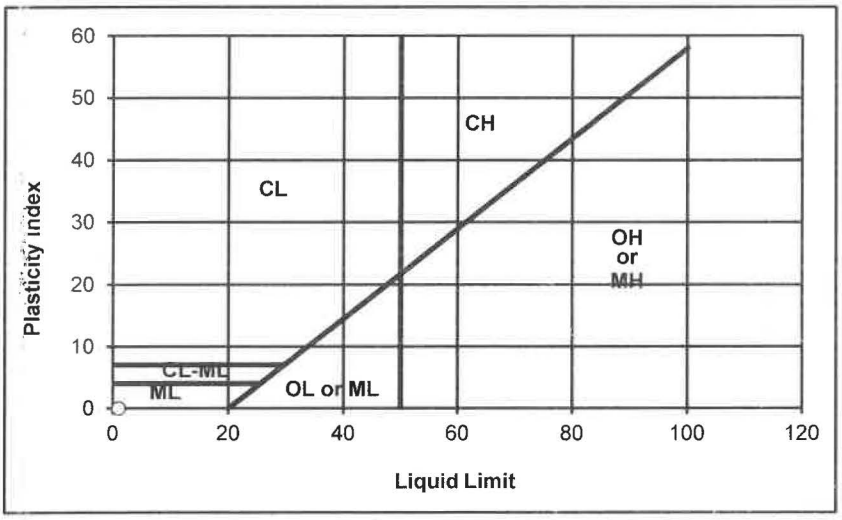
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B25 @ 20-21'
Sample Description: SM w/ trace of clay

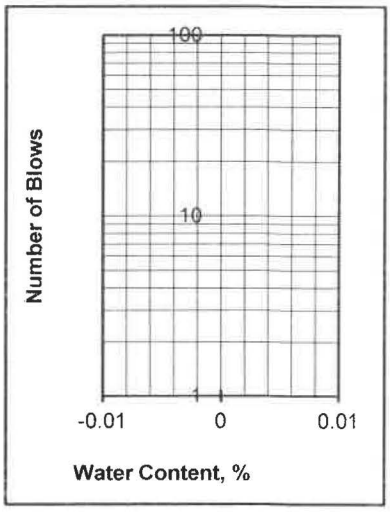
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

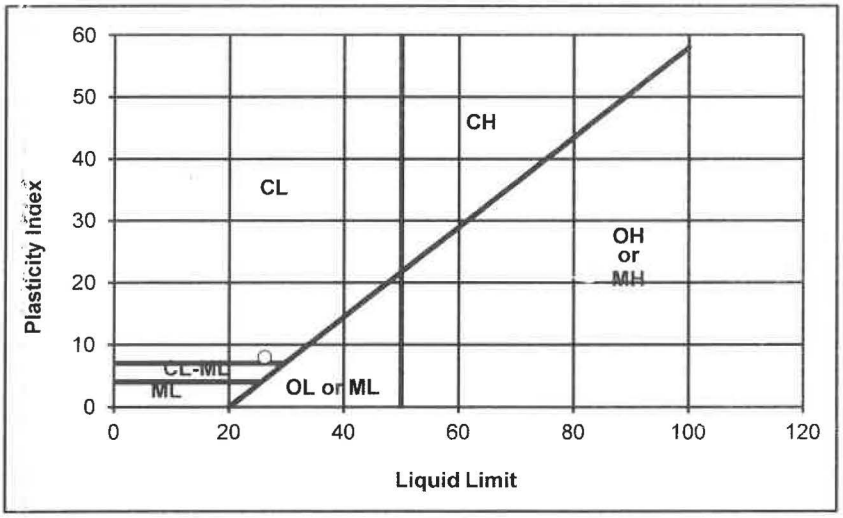
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B25 @ 30-31'
Sample Description: SC/CL

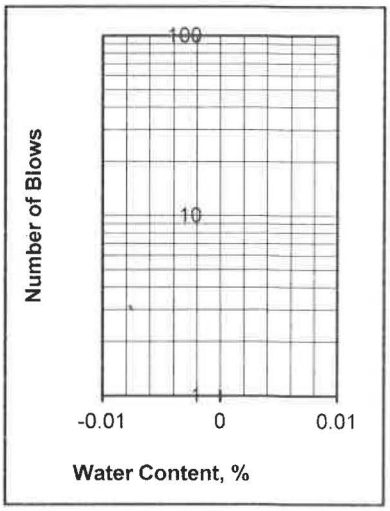
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	44.47	46.28		38.70	39.26	
Weight of Dry Soil & Tare (g)	41.40	42.82		34.34	35.27	
Weight of Tare (g)	24.36	24.32		17.40	20.22	
Weight of water (g)	3.08	3.45		4.36	3.99	
Weight of Dry Soil (g)	17.04	18.50		16.95	15.05	
Water Content (% of dry wt.)	18.1%	18.7%		25.7%	26.5%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 26**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

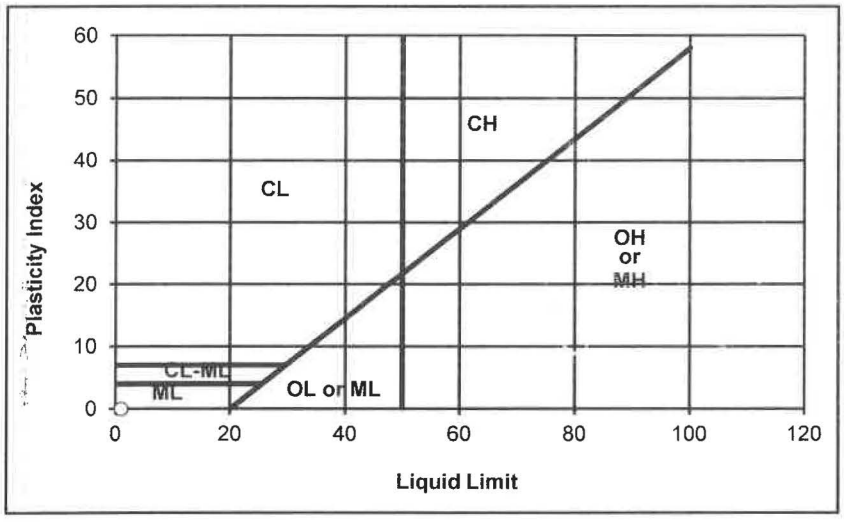
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B26 @ 5-6'
Sample Description: SM w/ trace of clay

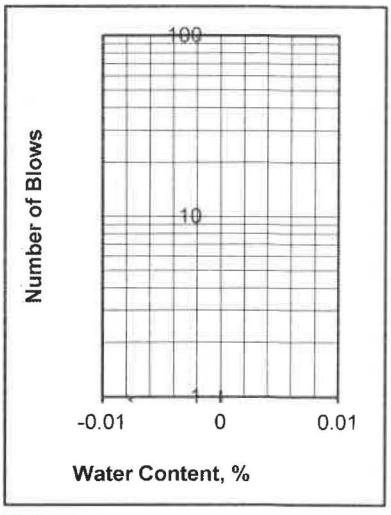
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

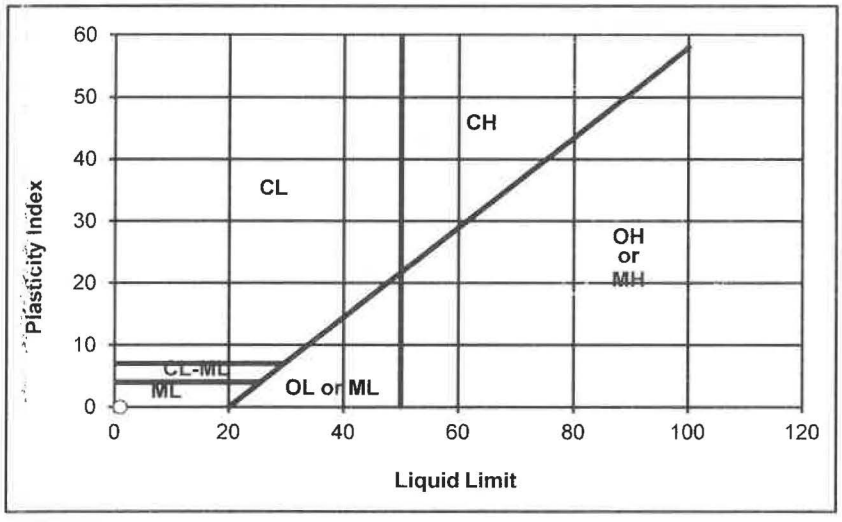
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B26 @ 12.5-13.5'
Sample Description: SM

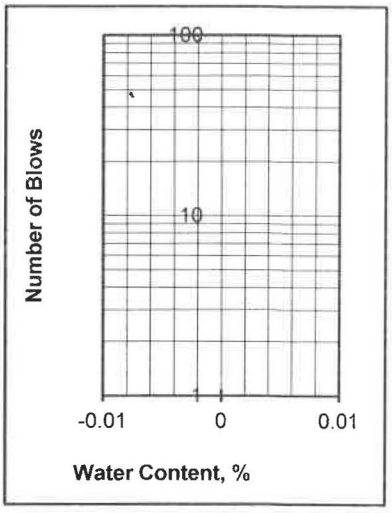
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

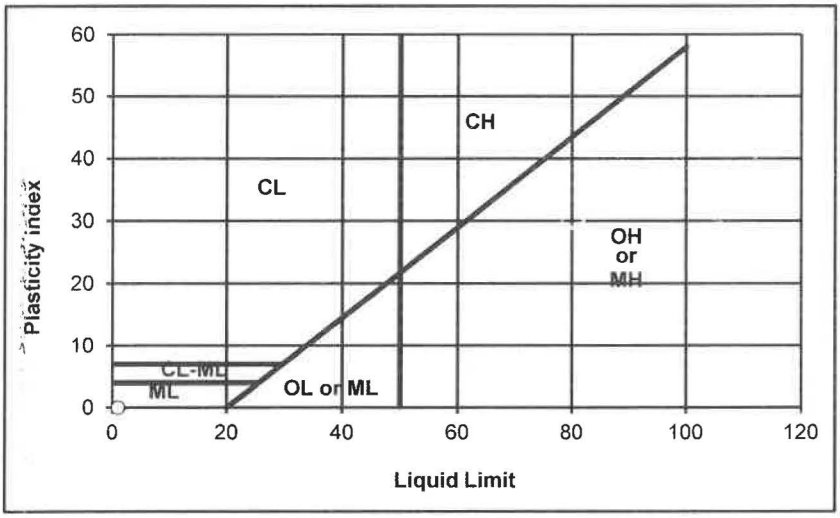
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B26 @ 20-21'
Sample Description: SM/ML w/ trace of clay

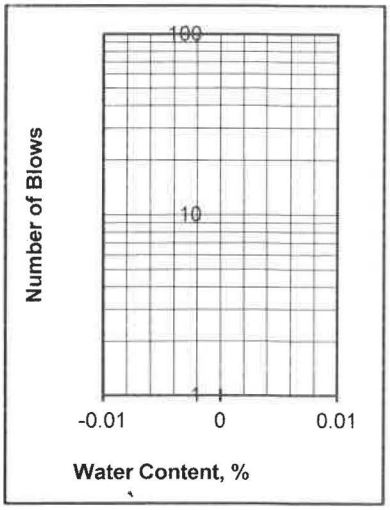
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)						
Weight of Dry Soil & Tare (g)						
Weight of Tare (g)						
Weight of water (g)						
Weight of Dry Soil (g)						
Water Content (% of dry wt.)						
Number of Blows						

Plastic Limit : N/D **Liquid Limit : N/D**

Plasticity Index : NON-PLASTIC
Unified Soil Classification : NON-PLASTIC **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

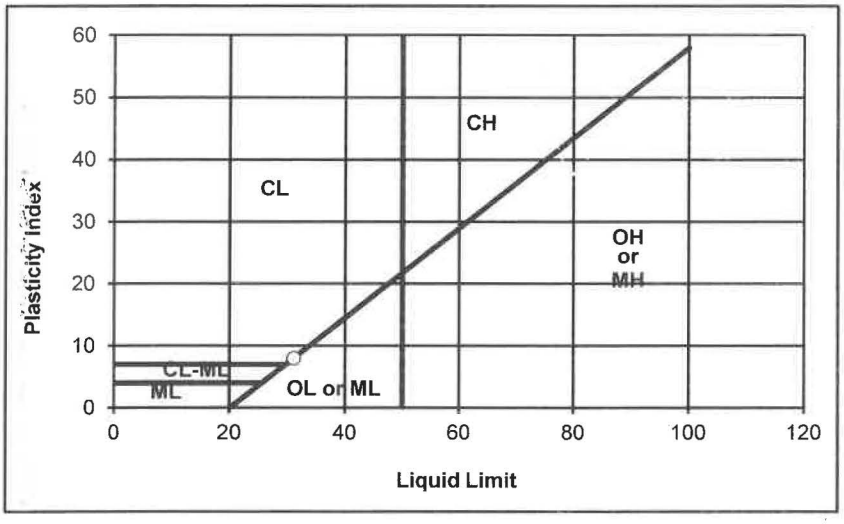
Project: **Triangle Development**
Project Number: **012-22165**
Date Sampled: 4/11/2023
Sampled By: SR
Sample Number: -
Sample Location: B26 @ 30-31'
Sample Description: SC/CL

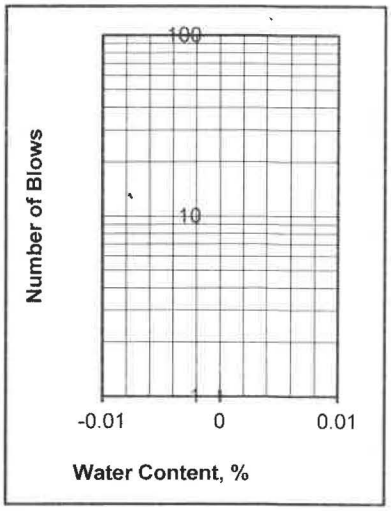
Date Tested: 5/18/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	40.69	40.85		43.81	35.12	
Weight of Dry Soil & Tare (g)	37.64	37.76		38.78	31.87	
Weight of Tare (g)	24.08	24.08		22.54	21.45	
Weight of water (g)	3.05	3.09		5.03	3.25	
Weight of Dry Soil (g)	13.56	13.68		16.23	10.42	
Water Content (% of dry wt.)	22.5%	22.6%		31.0%	31.2%	
Number of Blows				25	25	

Plastic Limit : 23 **Liquid Limit : 31**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

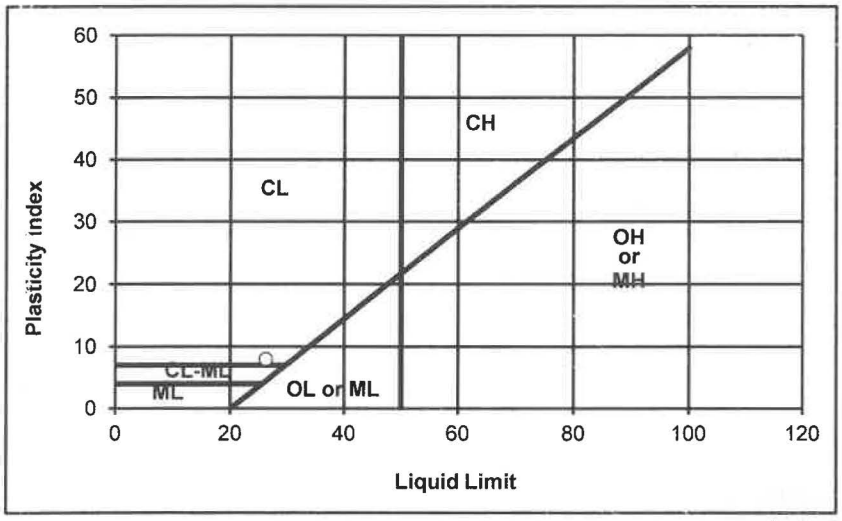
Project: **Triangle Development**
Project Number: **012-22233**
Date Sampled: 7/7/2023
Sampled By: SR / MR
Sample Number: -
Sample Location: B30 @ 5-6'
Sample Description: SC

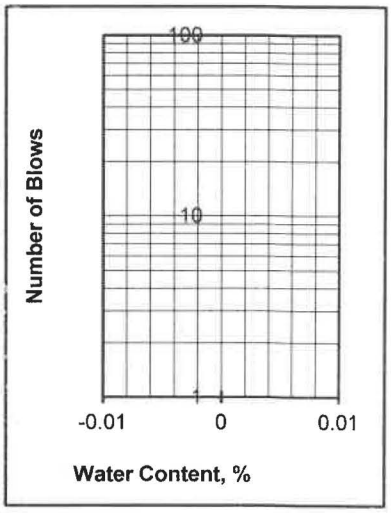
Date Tested: 7/17/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	41.22	39.42		31.42	39.40	
Weight of Dry Soil & Tare (g)	38.70	37.15		28.13	35.39	
Weight of Tare (g)	24.35	24.37		15.57	20.09	
Weight of water (g)	2.52	2.27		3.29	4.01	
Weight of Dry Soil (g)	14.35	12.78		12.56	15.30	
Water Content (% of dry wt.)	17.6%	17.8%		26.2%	26.2%	
Number of Blows				25	25	

Plastic Limit : 18 **Liquid Limit : 26**

Plasticity Index : 8
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Plasticity Index of Soils

ASTM D4318/AASHTO T89 T90/CT 204

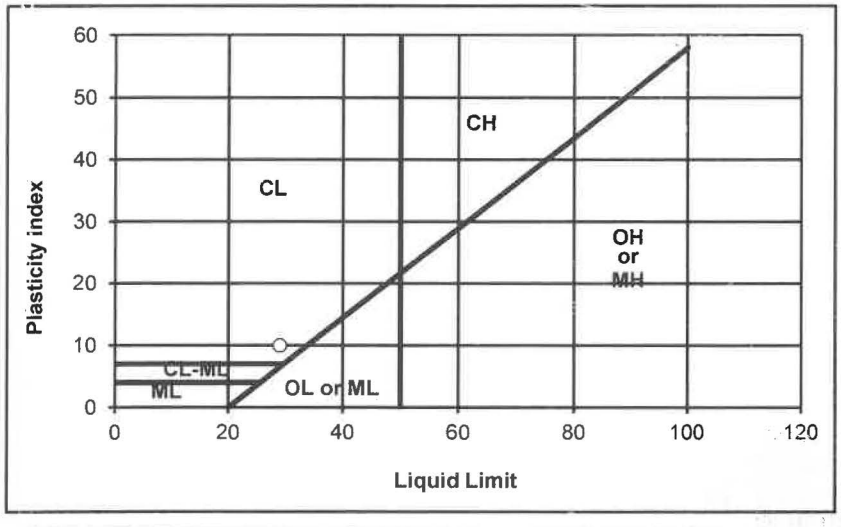
Project: **Triangle Development**
Project Number: **012-22233**
Date Sampled: 7/7/2023
Sampled By: SR / MR
Sample Number: -
Sample Location: B30 @ 7.5-8.5'
Sample Description: SC/CL

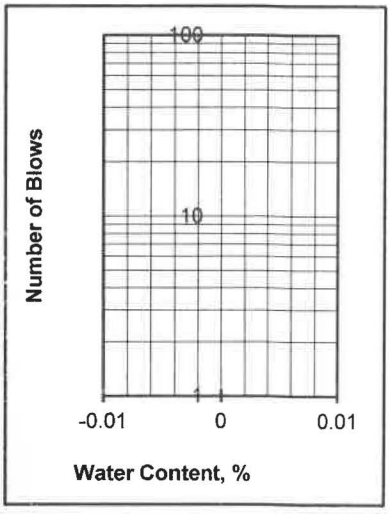
Date Tested: 7/17/2023
Tested By: JM
Verified By: JG

	Plastic Limit			Liquid Limit		
Trial Number	1	2	3	1	2	3
Weight of Wet Soil & Tare (g)	45.05	46.36		35.09	29.88	
Weight of Dry Soil & Tare (g)	41.67	42.74		32.25	27.90	
Weight of Tare (g)	24.20	24.17		22.27	21.19	
Weight of water (g)	3.38	3.62		2.84	1.98	
Weight of Dry Soil (g)	17.47	18.57		9.98	6.71	
Water Content (% of dry wt.)	19.3%	19.5%		28.5%	29.5%	
Number of Blows				25	25	

Plastic Limit : 19 **Liquid Limit : 29**

Plasticity Index : 10
Unified Soil Classification : CL **Requirement:**
Approx. % of Material Retained on # 40 Sieve:





Departures from Outlined Procedure:

Unusual Conditions, Other Notes:

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/16/2022
Sample Number	: -
Sample Location	: B1 @ 12-13'
Soil Classification	: SM/ML

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	105.5	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	19.0	Initial Length,cm	7.11	% Passing # 200	52.9
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:45	5:08	0.34	1.82	9.78	8.30	23.4	21.2	24.4
2	5:08	5:20	1.82	2.54	8.30	7.56	23.4	21.2	24.4
3	5:20	5:45	2.54	3.94	7.56	6.18	23.4	21.2	24.4
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1380	0.89319	7.7E-06	7.691E-06
2	720	0.94055	8.0E-06	8E-06
3	1500	0.88109	7.9E-06	7.93E-06
4				
5				
6				

Permeability
7.87E-06 cm/sec
7.87E-08 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/19/2022
Sample Number	: -
Sample Location	: B1 @ 25-26'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	110.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	16.5	Initial Length,cm	7.11	% Passing # 200	44.2
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:25	5:12	0.52	5.20	9.44	4.76	20.1	18.6	21.1
2	5:15	6:45	0.42	7.46	9.58	2.54	20.1	18.6	21.1
3									
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	2820	0.51879	2.2E-05	2.187E-05
2	5400	0.28580	2.2E-05	2.179E-05
3				
4				
5				
6				

Permeability
2.18E-05 cm/sec
2.18E-07 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/19/2022
Sample Number	: -
Sample Location	: B1 @ 35-36'
Soil Classification	: SC/CL

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	80.4	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	36.0	Initial Length,cm	7.11	% Passing # 200	52.3
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:02	6:15	0.32	1.54	9.82	8.60	33.0	30.3	34.0
2	6:15	7:33	1.54	2.20	8.60	7.92	33.0	30.3	34.0
3									
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	7980	0.92661	9.0E-07	8.975E-07
2	4680	0.95613	9.0E-07	9.008E-07
3				
4				
5				
6				

Permeability
8.99E-07 cm/sec
8.99E-09 m/sec

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Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/16/2022
Sample Number	: -
Sample Location	: B2 @ 20-21'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	109.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	14.0	Initial Length,cm	7.11	% Passing # 200	34.5
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:50	5:19	0.32	5.84	9.78	4.24	18.2	16.6	19.2
2	5:22	6:02	0.36	7.12	9.84	3.08	18.2	16.6	19.2
3	6:05	6:36	0.24	5.96	9.66	3.94	18.2	16.6	19.2
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1740	0.47689	4.0E-05	3.999E-05
2	2400	0.36357	4.0E-05	3.961E-05
3	1860	0.45546	4.0E-05	3.973E-05
4				
5				
6				

Permeability
3.98E-05 cm/sec
3.98E-07 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Number	: -
Sample Location	: B3 @ 10-11'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	114.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	12.0	Initial Length,cm	7.11	% Passing # 200	38.6
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:30	4:58	0.20	3.84	9.86	6.24	17.5	15.9	18.5
2	5:01	5:40	0.54	5.12	9.72	5.14	17.5	15.9	18.5
3	5:43	6:20	0.18	4.66	9.74	5.26	17.5	15.9	18.5
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1680	0.66037	2.3E-05	2.321E-05
2	2340	0.56336	2.3E-05	2.304E-05
3	2220	0.57656	2.3E-05	2.331E-05
4				
5				
6				

Permeability
2.32E-05 cm/sec
2.32E-07 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/21/2022
Sample Number	: -
Sample Location	: B3 @ 17-18'
Soil Classification	: SM/SP

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	110.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	11.0	Initial Length,cm	7.11	% Passing # 200	13.5
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:20	4:36	0.24	7.12	9.86	2.98	16.0	14.5	17.0
2	4:39	5:05	0.18	8.46	9.84	1.56	16.0	14.5	17.0
3							16.0	14.5	17.0
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	960	0.31991	1.1E-04	0.0001116
2	1560	0.18125	1.0E-04	0.0001029
3				
4				
5				
6				

Permeability
1.07E-04 cm/sec
1.07E-06 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	:012-22165
Project Name	:Triangle Development
Date	:9/23/2022
Sample Number	:-
Sample Location	:B3 @ 20-21'
Soil Classification	:SC

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	118.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	11.0	Initial Length,cm	7.11	% Passing # 200	31.6
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	5:07	5:29	0.22	3.12	9.86	6.94	24.3	22.1	25.3
2	5:29	6:06	3.12	6.84	6.94	3.32	24.3	22.1	25.3
3	6:08	6:43	1.16	5.44	9.64	5.36	24.3	22.1	25.3
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1320	0.79090	1.7E-05	1.67E-05
2	2220	0.66988	1.7E-05	1.696E-05
3	2100	0.68471	1.7E-05	1.695E-05
4				
5				
6				

Permeability
1.69E-05 cm/sec
1.69E-07 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/23/2022
Sample Number	: -
Sample Location	: B3 @ 25-26'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft		--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %		--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft		120.1	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %		11.0	Initial Length,cm	7.11	% Passing # 200	20.7
Sample Compaction, %		--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft		--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %		--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)		2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed				$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:45	5:06	0.20	6.92	9.76	3.04	18.0	16.5	19.0
2	5:09	5:28	0.24	6.64	9.84	3.44	18.0	16.5	19.0
3	5:30	5:52	0.16	7.12	9.82	2.86	18.0	16.5	19.0
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1260	0.33104	8.2E-05	8.245E-05
2	1140	0.36637	8.3E-05	8.277E-05
3	1320	0.31098	8.3E-05	8.315E-05
4				
5				
6				

Permeability
8.28E-05 cm/sec
8.28E-07 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/30/2022
Sample Number	: -
Sample Location	: B3 @ 35-36'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	100.2	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	18.0	Initial Length,cm	7.11	% Passing # 200	36.7
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	5:15	5:38	0.26	5.14	9.78	4.90	17.9	16.4	18.9
2	5:41	6:13	0.40	6.38	9.56	3.58	17.9	16.4	18.9
3									
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1380	0.51437	4.5E-05	4.527E-05
2	1920	0.39261	4.6E-05	4.576E-05
3				
4				
5				
6				

Permeability
4.55E-05 cm/sec
4.55E-07 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/26/2022
Sample Number	: -
Sample Location	: B4 @ 5-6'
Soil Classification	: SM/SC

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	123.9	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	6.1	Initial Length,cm	7.11	% Passing # 200	--
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	6:10	6:50	0.24	3.78	9.68	6.14	22.5	19.7	23.5
2	6:50	7:23	3.78	6.12	6.14	3.80	22.5	19.7	23.5
3									
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	2400	0.79269	9.1E-06	9.096E-06
2	1980	0.82713	9.0E-06	9.007E-06
3				
4				
5				
6				

Permeability
9.05E-06 cm/sec
9.05E-08 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/28/2022
Sample Number	: -
Sample Location	: B4 @ 10-11
Soil Classification	: SC/CL

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	119.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	14.0	Initial Length,cm	7.11	% Passing # 200	46.2
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	5:30	6:54	0.20	1.62	9.84	8.44	31.5	26.4	32.5
2	6:54	7:29	1.62	2.18	8.44	7.88	31.5	26.4	32.5
3									
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	5040	0.95284	9.0E-07	9.006E-07
2	2100	0.98026	8.9E-07	8.92E-07
3				
4				
5				
6				

Permeability
8.96E-07 cm/sec
8.96E-09 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/30/2022
Sample Number	: -
Sample Location	: B4 @ 15-16'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	116.5	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	12.5	Initial Length,cm	7.11	% Passing # 200	29.4
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	5:15	5:32	0.18	2.94	9.86	7.10	21.5	19.8	22.5
2	5:32	5:55	2.94	5.68	7.10	4.36	21.5	19.8	22.5
3	5:58	6:31	0.34	5.12	9.80	5.02	21.5	19.8	22.5
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1020	0.75404	2.6E-05	2.601E-05
2	1380	0.67618	2.7E-05	2.664E-05
3	1980	0.57094	2.7E-05	2.66E-05
4				
5				
6				

Permeability
2.64E-05 cm/sec
2.64E-07 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/26/2022
Sample Number	: -
Sample Location	: B4 @ 25-26'
Soil Classification	: SC

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	--	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	--	Initial Length,cm	7.11	% Passing # 200	--
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	5:35	6:02	0.24	2.12	9.72	7.84	24.2	21.2	25.2
2	6:02	6:58	2.12	5.44	7.84	4.52	24.2	21.2	25.2
3									
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1620	0.89670	6.3E-06	6.324E-06
2	3360	0.79657	6.4E-06	6.361E-06
3				
4				
5				
6				

Permeability
6.34E-06 cm/sec
6.34E-08 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 9/28/2022
Sample Number	: -
Sample Location	: B4 @ 40-41'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	98.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	24.0	Initial Length,cm	7.11	% Passing # 200	44.4
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:45	5:03	0.46	4.12	9.78	6.12	23.7	21.9	24.7
2	5:04	5:28	0.54	5.24	9.84	5.14	23.7	21.9	24.7
3	5:30	6:05	0.36	6.50	9.74	3.60	23.7	21.9	24.7
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1080	0.68573	3.3E-05	3.282E-05
2	1440	0.59750	3.4E-05	3.361E-05
3	2100	0.47229	3.4E-05	3.357E-05
4				
5				
6				

Permeability
3.33E-05 cm/sec
3.33E-07 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 10/3/2022
Sample Number	: B5
Sample Location	: 30-31
Soil Classification	: SC

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	115.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	16.0	Initial Length,cm	7.11	% Passing # 200	42.7
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:30	4:51	0.44	1.88	9.80	8.36	25.6	23.2	26.6
2	4:51	5:29	1.88	4.12	8.36	6.12	25.6	23.2	26.6
3	5:29	6:19	4.12	6.52	6.12	3.72	25.6	23.2	26.6
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1260	0.90364	7.6E-06	7.556E-06
2	2280	0.83412	7.5E-06	7.475E-06
3	3000	0.78693	7.5E-06	7.505E-06
4				
5				
6				

Permeability
7.51E-06 cm/sec
7.51E-08 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 10/3/2022
Sample Number	: -
Sample Location	: B6 @ 30-31'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	110.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	14.0	Initial Length,cm	7.11	% Passing # 200	33.1
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	4:25	4:56	0.24	7.44	9.78	2.58	19.0	17.5	20.0
2	4:59	5:38	0.18	8.12	9.70	1.76	19.0	17.5	20.0
3									
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1860	0.28379	6.4E-05	6.363E-05
2	2340	0.20617	6.3E-05	6.341E-05
3				
4				
5				
6				

Permeability
6.35E-05 cm/sec
6.35E-07 m/sec

Krazan Testing Laboratory

Soil Permeability

Flexible Wall, Falling Head (Rising Tail)

ASTM D - 5084 / CAL 220

Project Number	: 012-22165
Project Name	: Triangle Development
Date	: 10/5/2022
Sample Number	: -
Sample Location	: B6 @ 40-41'
Soil Classification	: SM

Max Dry Density, lbs/cu.ft	--	Degree of Sat. %		Max. Particle Size	0.0
Optimum Moisture, %	--	%Over Optimum		% Passing 3/8"	--
Initial Dry Density, lbs/cu.ft	114.0	Initial Diameter, cm	3.56	% Passing # 10	--
Initial Moisture, %	12.0	Initial Length,cm	7.11	% Passing # 200	39.2
Sample Compaction, %	--	Initial Area sq.cm	9.95	Temperature	20.0
Final Dry Density, lbs/cu.ft	--	Final Diameter, cm	3.56	Type of Permeant	Tap Water
Final Moisture, %	--	Final Length, cm	7.11	$\Delta\mu$ (Pore Pressure)	5.0
Specific Gravity (Assumed)	2.7	Final Area, sq.cm	9.95	$\Delta\sigma$ (Cell Pressure)	5.0
Comp. Procedure	Undisturbed			$\Delta\mu/\Delta\sigma$ (**B** Value)	1.00

Test	Start Time	Finish Time	H in Start	H in Final	H out Start	H out Final	Back Press	Tail Press.	Cell Press
1	5:10	5:38	0.14	5.70	9.82	4.26	17.8	16.0	18.8
2	5:41	6:15	0.18	6.42	9.84	3.60	17.8	16.0	18.8
3	6:18	6:56	0.14	6.86	9.74	3.02	17.8	16.0	18.8
4									
5									
6									

Test	Time sec	h1/h2	K cm/sec	k20 cm/sec
1	1680	0.52658	3.6E-05	3.587E-05
2	2040	0.46902	3.5E-05	3.487E-05
3	2280	0.42471	3.5E-05	3.529E-05
4				
5				
6				

Permeability
3.53E-05 cm/sec
3.53E-07 m/sec

Krazan Testing Laboratory

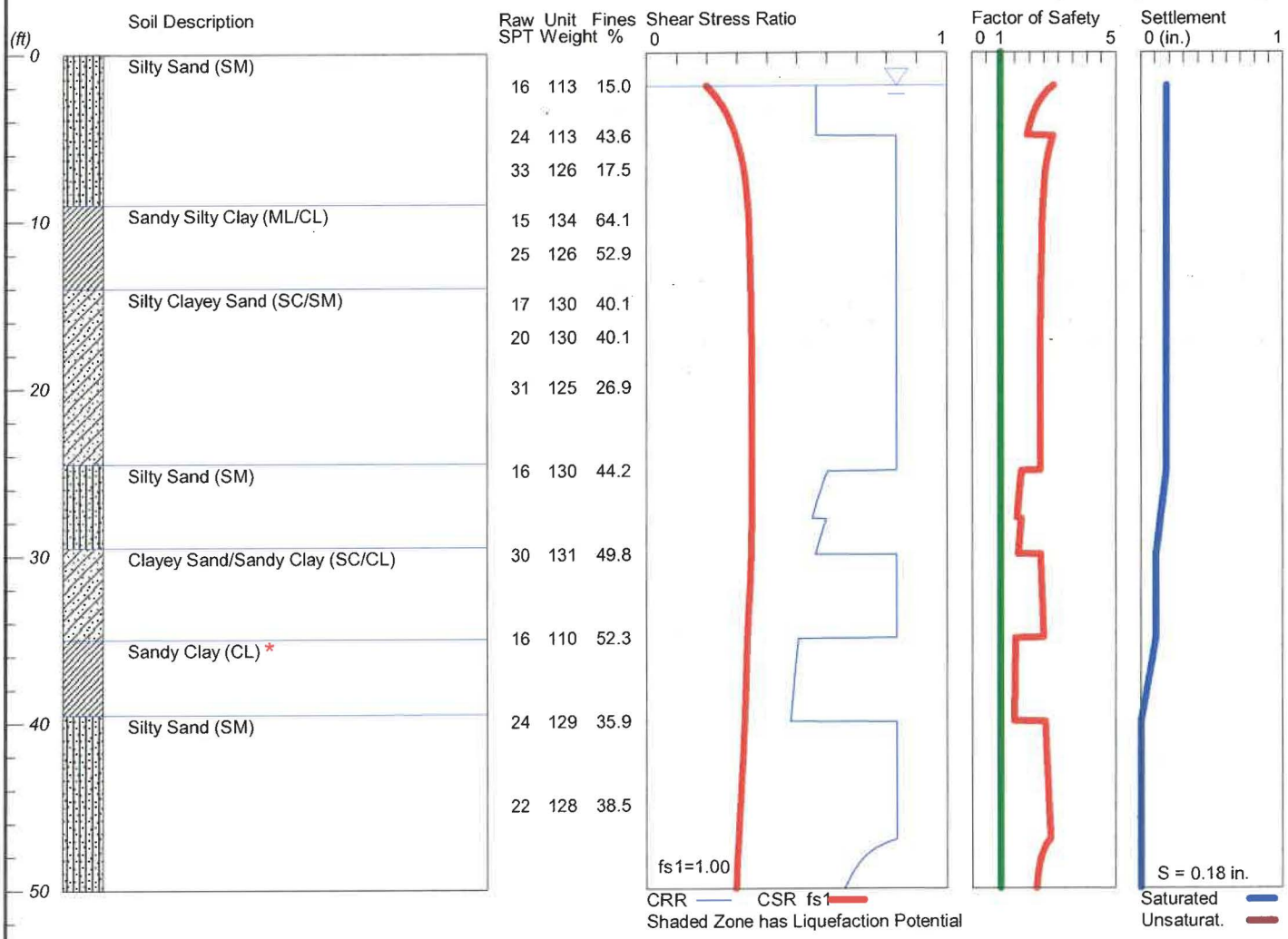
LIQUEFACTION ANALYSES

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B1 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



*Note: Sandy Clay layer at 35 feet is potentially liquefiable.

LiquefyPro CivilTech Software USA www.civiltech.com

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*****************************************************************************************************
                                    LIQUEFACTION ANALYSIS SUMMARY
                                   Copyright by CivilTech Software
                                        www.civiltech.com
*****************************************************************************************************
    Font: Courier New, Regular, Size 8 is recommended for this report.
    Licensed to ,   10/10/2022      2:04:37 PM

    Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B1\01222165 B1
Liquefaction.liq
    Title:  Triangle Development
    Subtitle:  012-22165

    Surface Elev.=
    Hole No.=B1
    Depth of Hole= 50.00 ft
    Water Table during Earthquake= 2.00 ft
    Water Table during In-Situ Testing= 2.00 ft
    Max. Acceleration= 0.31 g
    Earthquake Magnitude= 6.15

 Input Data:
    Surface Elev.=
    Hole No.=B1
    Depth of Hole=50.00 ft
    Water Table during Earthquake= 2.00 ft
    Water Table during In-Situ Testing= 2.00 ft
    Max. Acceleration=0.31 g
    Earthquake Magnitude=6.15
    No-Liquefiable Soils:   Based on Analysis

    1. SPT or BPT Calculation.
    2. Settlement Analysis Method: Ishihara / Yoshimine
    3. Fines Correction for Liquefaction: Stark/Olson et al.*
    4. Fine Correction for Settlement: During Liquefaction*
    5. Settlement Calculation in: All zones*
    6. Hammer Energy Ratio,                                    Ce = 1.25
    7. Borehole Diameter,                                       Cb= 1
    8. Sampling Method,                                         Cs= 1
    9. User request factor of safety (apply to CSR) ,   User= 1
       Plot one CSR curve (fs1=User)
    10. Use Curve Smoothing: No
    * Recommended Options

    In-Situ Test Data:
    Depth   SPT     gamma   Fines
    ft              pcf     %
    ____________________________________
    2.00    16.00   113.00  15.00
    5.00    24.00   113.00  43.60
    7.00    33.00   126.00  17.50
    10.00   15.00   134.00  64.10
    12.00   25.00   126.00  52.90
    15.00   17.00   130.00  40.10
    17.00   20.00   130.00  40.10
    20.00   31.00   125.00  26.90
    25.00   16.00   130.00  44.20
    30.00   30.00   131.00  49.80
    35.00   16.00   110.00  52.30
    40.00   24.00   129.00  35.90
    45.00   22.00   128.00  38.50
    ____________________________________

Output Results:
    Settlement of Saturated Sands=0.18 in.
    Settlement of Unsaturated Sands=0.00 in.
    Total Settlement of Saturated and Unsaturated Sands=0.18 in.
    Differential Settlement=0.088 to 0.116 in.

    Depth   CRRm    CSRfs   F.S.    S_sat.  S_dry   S_all
    ft                              in.     in.     in.
```

2.00	0.57	0.20	2.85	0.18	0.00	0.18
2.05	0.57	0.20	2.81	0.18	0.00	0.18
2.10	0.57	0.20	2.77	0.18	0.00	0.18
2.15	0.57	0.21	2.74	0.18	0.00	0.18
2.20	0.57	0.21	2.71	0.18	0.00	0.18
2.25	0.57	0.21	2.67	0.18	0.00	0.18
2.30	0.57	0.21	2.64	0.18	0.00	0.18
2.35	0.57	0.22	2.62	0.18	0.00	0.18
2.40	0.57	0.22	2.59	0.18	0.00	0.18
2.45	0.57	0.22	2.56	0.18	0.00	0.18
2.50	0.57	0.22	2.54	0.18	0.00	0.18
2.55	0.57	0.23	2.51	0.18	0.00	0.18
2.60	0.57	0.23	2.49	0.18	0.00	0.18
2.65	0.57	0.23	2.47	0.18	0.00	0.18
2.70	0.57	0.23	2.44	0.18	0.00	0.18
2.75	0.57	0.23	2.42	0.18	0.00	0.18
2.80	0.57	0.24	2.40	0.18	0.00	0.18
2.85	0.57	0.24	2.38	0.18	0.00	0.18
2.90	0.57	0.24	2.36	0.18	0.00	0.18
2.95	0.57	0.24	2.35	0.18	0.00	0.18
3.00	0.57	0.24	2.33	0.18	0.00	0.18
3.05	0.57	0.24	2.31	0.18	0.00	0.18
3.10	0.57	0.25	2.30	0.18	0.00	0.18
3.15	0.57	0.25	2.28	0.18	0.00	0.18
3.20	0.57	0.25	2.26	0.18	0.00	0.18
3.25	0.57	0.25	2.25	0.18	0.00	0.18
3.30	0.57	0.25	2.23	0.18	0.00	0.18
3.35	0.57	0.25	2.22	0.18	0.00	0.18
3.40	0.57	0.26	2.21	0.18	0.00	0.18
3.45	0.57	0.26	2.19	0.18	0.00	0.18
3.50	0.57	0.26	2.18	0.18	0.00	0.18
3.55	0.57	0.26	2.17	0.18	0.00	0.18
3.60	0.57	0.26	2.16	0.18	0.00	0.18
3.65	0.57	0.26	2.14	0.18	0.00	0.18
3.70	0.57	0.27	2.13	0.18	0.00	0.18
3.75	0.57	0.27	2.12	0.18	0.00	0.18
3.80	0.57	0.27	2.11	0.18	0.00	0.18
3.85	0.57	0.27	2.10	0.18	0.00	0.18
3.90	0.57	0.27	2.09	0.18	0.00	0.18
3.95	0.57	0.27	2.08	0.18	0.00	0.18
4.00	0.57	0.27	2.07	0.18	0.00	0.18
4.05	0.57	0.27	2.06	0.18	0.00	0.18
4.10	0.57	0.28	2.05	0.18	0.00	0.18
4.15	0.57	0.28	2.04	0.18	0.00	0.18
4.20	0.57	0.28	2.03	0.18	0.00	0.18
4.25	0.57	0.28	2.03	0.18	0.00	0.18
4.30	0.57	0.28	2.02	0.18	0.00	0.18
4.35	0.57	0.28	2.01	0.18	0.00	0.18
4.40	0.57	0.28	2.00	0.18	0.00	0.18
4.45	0.57	0.28	1.99	0.18	0.00	0.18
4.50	0.57	0.28	1.99	0.18	0.00	0.18
4.55	0.57	0.29	1.98	0.18	0.00	0.18
4.60	0.57	0.29	1.97	0.18	0.00	0.18
4.65	0.57	0.29	1.96	0.18	0.00	0.18
4.70	0.57	0.29	1.96	0.18	0.00	0.18
4.75	0.57	0.29	1.95	0.18	0.00	0.18
4.80	0.57	0.29	1.94	0.18	0.00	0.18
4.85	0.57	0.29	1.94	0.18	0.00	0.18
4.90	0.57	0.29	1.93	0.18	0.00	0.18
4.95	0.57	0.29	1.92	0.18	0.00	0.18
5.00	0.83	0.29	2.82	0.18	0.00	0.18
5.05	0.83	0.30	2.81	0.18	0.00	0.18
5.10	0.83	0.30	2.80	0.18	0.00	0.18
5.15	0.83	0.30	2.79	0.18	0.00	0.18
5.20	0.83	0.30	2.78	0.18	0.00	0.18
5.25	0.83	0.30	2.77	0.18	0.00	0.18
5.30	0.83	0.30	2.77	0.18	0.00	0.18
5.35	0.83	0.30	2.76	0.18	0.00	0.18
5.40	0.83	0.30	2.75	0.18	0.00	0.18
5.45	0.83	0.30	2.74	0.18	0.00	0.18

5.50	0.83	0.30	2.74	0.18	0.00	0.18
5.55	0.83	0.30	2.73	0.18	0.00	0.18
5.60	0.83	0.31	2.72	0.18	0.00	0.18
5.65	0.83	0.31	2.71	0.18	0.00	0.18
5.70	0.83	0.31	2.71	0.18	0.00	0.18
5.75	0.83	0.31	2.70	0.18	0.00	0.18
5.80	0.83	0.31	2.69	0.18	0.00	0.18
5.85	0.83	0.31	2.69	0.18	0.00	0.18
5.90	0.83	0.31	2.68	0.18	0.00	0.18
5.95	0.83	0.31	2.67	0.18	0.00	0.18
6.00	0.83	0.31	2.67	0.18	0.00	0.18
6.05	0.83	0.31	2.66	0.18	0.00	0.18
6.10	0.83	0.31	2.66	0.18	0.00	0.18
6.15	0.83	0.31	2.65	0.18	0.00	0.18
6.20	0.83	0.31	2.64	0.18	0.00	0.18
6.25	0.83	0.31	2.64	0.18	0.00	0.18
6.30	0.83	0.32	2.63	0.18	0.00	0.18
6.35	0.83	0.32	2.63	0.18	0.00	0.18
6.40	0.83	0.32	2.62	0.18	0.00	0.18
6.45	0.83	0.32	2.62	0.18	0.00	0.18
6.50	0.83	0.32	2.61	0.18	0.00	0.18
6.55	0.83	0.32	2.61	0.18	0.00	0.18
6.60	0.83	0.32	2.60	0.18	0.00	0.18
6.65	0.83	0.32	2.60	0.18	0.00	0.18
6.70	0.83	0.32	2.59	0.18	0.00	0.18
6.75	0.83	0.32	2.59	0.18	0.00	0.18
6.80	0.83	0.32	2.58	0.18	0.00	0.18
6.85	0.83	0.32	2.58	0.18	0.00	0.18
6.90	0.83	0.32	2.57	0.18	0.00	0.18
6.95	0.83	0.32	2.57	0.18	0.00	0.18
7.00	0.83	0.32	2.56	0.18	0.00	0.18
7.05	0.83	0.32	2.56	0.18	0.00	0.18
7.10	0.83	0.32	2.56	0.18	0.00	0.18
7.15	0.83	0.33	2.55	0.18	0.00	0.18
7.20	0.83	0.33	2.55	0.18	0.00	0.18
7.25	0.83	0.33	2.55	0.18	0.00	0.18
7.30	0.83	0.33	2.55	0.18	0.00	0.18
7.35	0.83	0.33	2.54	0.18	0.00	0.18
7.40	0.83	0.33	2.54	0.18	0.00	0.18
7.45	0.83	0.33	2.54	0.18	0.00	0.18
7.50	0.83	0.33	2.53	0.18	0.00	0.18
7.55	0.83	0.33	2.53	0.18	0.00	0.18
7.60	0.83	0.33	2.53	0.18	0.00	0.18
7.65	0.83	0.33	2.53	0.18	0.00	0.18
7.70	0.83	0.33	2.52	0.18	0.00	0.18
7.75	0.83	0.33	2.52	0.18	0.00	0.18
7.80	0.83	0.33	2.52	0.18	0.00	0.18
7.85	0.83	0.33	2.52	0.18	0.00	0.18
7.90	0.83	0.33	2.51	0.18	0.00	0.18
7.95	0.83	0.33	2.51	0.18	0.00	0.18
8.00	0.83	0.33	2.51	0.18	0.00	0.18
8.05	0.83	0.33	2.51	0.18	0.00	0.18
8.10	0.83	0.33	2.51	0.18	0.00	0.18
8.15	0.83	0.33	2.50	0.18	0.00	0.18
8.20	0.83	0.33	2.50	0.18	0.00	0.18
8.25	0.83	0.33	2.50	0.18	0.00	0.18
8.30	0.83	0.33	2.50	0.18	0.00	0.18
8.35	0.83	0.33	2.50	0.18	0.00	0.18
8.40	0.83	0.33	2.49	0.18	0.00	0.18
8.45	0.83	0.33	2.49	0.18	0.00	0.18
8.50	0.83	0.33	2.49	0.18	0.00	0.18
8.55	0.83	0.33	2.49	0.18	0.00	0.18
8.60	0.83	0.33	2.49	0.18	0.00	0.18
8.65	0.83	0.33	2.48	0.18	0.00	0.18
8.70	0.83	0.33	2.48	0.18	0.00	0.18
8.75	0.83	0.33	2.48	0.18	0.00	0.18
8.80	0.83	0.34	2.48	0.18	0.00	0.18
8.85	0.83	0.34	2.48	0.18	0.00	0.18
8.90	0.83	0.34	2.47	0.18	0.00	0.18
8.95	0.83	0.34	2.47	0.18	0.00	0.18
9.00	0.83	0.34	2.47	0.18	0.00	0.18

9.05	0.83	0.34	2.47	0.18	0.00	0.18
9.10	0.83	0.34	2.47	0.18	0.00	0.18
9.15	0.83	0.34	2.47	0.18	0.00	0.18
9.20	0.83	0.34	2.46	0.18	0.00	0.18
9.25	0.83	0.34	2.46	0.18	0.00	0.18
9.30	0.83	0.34	2.46	0.18	0.00	0.18
9.35	0.83	0.34	2.46	0.18	0.00	0.18
9.40	0.83	0.34	2.46	0.18	0.00	0.18
9.45	0.83	0.34	2.46	0.18	0.00	0.18
9.50	0.83	0.34	2.46	0.18	0.00	0.18
9.55	0.83	0.34	2.45	0.18	0.00	0.18
9.60	0.83	0.34	2.45	0.18	0.00	0.18
9.65	0.83	0.34	2.45	0.18	0.00	0.18
9.70	0.83	0.34	2.45	0.18	0.00	0.18
9.75	0.83	0.34	2.45	0.18	0.00	0.18
9.80	0.83	0.34	2.45	0.18	0.00	0.18
9.85	0.83	0.34	2.45	0.18	0.00	0.18
9.90	0.83	0.34	2.44	0.18	0.00	0.18
9.95	0.83	0.34	2.44	0.18	0.00	0.18
10.00	0.83	0.34	2.44	0.18	0.00	0.18
10.05	0.83	0.34	2.44	0.18	0.00	0.18
10.10	0.83	0.34	2.44	0.18	0.00	0.18
10.15	0.83	0.34	2.44	0.18	0.00	0.18
10.20	0.83	0.34	2.44	0.18	0.00	0.18
10.25	0.83	0.34	2.44	0.18	0.00	0.18
10.30	0.83	0.34	2.44	0.18	0.00	0.18
10.35	0.83	0.34	2.44	0.18	0.00	0.18
10.40	0.83	0.34	2.44	0.18	0.00	0.18
10.45	0.83	0.34	2.44	0.18	0.00	0.18
10.50	0.83	0.34	2.44	0.18	0.00	0.18
10.55	0.83	0.34	2.44	0.18	0.00	0.18
10.60	0.83	0.34	2.44	0.18	0.00	0.18
10.65	0.83	0.34	2.43	0.18	0.00	0.18
10.70	0.83	0.34	2.43	0.18	0.00	0.18
10.75	0.83	0.34	2.43	0.18	0.00	0.18
10.80	0.83	0.34	2.43	0.18	0.00	0.18
10.85	0.83	0.34	2.43	0.18	0.00	0.18
10.90	0.83	0.34	2.43	0.18	0.00	0.18
10.95	0.83	0.34	2.43	0.18	0.00	0.18
11.00	0.83	0.34	2.43	0.18	0.00	0.18
11.05	0.83	0.34	2.43	0.18	0.00	0.18
11.10	0.83	0.34	2.43	0.18	0.00	0.18
11.15	0.83	0.34	2.43	0.18	0.00	0.18
11.20	0.83	0.34	2.43	0.18	0.00	0.18
11.25	0.83	0.34	2.43	0.18	0.00	0.18
11.30	0.83	0.34	2.43	0.18	0.00	0.18
11.35	0.83	0.34	2.43	0.18	0.00	0.18
11.40	0.83	0.34	2.43	0.18	0.00	0.18
11.45	0.83	0.34	2.43	0.18	0.00	0.18
11.50	0.83	0.34	2.43	0.18	0.00	0.18
11.55	0.83	0.34	2.43	0.18	0.00	0.18
11.60	0.83	0.34	2.43	0.18	0.00	0.18
11.65	0.83	0.34	2.43	0.18	0.00	0.18
11.70	0.83	0.34	2.43	0.18	0.00	0.18
11.75	0.83	0.34	2.42	0.18	0.00	0.18
11.80	0.83	0.34	2.42	0.18	0.00	0.18
11.85	0.83	0.34	2.42	0.18	0.00	0.18
11.90	0.83	0.34	2.42	0.18	0.00	0.18
11.95	0.83	0.34	2.42	0.18	0.00	0.18
12.00	0.83	0.34	2.42	0.18	0.00	0.18
12.05	0.83	0.34	2.42	0.18	0.00	0.18
12.10	0.83	0.34	2.42	0.18	0.00	0.18
12.15	0.83	0.34	2.42	0.18	0.00	0.18
12.20	0.83	0.34	2.42	0.18	0.00	0.18
12.25	0.83	0.34	2.42	0.18	0.00	0.18
12.30	0.83	0.34	2.42	0.18	0.00	0.18
12.35	0.83	0.34	2.42	0.18	0.00	0.18
12.40	0.83	0.34	2.42	0.18	0.00	0.18
12.45	0.83	0.34	2.42	0.18	0.00	0.18
12.50	0.83	0.34	2.41	0.18	0.00	0.18
12.55	0.83	0.34	2.41	0.18	0.00	0.18

12.60	0.83	0.34	2.41	0.18	0.00	0.18
12.65	0.83	0.34	2.41	0.18	0.00	0.18
12.70	0.83	0.34	2.41	0.18	0.00	0.18
12.75	0.83	0.34	2.41	0.18	0.00	0.18
12.80	0.83	0.34	2.41	0.18	0.00	0.18
12.85	0.83	0.34	2.41	0.18	0.00	0.18
12.90	0.83	0.34	2.41	0.18	0.00	0.18
12.95	0.83	0.34	2.41	0.18	0.00	0.18
13.00	0.83	0.35	2.41	0.18	0.00	0.18
13.05	0.83	0.35	2.41	0.18	0.00	0.18
13.10	0.83	0.35	2.41	0.18	0.00	0.18
13.15	0.83	0.35	2.41	0.18	0.00	0.18
13.20	0.83	0.35	2.41	0.18	0.00	0.18
13.25	0.83	0.35	2.40	0.18	0.00	0.18
13.30	0.83	0.35	2.40	0.18	0.00	0.18
13.35	0.83	0.35	2.40	0.18	0.00	0.18
13.40	0.83	0.35	2.40	0.18	0.00	0.18
13.45	0.83	0.35	2.40	0.18	0.00	0.18
13.50	0.83	0.35	2.40	0.18	0.00	0.18
13.55	0.83	0.35	2.40	0.18	0.00	0.18
13.60	0.83	0.35	2.40	0.18	0.00	0.18
13.65	0.83	0.35	2.40	0.18	0.00	0.18
13.70	0.83	0.35	2.40	0.18	0.00	0.18
13.75	0.83	0.35	2.40	0.18	0.00	0.18
13.80	0.83	0.35	2.40	0.18	0.00	0.18
13.85	0.83	0.35	2.40	0.18	0.00	0.18
13.90	0.83	0.35	2.40	0.18	0.00	0.18
13.95	0.83	0.35	2.40	0.18	0.00	0.18
14.00	0.83	0.35	2.40	0.18	0.00	0.18
14.05	0.83	0.35	2.39	0.18	0.00	0.18
14.10	0.83	0.35	2.39	0.18	0.00	0.18
14.15	0.83	0.35	2.39	0.18	0.00	0.18
14.20	0.83	0.35	2.39	0.18	0.00	0.18
14.25	0.83	0.35	2.39	0.18	0.00	0.18
14.30	0.83	0.35	2.39	0.18	0.00	0.18
14.35	0.83	0.35	2.39	0.18	0.00	0.18
14.40	0.83	0.35	2.39	0.18	0.00	0.18
14.45	0.83	0.35	2.39	0.18	0.00	0.18
14.50	0.83	0.35	2.39	0.18	0.00	0.18
14.55	0.83	0.35	2.39	0.18	0.00	0.18
14.60	0.83	0.35	2.39	0.18	0.00	0.18
14.65	0.83	0.35	2.39	0.18	0.00	0.18
14.70	0.83	0.35	2.39	0.18	0.00	0.18
14.75	0.83	0.35	2.39	0.18	0.00	0.18
14.80	0.83	0.35	2.39	0.18	0.00	0.18
14.85	0.83	0.35	2.39	0.18	0.00	0.18
14.90	0.83	0.35	2.39	0.18	0.00	0.18
14.95	0.83	0.35	2.39	0.18	0.00	0.18
15.00	0.83	0.35	2.39	0.18	0.00	0.18
15.05	0.83	0.35	2.39	0.18	0.00	0.18
15.10	0.83	0.35	2.39	0.18	0.00	0.18
15.15	0.83	0.35	2.39	0.18	0.00	0.18
15.20	0.83	0.35	2.38	0.18	0.00	0.18
15.25	0.83	0.35	2.38	0.18	0.00	0.18
15.30	0.83	0.35	2.38	0.18	0.00	0.18
15.35	0.83	0.35	2.38	0.18	0.00	0.18
15.40	0.83	0.35	2.38	0.18	0.00	0.18
15.45	0.83	0.35	2.38	0.18	0.00	0.18
15.50	0.83	0.35	2.38	0.18	0.00	0.18
15.55	0.83	0.35	2.38	0.18	0.00	0.18
15.60	0.83	0.35	2.38	0.18	0.00	0.18
15.65	0.83	0.35	2.38	0.18	0.00	0.18
15.70	0.83	0.35	2.38	0.18	0.00	0.18
15.75	0.83	0.35	2.38	0.18	0.00	0.18
15.80	0.83	0.35	2.38	0.18	0.00	0.18
15.85	0.83	0.35	2.38	0.18	0.00	0.18
15.90	0.83	0.35	2.38	0.18	0.00	0.18
15.95	0.83	0.35	2.38	0.18	0.00	0.18
16.00	0.83	0.35	2.38	0.18	0.00	0.18
16.05	0.83	0.35	2.38	0.18	0.00	0.18
16.10	0.83	0.35	2.38	0.18	0.00	0.18

16.15	0.83	0.35	2.38	0.18	0.00	0.18
16.20	0.83	0.35	2.38	0.18	0.00	0.18
16.25	0.83	0.35	2.38	0.18	0.00	0.18
16.30	0.83	0.35	2.38	0.18	0.00	0.18
16.35	0.83	0.35	2.38	0.18	0.00	0.18
16.40	0.83	0.35	2.38	0.18	0.00	0.18
16.45	0.83	0.35	2.38	0.18	0.00	0.18
16.50	0.83	0.35	2.38	0.18	0.00	0.18
16.55	0.83	0.35	2.38	0.18	0.00	0.18
16.60	0.83	0.35	2.38	0.18	0.00	0.18
16.65	0.83	0.35	2.38	0.18	0.00	0.18
16.70	0.83	0.35	2.38	0.18	0.00	0.18
16.75	0.83	0.35	2.38	0.18	0.00	0.18
16.80	0.83	0.35	2.38	0.18	0.00	0.18
16.85	0.83	0.35	2.38	0.18	0.00	0.18
16.90	0.83	0.35	2.38	0.18	0.00	0.18
16.95	0.83	0.35	2.38	0.18	0.00	0.18
17.00	0.83	0.35	2.38	0.18	0.00	0.18
17.05	0.83	0.35	2.38	0.18	0.00	0.18
17.10	0.83	0.35	2.38	0.18	0.00	0.18
17.15	0.83	0.35	2.38	0.18	0.00	0.18
17.20	0.83	0.35	2.38	0.18	0.00	0.18
17.25	0.83	0.35	2.38	0.18	0.00	0.18
17.30	0.83	0.35	2.38	0.18	0.00	0.18
17.35	0.83	0.35	2.38	0.18	0.00	0.18
17.40	0.83	0.35	2.38	0.18	0.00	0.18
17.45	0.83	0.35	2.38	0.18	0.00	0.18
17.50	0.83	0.35	2.38	0.18	0.00	0.18
17.55	0.83	0.35	2.38	0.18	0.00	0.18
17.60	0.83	0.35	2.38	0.18	0.00	0.18
17.65	0.83	0.35	2.38	0.18	0.00	0.18
17.70	0.83	0.35	2.38	0.18	0.00	0.18
17.75	0.83	0.35	2.38	0.18	0.00	0.18
17.80	0.83	0.35	2.38	0.18	0.00	0.18
17.85	0.83	0.35	2.38	0.18	0.00	0.18
17.90	0.83	0.35	2.38	0.18	0.00	0.18
17.95	0.83	0.35	2.38	0.18	0.00	0.18
18.00	0.83	0.35	2.38	0.18	0.00	0.18
18.05	0.83	0.35	2.38	0.18	0.00	0.18
18.10	0.83	0.35	2.38	0.18	0.00	0.18
18.15	0.83	0.35	2.38	0.18	0.00	0.18
18.20	0.83	0.35	2.38	0.18	0.00	0.18
18.25	0.83	0.35	2.38	0.18	0.00	0.18
18.30	0.83	0.35	2.38	0.18	0.00	0.18
18.35	0.83	0.35	2.38	0.18	0.00	0.18
18.40	0.83	0.35	2.38	0.18	0.00	0.18
18.45	0.83	0.35	2.38	0.18	0.00	0.18
18.50	0.83	0.35	2.38	0.18	0.00	0.18
18.55	0.83	0.35	2.38	0.18	0.00	0.18
18.60	0.83	0.35	2.38	0.18	0.00	0.18
18.65	0.83	0.35	2.38	0.18	0.00	0.18
18.70	0.83	0.35	2.38	0.18	0.00	0.18
18.75	0.83	0.35	2.38	0.18	0.00	0.18
18.80	0.83	0.35	2.38	0.18	0.00	0.18
18.85	0.83	0.35	2.38	0.18	0.00	0.18
18.90	0.83	0.35	2.38	0.18	0.00	0.18
18.95	0.83	0.35	2.38	0.18	0.00	0.18
19.00	0.83	0.35	2.38	0.18	0.00	0.18
19.05	0.83	0.35	2.38	0.18	0.00	0.18
19.10	0.83	0.35	2.38	0.18	0.00	0.18
19.15	0.83	0.35	2.38	0.18	0.00	0.18
19.20	0.83	0.35	2.38	0.18	0.00	0.18
19.25	0.83	0.35	2.38	0.18	0.00	0.18
19.30	0.83	0.35	2.38	0.18	0.00	0.18
19.35	0.83	0.35	2.38	0.18	0.00	0.18
19.40	0.83	0.35	2.38	0.18	0.00	0.18
19.45	0.83	0.35	2.38	0.18	0.00	0.18
19.50	0.83	0.35	2.38	0.18	0.00	0.18
19.55	0.83	0.35	2.38	0.18	0.00	0.18
19.60	0.83	0.35	2.38	0.18	0.00	0.18
19.65	0.83	0.35	2.38	0.18	0.00	0.18

19.70	0.83	0.35	2.38	0.18	0.00	0.18
19.75	0.83	0.35	2.38	0.18	0.00	0.18
19.80	0.83	0.35	2.38	0.18	0.00	0.18
19.85	0.83	0.35	2.38	0.18	0.00	0.18
19.90	0.83	0.35	2.38	0.18	0.00	0.18
19.95	0.83	0.35	2.38	0.18	0.00	0.18
20.00	0.83	0.35	2.38	0.18	0.00	0.18
20.05	0.83	0.35	2.38	0.18	0.00	0.18
20.10	0.83	0.35	2.38	0.18	0.00	0.18
20.15	0.83	0.35	2.38	0.18	0.00	0.18
20.20	0.83	0.35	2.38	0.18	0.00	0.18
20.25	0.83	0.35	2.38	0.18	0.00	0.18
20.30	0.83	0.35	2.38	0.18	0.00	0.18
20.35	0.83	0.35	2.38	0.18	0.00	0.18
20.40	0.83	0.35	2.38	0.18	0.00	0.18
20.45	0.83	0.35	2.38	0.18	0.00	0.18
20.50	0.83	0.35	2.38	0.18	0.00	0.18
20.55	0.83	0.35	2.38	0.18	0.00	0.18
20.60	0.83	0.35	2.37	0.18	0.00	0.18
20.65	0.83	0.35	2.37	0.18	0.00	0.18
20.70	0.83	0.35	2.37	0.18	0.00	0.18
20.75	0.83	0.35	2.37	0.18	0.00	0.18
20.80	0.83	0.35	2.37	0.18	0.00	0.18
20.85	0.83	0.35	2.37	0.18	0.00	0.18
20.90	0.83	0.35	2.37	0.18	0.00	0.18
20.95	0.83	0.35	2.37	0.18	0.00	0.18
21.00	0.83	0.35	2.37	0.18	0.00	0.18
21.05	0.83	0.35	2.37	0.18	0.00	0.18
21.10	0.83	0.35	2.37	0.18	0.00	0.18
21.15	0.83	0.35	2.37	0.18	0.00	0.18
21.20	0.83	0.35	2.37	0.18	0.00	0.18
21.25	0.83	0.35	2.37	0.18	0.00	0.18
21.30	0.83	0.35	2.37	0.18	0.00	0.18
21.35	0.83	0.35	2.37	0.18	0.00	0.18
21.40	0.83	0.35	2.37	0.18	0.00	0.18
21.45	0.83	0.35	2.37	0.18	0.00	0.18
21.50	0.83	0.35	2.37	0.18	0.00	0.18
21.55	0.83	0.35	2.37	0.18	0.00	0.18
21.60	0.83	0.35	2.37	0.18	0.00	0.18
21.65	0.83	0.35	2.37	0.18	0.00	0.18
21.70	0.83	0.35	2.37	0.18	0.00	0.18
21.75	0.83	0.35	2.37	0.18	0.00	0.18
21.80	0.83	0.35	2.37	0.18	0.00	0.18
21.85	0.83	0.35	2.37	0.18	0.00	0.18
21.90	0.83	0.35	2.37	0.18	0.00	0.18
21.95	0.83	0.35	2.37	0.18	0.00	0.18
22.00	0.83	0.35	2.37	0.18	0.00	0.18
22.05	0.83	0.35	2.37	0.18	0.00	0.18
22.10	0.83	0.35	2.37	0.18	0.00	0.18
22.15	0.83	0.35	2.37	0.18	0.00	0.18
22.20	0.83	0.35	2.37	0.18	0.00	0.18
22.25	0.83	0.35	2.37	0.18	0.00	0.18
22.30	0.83	0.35	2.37	0.18	0.00	0.18
22.35	0.83	0.35	2.37	0.18	0.00	0.18
22.40	0.83	0.35	2.37	0.18	0.00	0.18
22.45	0.83	0.35	2.37	0.18	0.00	0.18
22.50	0.83	0.35	2.37	0.18	0.00	0.18
22.55	0.83	0.35	2.37	0.18	0.00	0.18
22.60	0.83	0.35	2.37	0.18	0.00	0.18
22.65	0.83	0.35	2.37	0.18	0.00	0.18
22.70	0.83	0.35	2.37	0.18	0.00	0.18
22.75	0.83	0.35	2.37	0.18	0.00	0.18
22.80	0.83	0.35	2.37	0.18	0.00	0.18
22.85	0.83	0.35	2.37	0.18	0.00	0.18
22.90	0.83	0.35	2.37	0.18	0.00	0.18
22.95	0.83	0.35	2.37	0.18	0.00	0.18
23.00	0.83	0.35	2.37	0.18	0.00	0.18
23.05	0.83	0.35	2.37	0.18	0.00	0.18
23.10	0.83	0.35	2.37	0.18	0.00	0.18
23.15	0.83	0.35	2.37	0.18	0.00	0.18
23.20	0.83	0.35	2.37	0.18	0.00	0.18

23.25	0.83	0.35	2.37	0.18	0.00	0.18
23.30	0.83	0.35	2.37	0.18	0.00	0.18
23.35	0.83	0.35	2.37	0.18	0.00	0.18
23.40	0.83	0.35	2.37	0.18	0.00	0.18
23.45	0.83	0.35	2.37	0.18	0.00	0.18
23.50	0.83	0.35	2.37	0.18	0.00	0.18
23.55	0.83	0.35	2.37	0.18	0.00	0.18
23.60	0.83	0.35	2.37	0.18	0.00	0.18
23.65	0.83	0.35	2.37	0.18	0.00	0.18
23.70	0.83	0.35	2.37	0.18	0.00	0.18
23.75	0.83	0.35	2.37	0.18	0.00	0.18
23.80	0.83	0.35	2.37	0.18	0.00	0.18
23.85	0.83	0.35	2.37	0.18	0.00	0.18
23.90	0.83	0.35	2.37	0.18	0.00	0.18
23.95	0.83	0.35	2.37	0.18	0.00	0.18
24.00	0.83	0.35	2.37	0.18	0.00	0.18
24.05	0.83	0.35	2.37	0.18	0.00	0.18
24.10	0.83	0.35	2.37	0.18	0.00	0.18
24.15	0.83	0.35	2.37	0.18	0.00	0.18
24.20	0.83	0.35	2.37	0.18	0.00	0.18
24.25	0.83	0.35	2.37	0.18	0.00	0.18
24.30	0.83	0.35	2.37	0.18	0.00	0.18
24.35	0.83	0.35	2.37	0.18	0.00	0.18
24.40	0.83	0.35	2.37	0.18	0.00	0.18
24.45	0.83	0.35	2.37	0.18	0.00	0.18
24.50	0.83	0.35	2.37	0.18	0.00	0.18
24.55	0.83	0.35	2.37	0.18	0.00	0.18
24.60	0.83	0.35	2.37	0.18	0.00	0.18
24.65	0.83	0.35	2.37	0.18	0.00	0.18
24.70	0.83	0.35	2.37	0.18	0.00	0.18
24.75	0.83	0.35	2.37	0.18	0.00	0.18
24.80	0.83	0.35	2.37	0.18	0.00	0.18
24.85	0.83	0.35	2.37	0.18	0.00	0.18
24.90	0.83	0.35	2.37	0.18	0.00	0.18
24.95	0.83	0.35	2.37	0.18	0.00	0.18
25.00	0.83	0.35	2.37	0.18	0.00	0.18
25.05	0.60	0.35	1.72	0.18	0.00	0.18
25.10	0.60	0.35	1.71	0.17	0.00	0.17
25.15	0.60	0.35	1.71	0.17	0.00	0.17
25.20	0.60	0.35	1.71	0.17	0.00	0.17
25.25	0.60	0.35	1.70	0.17	0.00	0.17
25.30	0.60	0.35	1.70	0.17	0.00	0.17
25.35	0.60	0.35	1.70	0.17	0.00	0.17
25.40	0.59	0.35	1.69	0.17	0.00	0.17
25.45	0.59	0.35	1.69	0.17	0.00	0.17
25.50	0.59	0.35	1.69	0.17	0.00	0.17
25.55	0.59	0.35	1.69	0.17	0.00	0.17
25.60	0.59	0.35	1.68	0.17	0.00	0.17
25.65	0.59	0.35	1.68	0.17	0.00	0.17
25.70	0.59	0.35	1.68	0.17	0.00	0.17
25.75	0.59	0.35	1.67	0.17	0.00	0.17
25.80	0.59	0.35	1.67	0.17	0.00	0.17
25.85	0.58	0.35	1.67	0.17	0.00	0.17
25.90	0.58	0.35	1.67	0.17	0.00	0.17
25.95	0.58	0.35	1.66	0.16	0.00	0.16
26.00	0.58	0.35	1.66	0.16	0.00	0.16
26.05	0.58	0.35	1.66	0.16	0.00	0.16
26.10	0.58	0.35	1.65	0.16	0.00	0.16
26.15	0.58	0.35	1.65	0.16	0.00	0.16
26.20	0.58	0.35	1.65	0.16	0.00	0.16
26.25	0.58	0.35	1.65	0.16	0.00	0.16
26.30	0.58	0.35	1.64	0.16	0.00	0.16
26.35	0.58	0.35	1.64	0.16	0.00	0.16
26.40	0.57	0.35	1.64	0.16	0.00	0.16
26.45	0.57	0.35	1.64	0.16	0.00	0.16
26.50	0.57	0.35	1.63	0.16	0.00	0.16
26.55	0.57	0.35	1.63	0.16	0.00	0.16
26.60	0.57	0.35	1.63	0.16	0.00	0.16
26.65	0.57	0.35	1.63	0.15	0.00	0.15
26.70	0.57	0.35	1.62	0.15	0.00	0.15
26.75	0.57	0.35	1.62	0.15	0.00	0.15

26.80	0.57	0.35	1.62	0.15	0.00	0.15
26.85	0.57	0.35	1.62	0.15	0.00	0.15
26.90	0.57	0.35	1.62	0.15	0.00	0.15
26.95	0.56	0.35	1.61	0.15	0.00	0.15
27.00	0.56	0.35	1.61	0.15	0.00	0.15
27.05	0.56	0.35	1.61	0.15	0.00	0.15
27.10	0.56	0.35	1.61	0.15	0.00	0.15
27.15	0.56	0.35	1.60	0.15	0.00	0.15
27.20	0.56	0.35	1.60	0.15	0.00	0.15
27.25	0.56	0.35	1.60	0.15	0.00	0.15
27.30	0.56	0.35	1.60	0.14	0.00	0.14
27.35	0.56	0.35	1.60	0.14	0.00	0.14
27.40	0.56	0.35	1.59	0.14	0.00	0.14
27.45	0.56	0.35	1.59	0.14	0.00	0.14
27.50	0.56	0.35	1.59	0.14	0.00	0.14
27.55	0.56	0.35	1.59	0.14	0.00	0.14
27.60	0.55	0.35	1.59	0.14	0.00	0.14
27.65	0.55	0.35	1.58	0.14	0.00	0.14
27.70	0.55	0.35	1.58	0.14	0.00	0.14
27.75	0.55	0.35	1.58	0.14	0.00	0.14
27.80	0.55	0.35	1.58	0.14	0.00	0.14
27.85	0.55	0.35	1.58	0.14	0.00	0.14
27.90	0.60	0.35	1.71	0.13	0.00	0.13
27.95	0.60	0.35	1.71	0.13	0.00	0.13
28.00	0.60	0.35	1.71	0.13	0.00	0.13
28.05	0.59	0.35	1.70	0.13	0.00	0.13
28.10	0.59	0.35	1.70	0.13	0.00	0.13
28.15	0.59	0.35	1.70	0.13	0.00	0.13
28.20	0.59	0.35	1.69	0.13	0.00	0.13
28.25	0.59	0.35	1.69	0.13	0.00	0.13
28.30	0.59	0.35	1.69	0.13	0.00	0.13
28.35	0.59	0.35	1.69	0.13	0.00	0.13
28.40	0.59	0.35	1.68	0.13	0.00	0.13
28.45	0.59	0.35	1.68	0.13	0.00	0.13
28.50	0.59	0.35	1.68	0.13	0.00	0.13
28.55	0.59	0.35	1.68	0.13	0.00	0.13
28.60	0.58	0.35	1.67	0.13	0.00	0.13
28.65	0.58	0.35	1.67	0.13	0.00	0.13
28.70	0.58	0.35	1.67	0.13	0.00	0.13
28.75	0.58	0.35	1.67	0.12	0.00	0.12
28.80	0.58	0.35	1.66	0.12	0.00	0.12
28.85	0.58	0.35	1.66	0.12	0.00	0.12
28.90	0.58	0.35	1.66	0.12	0.00	0.12
28.95	0.58	0.35	1.66	0.12	0.00	0.12
29.00	0.58	0.35	1.66	0.12	0.00	0.12
29.05	0.58	0.35	1.65	0.12	0.00	0.12
29.10	0.58	0.35	1.65	0.12	0.00	0.12
29.15	0.57	0.35	1.65	0.12	0.00	0.12
29.20	0.57	0.35	1.65	0.12	0.00	0.12
29.25	0.57	0.35	1.64	0.12	0.00	0.12
29.30	0.57	0.35	1.64	0.12	0.00	0.12
29.35	0.57	0.35	1.64	0.12	0.00	0.12
29.40	0.57	0.35	1.64	0.12	0.00	0.12
29.45	0.57	0.35	1.64	0.12	0.00	0.12
29.50	0.57	0.35	1.63	0.11	0.00	0.11
29.55	0.57	0.35	1.63	0.11	0.00	0.11
29.60	0.57	0.35	1.63	0.11	0.00	0.11
29.65	0.57	0.35	1.63	0.11	0.00	0.11
29.70	0.57	0.35	1.62	0.11	0.00	0.11
29.75	0.57	0.35	1.62	0.11	0.00	0.11
29.80	0.56	0.35	1.62	0.11	0.00	0.11
29.85	0.56	0.35	1.62	0.11	0.00	0.11
29.90	0.56	0.35	1.62	0.11	0.00	0.11
29.95	0.56	0.35	1.61	0.11	0.00	0.11
30.00	0.56	0.35	1.61	0.11	0.00	0.11
30.05	0.83	0.35	2.39	0.11	0.00	0.11
30.10	0.83	0.35	2.39	0.11	0.00	0.11
30.15	0.83	0.35	2.39	0.11	0.00	0.11
30.20	0.83	0.35	2.39	0.11	0.00	0.11
30.25	0.83	0.35	2.39	0.11	0.00	0.11
30.30	0.83	0.35	2.39	0.11	0.00	0.11

30.35	0.83	0.35	2.39	0.11	0.00	0.11
30.40	0.83	0.35	2.39	0.11	0.00	0.11
30.45	0.83	0.35	2.39	0.11	0.00	0.11
30.50	0.83	0.35	2.40	0.11	0.00	0.11
30.55	0.83	0.35	2.40	0.11	0.00	0.11
30.60	0.83	0.35	2.40	0.11	0.00	0.11
30.65	0.83	0.35	2.40	0.11	0.00	0.11
30.70	0.83	0.35	2.40	0.11	0.00	0.11
30.75	0.83	0.35	2.40	0.11	0.00	0.11
30.80	0.83	0.35	2.40	0.11	0.00	0.11
30.85	0.83	0.35	2.40	0.11	0.00	0.11
30.90	0.83	0.35	2.40	0.11	0.00	0.11
30.95	0.83	0.35	2.40	0.11	0.00	0.11
31.00	0.83	0.35	2.41	0.11	0.00	0.11
31.05	0.83	0.35	2.41	0.11	0.00	0.11
31.10	0.83	0.35	2.41	0.11	0.00	0.11
31.15	0.83	0.34	2.41	0.11	0.00	0.11
31.20	0.83	0.34	2.41	0.11	0.00	0.11
31.25	0.83	0.34	2.41	0.11	0.00	0.11
31.30	0.83	0.34	2.41	0.11	0.00	0.11
31.35	0.83	0.34	2.41	0.11	0.00	0.11
31.40	0.83	0.34	2.41	0.11	0.00	0.11
31.45	0.83	0.34	2.41	0.11	0.00	0.11
31.50	0.83	0.34	2.42	0.11	0.00	0.11
31.55	0.83	0.34	2.42	0.11	0.00	0.11
31.60	0.83	0.34	2.42	0.11	0.00	0.11
31.65	0.83	0.34	2.42	0.11	0.00	0.11
31.70	0.83	0.34	2.42	0.11	0.00	0.11
31.75	0.83	0.34	2.42	0.11	0.00	0.11
31.80	0.83	0.34	2.42	0.11	0.00	0.11
31.85	0.83	0.34	2.42	0.11	0.00	0.11
31.90	0.83	0.34	2.42	0.11	0.00	0.11
31.95	0.83	0.34	2.42	0.11	0.00	0.11
32.00	0.83	0.34	2.43	0.11	0.00	0.11
32.05	0.83	0.34	2.43	0.11	0.00	0.11
32.10	0.83	0.34	2.43	0.11	0.00	0.11
32.15	0.83	0.34	2.43	0.11	0.00	0.11
32.20	0.83	0.34	2.43	0.11	0.00	0.11
32.25	0.83	0.34	2.43	0.11	0.00	0.11
32.30	0.83	0.34	2.43	0.11	0.00	0.11
32.35	0.83	0.34	2.43	0.11	0.00	0.11
32.40	0.83	0.34	2.43	0.11	0.00	0.11
32.45	0.83	0.34	2.43	0.11	0.00	0.11
32.50	0.83	0.34	2.44	0.11	0.00	0.11
32.55	0.83	0.34	2.44	0.11	0.00	0.11
32.60	0.83	0.34	2.44	0.11	0.00	0.11
32.65	0.83	0.34	2.44	0.11	0.00	0.11
32.70	0.83	0.34	2.44	0.11	0.00	0.11
32.75	0.83	0.34	2.44	0.11	0.00	0.11
32.80	0.83	0.34	2.44	0.11	0.00	0.11
32.85	0.83	0.34	2.44	0.11	0.00	0.11
32.90	0.83	0.34	2.44	0.11	0.00	0.11
32.95	0.83	0.34	2.44	0.11	0.00	0.11
33.00	0.83	0.34	2.45	0.11	0.00	0.11
33.05	0.83	0.34	2.45	0.11	0.00	0.11
33.10	0.83	0.34	2.45	0.11	0.00	0.11
33.15	0.83	0.34	2.45	0.11	0.00	0.11
33.20	0.83	0.34	2.45	0.11	0.00	0.11
33.25	0.83	0.34	2.45	0.11	0.00	0.11
33.30	0.83	0.34	2.45	0.11	0.00	0.11
33.35	0.83	0.34	2.45	0.11	0.00	0.11
33.40	0.83	0.34	2.45	0.11	0.00	0.11
33.45	0.83	0.34	2.46	0.11	0.00	0.11
33.50	0.83	0.34	2.46	0.11	0.00	0.11
33.55	0.83	0.34	2.46	0.11	0.00	0.11
33.60	0.83	0.34	2.46	0.11	0.00	0.11
33.65	0.83	0.34	2.46	0.11	0.00	0.11
33.70	0.83	0.34	2.46	0.11	0.00	0.11
33.75	0.83	0.34	2.46	0.11	0.00	0.11
33.80	0.83	0.34	2.46	0.11	0.00	0.11
33.85	0.83	0.34	2.46	0.11	0.00	0.11

33.90	0.83	0.34	2.46	0.11	0.00	0.11
33.95	0.83	0.34	2.47	0.11	0.00	0.11
34.00	0.83	0.34	2.47	0.11	0.00	0.11
34.05	0.83	0.34	2.47	0.11	0.00	0.11
34.10	0.83	0.34	2.47	0.11	0.00	0.11
34.15	0.83	0.34	2.47	0.11	0.00	0.11
34.20	0.83	0.34	2.47	0.11	0.00	0.11
34.25	0.83	0.34	2.47	0.11	0.00	0.11
34.30	0.83	0.34	2.47	0.11	0.00	0.11
34.35	0.83	0.34	2.47	0.11	0.00	0.11
34.40	0.83	0.34	2.48	0.11	0.00	0.11
34.45	0.83	0.34	2.48	0.11	0.00	0.11
34.50	0.83	0.34	2.48	0.11	0.00	0.11
34.55	0.83	0.34	2.48	0.11	0.00	0.11
34.60	0.83	0.34	2.48	0.11	0.00	0.11
34.65	0.83	0.33	2.48	0.11	0.00	0.11
34.70	0.83	0.33	2.48	0.11	0.00	0.11
34.75	0.83	0.33	2.48	0.11	0.00	0.11
34.80	0.83	0.33	2.48	0.11	0.00	0.11
34.85	0.83	0.33	2.48	0.11	0.00	0.11
34.90	0.83	0.33	2.49	0.11	0.00	0.11
34.95	0.83	0.33	2.49	0.11	0.00	0.11
35.00	0.83	0.33	2.49	0.11	0.00	0.11
35.05	0.51	0.33	1.51	0.11	0.00	0.11
35.10	0.50	0.33	1.51	0.11	0.00	0.11
35.15	0.50	0.33	1.51	0.10	0.00	0.10
35.20	0.50	0.33	1.51	0.10	0.00	0.10
35.25	0.50	0.33	1.51	0.10	0.00	0.10
35.30	0.50	0.33	1.51	0.10	0.00	0.10
35.35	0.50	0.33	1.51	0.10	0.00	0.10
35.40	0.50	0.33	1.51	0.10	0.00	0.10
35.45	0.50	0.33	1.51	0.10	0.00	0.10
35.50	0.50	0.33	1.51	0.10	0.00	0.10
35.55	0.50	0.33	1.51	0.10	0.00	0.10
35.60	0.50	0.33	1.51	0.10	0.00	0.10
35.65	0.50	0.33	1.51	0.09	0.00	0.09
35.70	0.50	0.33	1.51	0.09	0.00	0.09
35.75	0.50	0.33	1.51	0.09	0.00	0.09
35.80	0.50	0.33	1.51	0.09	0.00	0.09
35.85	0.50	0.33	1.50	0.09	0.00	0.09
35.90	0.50	0.33	1.50	0.09	0.00	0.09
35.95	0.50	0.33	1.50	0.09	0.00	0.09
36.00	0.50	0.33	1.50	0.09	0.00	0.09
36.05	0.50	0.33	1.50	0.09	0.00	0.09
36.10	0.50	0.33	1.50	0.08	0.00	0.08
36.15	0.50	0.33	1.50	0.08	0.00	0.08
36.20	0.50	0.33	1.50	0.08	0.00	0.08
36.25	0.50	0.33	1.50	0.08	0.00	0.08
36.30	0.50	0.33	1.50	0.08	0.00	0.08
36.35	0.50	0.33	1.50	0.08	0.00	0.08
36.40	0.50	0.33	1.50	0.08	0.00	0.08
36.45	0.50	0.33	1.50	0.08	0.00	0.08
36.50	0.50	0.33	1.50	0.08	0.00	0.08
36.55	0.50	0.33	1.50	0.08	0.00	0.08
36.60	0.50	0.33	1.50	0.07	0.00	0.07
36.65	0.50	0.33	1.50	0.07	0.00	0.07
36.70	0.50	0.33	1.50	0.07	0.00	0.07
36.75	0.50	0.33	1.50	0.07	0.00	0.07
36.80	0.49	0.33	1.50	0.07	0.00	0.07
36.85	0.49	0.33	1.50	0.07	0.00	0.07
36.90	0.49	0.33	1.49	0.07	0.00	0.07
36.95	0.49	0.33	1.49	0.07	0.00	0.07
37.00	0.49	0.33	1.49	0.07	0.00	0.07
37.05	0.49	0.33	1.49	0.07	0.00	0.07
37.10	0.49	0.33	1.49	0.06	0.00	0.06
37.15	0.49	0.33	1.49	0.06	0.00	0.06
37.20	0.49	0.33	1.49	0.06	0.00	0.06
37.25	0.49	0.33	1.49	0.06	0.00	0.06
37.30	0.49	0.33	1.49	0.06	0.00	0.06
37.35	0.49	0.33	1.49	0.06	0.00	0.06
37.40	0.49	0.33	1.49	0.06	0.00	0.06

37.45	0.49	0.33	1.49	0.06	0.00	0.06
37.50	0.49	0.33	1.49	0.06	0.00	0.06
37.55	0.49	0.33	1.49	0.05	0.00	0.05
37.60	0.49	0.33	1.49	0.05	0.00	0.05
37.65	0.49	0.33	1.49	0.05	0.00	0.05
37.70	0.49	0.33	1.49	0.05	0.00	0.05
37.75	0.49	0.33	1.49	0.05	0.00	0.05
37.80	0.49	0.33	1.49	0.05	0.00	0.05
37.85	0.49	0.33	1.49	0.05	0.00	0.05
37.90	0.49	0.33	1.49	0.05	0.00	0.05
37.95	0.49	0.33	1.49	0.05	0.00	0.05
38.00	0.49	0.33	1.49	0.04	0.00	0.04
38.05	0.49	0.33	1.48	0.04	0.00	0.04
38.10	0.49	0.33	1.48	0.04	0.00	0.04
38.15	0.49	0.33	1.48	0.04	0.00	0.04
38.20	0.49	0.33	1.48	0.04	0.00	0.04
38.25	0.49	0.33	1.48	0.04	0.00	0.04
38.30	0.49	0.33	1.48	0.04	0.00	0.04
38.35	0.49	0.33	1.48	0.04	0.00	0.04
38.40	0.49	0.33	1.48	0.04	0.00	0.04
38.45	0.49	0.33	1.48	0.04	0.00	0.04
38.50	0.49	0.33	1.48	0.03	0.00	0.03
38.55	0.49	0.33	1.48	0.03	0.00	0.03
38.60	0.49	0.33	1.48	0.03	0.00	0.03
38.65	0.49	0.33	1.48	0.03	0.00	0.03
38.70	0.48	0.33	1.48	0.03	0.00	0.03
38.75	0.48	0.33	1.48	0.03	0.00	0.03
38.80	0.48	0.33	1.48	0.03	0.00	0.03
38.85	0.48	0.33	1.48	0.03	0.00	0.03
38.90	0.48	0.33	1.48	0.03	0.00	0.03
38.95	0.48	0.33	1.48	0.02	0.00	0.02
39.00	0.48	0.33	1.48	0.02	0.00	0.02
39.05	0.48	0.33	1.48	0.02	0.00	0.02
39.10	0.48	0.33	1.48	0.02	0.00	0.02
39.15	0.48	0.33	1.48	0.02	0.00	0.02
39.20	0.48	0.33	1.48	0.02	0.00	0.02
39.25	0.48	0.33	1.48	0.02	0.00	0.02
39.30	0.48	0.33	1.48	0.02	0.00	0.02
39.35	0.48	0.33	1.48	0.02	0.00	0.02
39.40	0.48	0.33	1.48	0.01	0.00	0.01
39.45	0.48	0.33	1.48	0.01	0.00	0.01
39.50	0.48	0.33	1.47	0.01	0.00	0.01
39.55	0.48	0.33	1.47	0.01	0.00	0.01
39.60	0.48	0.33	1.47	0.01	0.00	0.01
39.65	0.48	0.33	1.47	0.01	0.00	0.01
39.70	0.48	0.33	1.47	0.01	0.00	0.01
39.75	0.48	0.33	1.47	0.01	0.00	0.01
39.80	0.48	0.33	1.47	0.01	0.00	0.01
39.85	0.48	0.33	1.47	0.00	0.00	0.00
39.90	0.48	0.33	1.47	0.00	0.00	0.00
39.95	0.48	0.33	1.47	0.00	0.00	0.00
40.00	0.48	0.33	1.47	0.00	0.00	0.00
40.05	0.83	0.33	2.55	0.00	0.00	0.00
40.10	0.83	0.32	2.56	0.00	0.00	0.00
40.15	0.83	0.32	2.56	0.00	0.00	0.00
40.20	0.83	0.32	2.56	0.00	0.00	0.00
40.25	0.83	0.32	2.56	0.00	0.00	0.00
40.30	0.83	0.32	2.56	0.00	0.00	0.00
40.35	0.83	0.32	2.56	0.00	0.00	0.00
40.40	0.83	0.32	2.56	0.00	0.00	0.00
40.45	0.83	0.32	2.56	0.00	0.00	0.00
40.50	0.83	0.32	2.57	0.00	0.00	0.00
40.55	0.83	0.32	2.57	0.00	0.00	0.00
40.60	0.83	0.32	2.57	0.00	0.00	0.00
40.65	0.83	0.32	2.57	0.00	0.00	0.00
40.70	0.83	0.32	2.57	0.00	0.00	0.00
40.75	0.83	0.32	2.57	0.00	0.00	0.00
40.80	0.83	0.32	2.57	0.00	0.00	0.00
40.85	0.83	0.32	2.57	0.00	0.00	0.00
40.90	0.83	0.32	2.58	0.00	0.00	0.00
40.95	0.83	0.32	2.58	0.00	0.00	0.00

41.00	0.83	0.32	2.58	0.00	0.00	0.00
41.05	0.83	0.32	2.58	0.00	0.00	0.00
41.10	0.83	0.32	2.58	0.00	0.00	0.00
41.15	0.83	0.32	2.58	0.00	0.00	0.00
41.20	0.83	0.32	2.58	0.00	0.00	0.00
41.25	0.83	0.32	2.58	0.00	0.00	0.00
41.30	0.83	0.32	2.59	0.00	0.00	0.00
41.35	0.83	0.32	2.59	0.00	0.00	0.00
41.40	0.83	0.32	2.59	0.00	0.00	0.00
41.45	0.83	0.32	2.59	0.00	0.00	0.00
41.50	0.83	0.32	2.59	0.00	0.00	0.00
41.55	0.83	0.32	2.59	0.00	0.00	0.00
41.60	0.83	0.32	2.59	0.00	0.00	0.00
41.65	0.83	0.32	2.59	0.00	0.00	0.00
41.70	0.83	0.32	2.60	0.00	0.00	0.00
41.75	0.83	0.32	2.60	0.00	0.00	0.00
41.80	0.83	0.32	2.60	0.00	0.00	0.00
41.85	0.83	0.32	2.60	0.00	0.00	0.00
41.90	0.83	0.32	2.60	0.00	0.00	0.00
41.95	0.83	0.32	2.60	0.00	0.00	0.00
42.00	0.83	0.32	2.60	0.00	0.00	0.00
42.05	0.83	0.32	2.60	0.00	0.00	0.00
42.10	0.83	0.32	2.61	0.00	0.00	0.00
42.15	0.83	0.32	2.61	0.00	0.00	0.00
42.20	0.83	0.32	2.61	0.00	0.00	0.00
42.25	0.83	0.32	2.61	0.00	0.00	0.00
42.30	0.83	0.32	2.61	0.00	0.00	0.00
42.35	0.83	0.32	2.61	0.00	0.00	0.00
42.40	0.83	0.32	2.61	0.00	0.00	0.00
42.45	0.83	0.32	2.61	0.00	0.00	0.00
42.50	0.83	0.32	2.62	0.00	0.00	0.00
42.55	0.83	0.32	2.62	0.00	0.00	0.00
42.60	0.83	0.32	2.62	0.00	0.00	0.00
42.65	0.83	0.32	2.62	0.00	0.00	0.00
42.70	0.83	0.32	2.62	0.00	0.00	0.00
42.75	0.83	0.32	2.62	0.00	0.00	0.00
42.80	0.83	0.32	2.62	0.00	0.00	0.00
42.85	0.83	0.32	2.62	0.00	0.00	0.00
42.90	0.83	0.32	2.63	0.00	0.00	0.00
42.95	0.83	0.32	2.63	0.00	0.00	0.00
43.00	0.83	0.32	2.63	0.00	0.00	0.00
43.05	0.83	0.32	2.63	0.00	0.00	0.00
43.10	0.83	0.32	2.63	0.00	0.00	0.00
43.15	0.83	0.32	2.63	0.00	0.00	0.00
43.20	0.83	0.32	2.63	0.00	0.00	0.00
43.25	0.83	0.32	2.63	0.00	0.00	0.00
43.30	0.83	0.32	2.64	0.00	0.00	0.00
43.35	0.83	0.32	2.64	0.00	0.00	0.00
43.40	0.83	0.31	2.64	0.00	0.00	0.00
43.45	0.83	0.31	2.64	0.00	0.00	0.00
43.50	0.83	0.31	2.64	0.00	0.00	0.00
43.55	0.83	0.31	2.64	0.00	0.00	0.00
43.60	0.83	0.31	2.64	0.00	0.00	0.00
43.65	0.83	0.31	2.64	0.00	0.00	0.00
43.70	0.83	0.31	2.65	0.00	0.00	0.00
43.75	0.83	0.31	2.65	0.00	0.00	0.00
43.80	0.83	0.31	2.65	0.00	0.00	0.00
43.85	0.83	0.31	2.65	0.00	0.00	0.00
43.90	0.83	0.31	2.65	0.00	0.00	0.00
43.95	0.83	0.31	2.65	0.00	0.00	0.00
44.00	0.83	0.31	2.65	0.00	0.00	0.00
44.05	0.83	0.31	2.65	0.00	0.00	0.00
44.10	0.83	0.31	2.66	0.00	0.00	0.00
44.15	0.83	0.31	2.66	0.00	0.00	0.00
44.20	0.83	0.31	2.66	0.00	0.00	0.00
44.25	0.83	0.31	2.66	0.00	0.00	0.00
44.30	0.83	0.31	2.66	0.00	0.00	0.00
44.35	0.83	0.31	2.66	0.00	0.00	0.00
44.40	0.83	0.31	2.66	0.00	0.00	0.00
44.45	0.83	0.31	2.67	0.00	0.00	0.00
44.50	0.83	0.31	2.67	0.00	0.00	0.00

44.55	0.83	0.31	2.67	0.00	0.00	0.00
44.60	0.83	0.31	2.67	0.00	0.00	0.00
44.65	0.83	0.31	2.67	0.00	0.00	0.00
44.70	0.83	0.31	2.67	0.00	0.00	0.00
44.75	0.83	0.31	2.67	0.00	0.00	0.00
44.80	0.83	0.31	2.67	0.00	0.00	0.00
44.85	0.83	0.31	2.68	0.00	0.00	0.00
44.90	0.83	0.31	2.68	0.00	0.00	0.00
44.95	0.83	0.31	2.68	0.00	0.00	0.00
45.00	0.83	0.31	2.68	0.00	0.00	0.00
45.05	0.83	0.31	2.68	0.00	0.00	0.00
45.10	0.83	0.31	2.68	0.00	0.00	0.00
45.15	0.83	0.31	2.68	0.00	0.00	0.00
45.20	0.83	0.31	2.69	0.00	0.00	0.00
45.25	0.83	0.31	2.69	0.00	0.00	0.00
45.30	0.83	0.31	2.69	0.00	0.00	0.00
45.35	0.83	0.31	2.69	0.00	0.00	0.00
45.40	0.83	0.31	2.69	0.00	0.00	0.00
45.45	0.83	0.31	2.69	0.00	0.00	0.00
45.50	0.83	0.31	2.69	0.00	0.00	0.00
45.55	0.83	0.31	2.69	0.00	0.00	0.00
45.60	0.83	0.31	2.70	0.00	0.00	0.00
45.65	0.83	0.31	2.70	0.00	0.00	0.00
45.70	0.83	0.31	2.70	0.00	0.00	0.00
45.75	0.83	0.31	2.70	0.00	0.00	0.00
45.80	0.83	0.31	2.70	0.00	0.00	0.00
45.85	0.83	0.31	2.70	0.00	0.00	0.00
45.90	0.83	0.31	2.70	0.00	0.00	0.00
45.95	0.83	0.31	2.70	0.00	0.00	0.00
46.00	0.83	0.31	2.71	0.00	0.00	0.00
46.05	0.83	0.31	2.71	0.00	0.00	0.00
46.10	0.83	0.31	2.71	0.00	0.00	0.00
46.15	0.83	0.31	2.71	0.00	0.00	0.00
46.20	0.83	0.31	2.71	0.00	0.00	0.00
46.25	0.83	0.31	2.71	0.00	0.00	0.00
46.30	0.83	0.31	2.71	0.00	0.00	0.00
46.35	0.83	0.31	2.72	0.00	0.00	0.00
46.40	0.83	0.31	2.72	0.00	0.00	0.00
46.45	0.83	0.31	2.72	0.00	0.00	0.00
46.50	0.83	0.31	2.72	0.00	0.00	0.00
46.55	0.83	0.31	2.72	0.00	0.00	0.00
46.60	0.83	0.31	2.72	0.00	0.00	0.00
46.65	0.83	0.30	2.72	0.00	0.00	0.00
46.70	0.83	0.30	2.73	0.00	0.00	0.00
46.75	0.83	0.30	2.73	0.00	0.00	0.00
46.80	0.83	0.30	2.73	0.00	0.00	0.00
46.85	0.83	0.30	2.73	0.00	0.00	0.00
46.90	0.83	0.30	2.73	0.00	0.00	0.00
46.95	0.83	0.30	2.73	0.00	0.00	0.00
47.00	0.83	0.30	2.73	0.00	0.00	0.00
47.05	0.83	0.30	2.73	0.00	0.00	0.00
47.10	0.83	0.30	2.73	0.00	0.00	0.00
47.15	0.82	0.30	2.70	0.00	0.00	0.00
47.20	0.81	0.30	2.68	0.00	0.00	0.00
47.25	0.80	0.30	2.65	0.00	0.00	0.00
47.30	0.80	0.30	2.63	0.00	0.00	0.00
47.35	0.79	0.30	2.61	0.00	0.00	0.00
47.40	0.78	0.30	2.59	0.00	0.00	0.00
47.45	0.78	0.30	2.57	0.00	0.00	0.00
47.50	0.77	0.30	2.56	0.00	0.00	0.00
47.55	0.77	0.30	2.54	0.00	0.00	0.00
47.60	0.76	0.30	2.53	0.00	0.00	0.00
47.65	0.76	0.30	2.51	0.00	0.00	0.00
47.70	0.75	0.30	2.50	0.00	0.00	0.00
47.75	0.75	0.30	2.49	0.00	0.00	0.00
47.80	0.75	0.30	2.48	0.00	0.00	0.00
47.85	0.74	0.30	2.47	0.00	0.00	0.00
47.90	0.74	0.30	2.46	0.00	0.00	0.00
47.95	0.74	0.30	2.45	0.00	0.00	0.00
48.00	0.73	0.30	2.44	0.00	0.00	0.00
48.05	0.73	0.30	2.43	0.00	0.00	0.00

48.10	0.73	0.30	2.42	0.00	0.00	0.00
48.15	0.72	0.30	2.41	0.00	0.00	0.00
48.20	0.72	0.30	2.40	0.00	0.00	0.00
48.25	0.72	0.30	2.39	0.00	0.00	0.00
48.30	0.72	0.30	2.39	0.00	0.00	0.00
48.3S	0.71	0.30	2.38	0.00	0.00	0.00
48.40	0.71	0.30	2.37	0.00	0.00	0.00
48.4S	0.71	0.30	2.37	0.00	0.00	0.00
48.S0	0.71	0.30	2.36	0.00	0.00	0.00
48.SS	0.70	0.30	2.3S	0.00	0.00	0.00
48.60	0.70	0.30	2.3S	0.00	0.00	0.00
48.6S	0.70	0.30	2.34	0.00	0.00	0.00
48.70	0.70	0.30	2.34	0.00	0.00	0.00
48.7S	0.70	0.30	2.33	0.00	0.00	0.00
48.80	0.69	0.30	2.32	0.00	0.00	0.00
48.85	0.69	0.30	2.32	0.00	0.00	0.00
48.90	0.69	0.30	2.31	0.00	0.00	0.00
48.95	0.69	0.30	2.31	0.00	0.00	0.00
49.00	0.69	0.30	2.31	0.00	0.00	0.00
49.05	0.68	0.30	2.30	0.00	0.00	0.00
49.10	0.68	0.30	2.30	0.00	0.00	0.00
49.1S	0.68	0.30	2.29	0.00	0.00	0.00
49.20	0.68	0.30	2.29	0.00	0.00	0.00
49.2S	0.68	0.30	2.28	0.00	0.00	0.00
49.30	0.68	0.30	2.28	0.00	0.00	0.00
49.3S	0.68	0.30	2.28	0.00	0.00	0.00
49.40	0.67	0.30	2.27	0.00	0.00	0.00
49.4S	0.67	0.30	2.27	0.00	0.00	0.00
49.50	0.67	0.30	2.27	0.00	0.00	0.00
49.55	0.67	0.30	2.26	0.00	0.00	0.00
49.60	0.67	0.30	2.26	0.00	0.00	0.00
49.65	0.67	0.30	2.26	0.00	0.00	0.00
49.70	0.67	0.30	2.2S	0.00	0.00	0.00
49.7S	0.66	0.30	2.25	0.00	0.00	0.00
49.80	0.66	0.30	2.2S	0.00	0.00	0.00
49.8S	0.66	0.30	2.24	0.00	0.00	0.00
49.90	0.66	0.30	2.24	0.00	0.00	0.00
49.9S	0.66	0.29	2.24	0.00	0.00	0.00
S0.00	0.66	0.29	2.23	0.00	0.00	0.00

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* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to S, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0S81tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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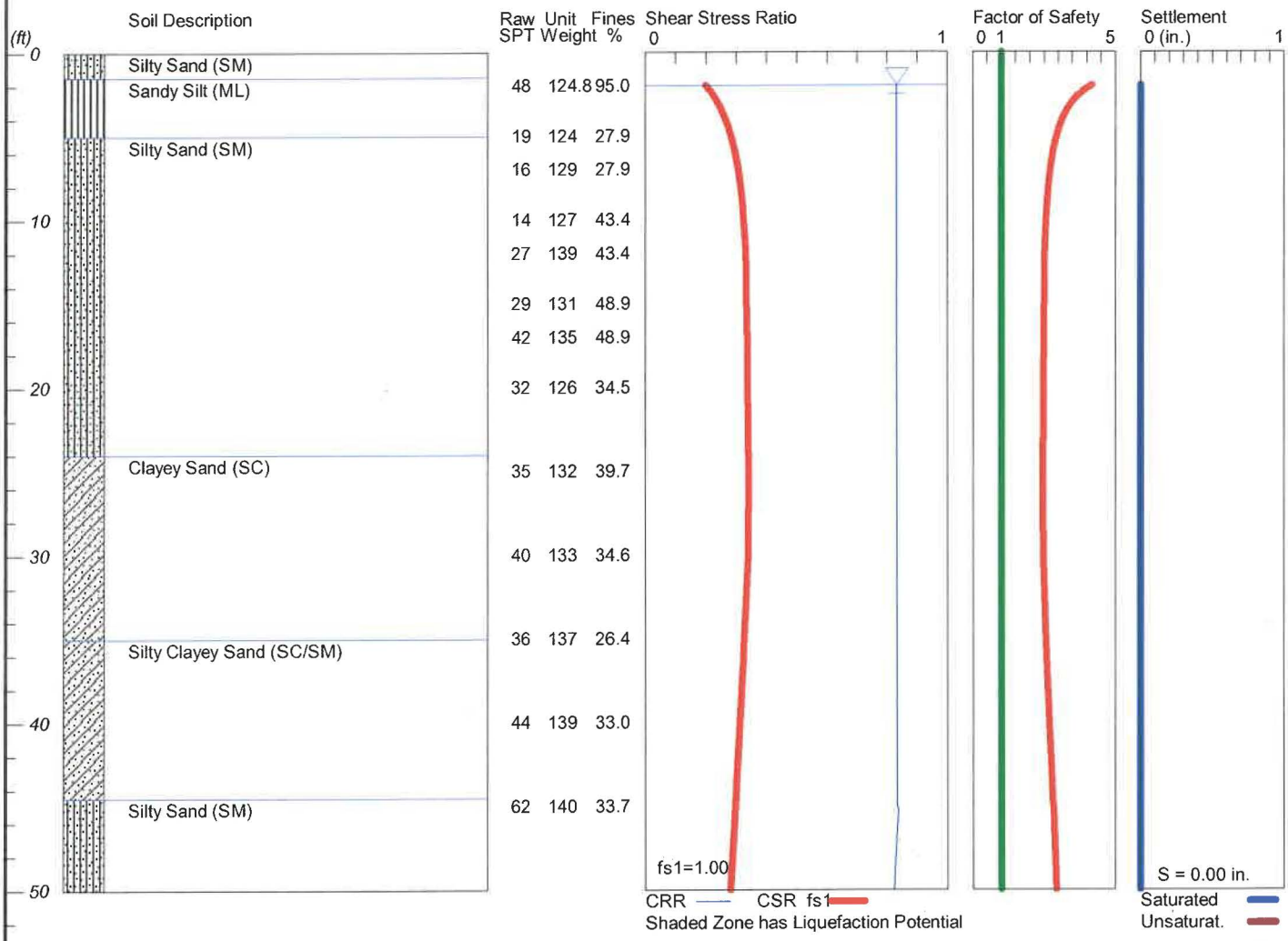
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat Settlement from saturated sands
S_dry Settlement from Unsaturated Sands
S_all Total Settlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B2 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B2\01222165 B2 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-2216S

Surface Elev.=
Hole No.=B2
Depth of Hole= S0.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B2
Depth of Hole=S0.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.1S
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.2S
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	48.00	124.80	9S.00
S.00	19.00	124.00	27.90
7.00	16.00	129.00	27.90
10.00	14.00	127.00	43.40
12.00	27.00	139.00	43.40
15.00	29.00	131.00	48.90
17.00	42.00	13S.00	48.90
20.00	32.00	126.00	34.S0
25.00	3S.00	132.00	39.70
30.00	40.00	133.00	34.60
3S.00	36.00	137.00	26.40
40.00	44.00	139.00	33.00
4S.00	62.00	140.00	33.70

Output Results:
Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.00 in.
Differential Settlement=0.000 to 0.000 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

2.00	0.83	0.20	4.18	0.00	0.00	0.00
2.05	0.83	0.20	4.13	0.00	0.00	0.00
2.10	0.83	0.20	4.08	0.00	0.00	0.00
2.15	0.83	0.21	4.04	0.00	0.00	0.00
2.20	0.83	0.21	3.99	0.00	0.00	0.00
2.25	0.83	0.21	3.95	0.00	0.00	0.00
2.30	0.83	0.21	3.91	0.00	0.00	0.00
2.35	0.83	0.21	3.87	0.00	0.00	0.00
2.40	0.83	0.22	3.84	0.00	0.00	0.00
2.45	0.83	0.22	3.80	0.00	0.00	0.00
2.50	0.83	0.22	3.77	0.00	0.00	0.00
2.55	0.83	0.22	3.74	0.00	0.00	0.00
2.60	0.83	0.22	3.71	0.00	0.00	0.00
2.65	0.83	0.23	3.68	0.00	0.00	0.00
2.70	0.83	0.23	3.65	0.00	0.00	0.00
2.75	0.83	0.23	3.62	0.00	0.00	0.00
2.80	0.83	0.23	3.59	0.00	0.00	0.00
2.85	0.83	0.23	3.57	0.00	0.00	0.00
2.90	0.83	0.23	3.54	0.00	0.00	0.00
2.95	0.83	0.24	3.52	0.00	0.00	0.00
3.00	0.83	0.24	3.49	0.00	0.00	0.00
3.05	0.83	0.24	3.47	0.00	0.00	0.00
3.10	0.83	0.24	3.45	0.00	0.00	0.00
3.15	0.83	0.24	3.43	0.00	0.00	0.00
3.20	0.83	0.24	3.41	0.00	0.00	0.00
3.25	0.83	0.25	3.39	0.00	0.00	0.00
3.30	0.83	0.25	3.37	0.00	0.00	0.00
3.35	0.83	0.25	3.35	0.00	0.00	0.00
3.40	0.83	0.25	3.33	0.00	0.00	0.00
3.45	0.83	0.25	3.31	0.00	0.00	0.00
3.50	0.83	0.25	3.30	0.00	0.00	0.00
3.55	0.83	0.25	3.28	0.00	0.00	0.00
3.60	0.83	0.25	3.27	0.00	0.00	0.00
3.65	0.83	0.26	3.25	0.00	0.00	0.00
3.70	0.83	0.26	3.23	0.00	0.00	0.00
3.75	0.83	0.26	3.22	0.00	0.00	0.00
3.80	0.83	0.26	3.21	0.00	0.00	0.00
3.85	0.83	0.26	3.19	0.00	0.00	0.00
3.90	0.83	0.26	3.18	0.00	0.00	0.00
3.95	0.83	0.26	3.16	0.00	0.00	0.00
4.00	0.83	0.26	3.15	0.00	0.00	0.00
4.05	0.83	0.26	3.14	0.00	0.00	0.00
4.10	0.83	0.27	3.13	0.00	0.00	0.00
4.15	0.83	0.27	3.11	0.00	0.00	0.00
4.20	0.83	0.27	3.10	0.00	0.00	0.00
4.25	0.83	0.27	3.09	0.00	0.00	0.00
4.30	0.83	0.27	3.08	0.00	0.00	0.00
4.35	0.83	0.27	3.07	0.00	0.00	0.00
4.40	0.83	0.27	3.06	0.00	0.00	0.00
4.45	0.83	0.27	3.05	0.00	0.00	0.00
4.50	0.83	0.27	3.04	0.00	0.00	0.00
4.55	0.83	0.27	3.03	0.00	0.00	0.00
4.60	0.83	0.28	3.02	0.00	0.00	0.00
4.65	0.83	0.28	3.01	0.00	0.00	0.00
4.70	0.83	0.28	3.00	0.00	0.00	0.00
4.75	0.83	0.28	2.99	0.00	0.00	0.00
4.80	0.83	0.28	2.98	0.00	0.00	0.00
4.85	0.83	0.28	2.97	0.00	0.00	0.00
4.90	0.83	0.28	2.96	0.00	0.00	0.00
4.95	0.83	0.28	2.96	0.00	0.00	0.00
5.00	0.83	0.28	2.95	0.00	0.00	0.00
5.05	0.83	0.28	2.94	0.00	0.00	0.00
5.10	0.83	0.28	2.93	0.00	0.00	0.00
5.15	0.83	0.28	2.92	0.00	0.00	0.00
5.20	0.83	0.28	2.92	0.00	0.00	0.00
5.25	0.83	0.29	2.91	0.00	0.00	0.00
5.30	0.83	0.29	2.90	0.00	0.00	0.00
5.35	0.83	0.29	2.90	0.00	0.00	0.00
5.40	0.83	0.29	2.89	0.00	0.00	0.00
5.45	0.83	0.29	2.88	0.00	0.00	0.00

5.50	0.83	0.29	2.87	0.00	0.00	0.00
5.55	0.83	0.29	2.87	0.00	0.00	0.00
5.60	0.83	0.29	2.86	0.00	0.00	0.00
5.65	0.83	0.29	2.85	0.00	0.00	0.00
5.70	0.83	0.29	2.85	0.00	0.00	0.00
5.75	0.83	0.29	2.84	0.00	0.00	0.00
5.80	0.83	0.29	2.84	0.00	0.00	0.00
5.85	0.83	0.29	2.83	0.00	0.00	0.00
5.90	0.83	0.29	2.82	0.00	0.00	0.00
5.95	0.83	0.29	2.82	0.00	0.00	0.00
6.00	0.83	0.30	2.81	0.00	0.00	0.00
6.05	0.83	0.30	2.81	0.00	0.00	0.00
6.10	0.83	0.30	2.80	0.00	0.00	0.00
6.15	0.83	0.30	2.80	0.00	0.00	0.00
6.20	0.83	0.30	2.79	0.00	0.00	0.00
6.25	0.83	0.30	2.79	0.00	0.00	0.00
6.30	0.83	0.30	2.78	0.00	0.00	0.00
6.35	0.83	0.30	2.78	0.00	0.00	0.00
6.40	0.83	0.30	2.77	0.00	0.00	0.00
6.45	0.83	0.30	2.77	0.00	0.00	0.00
6.50	0.83	0.30	2.76	0.00	0.00	0.00
6.55	0.83	0.30	2.76	0.00	0.00	0.00
6.60	0.83	0.30	2.75	0.00	0.00	0.00
6.65	0.83	0.30	2.75	0.00	0.00	0.00
6.70	0.83	0.30	2.74	0.00	0.00	0.00
6.75	0.83	0.30	2.74	0.00	0.00	0.00
6.80	0.83	0.30	2.73	0.00	0.00	0.00
6.85	0.83	0.30	2.73	0.00	0.00	0.00
6.90	0.83	0.30	2.73	0.00	0.00	0.00
6.95	0.83	0.31	2.72	0.00	0.00	0.00
7.00	0.83	0.31	2.72	0.00	0.00	0.00
7.05	0.83	0.31	2.71	0.00	0.00	0.00
7.10	0.83	0.31	2.71	0.00	0.00	0.00
7.15	0.83	0.31	2.71	0.00	0.00	0.00
7.20	0.83	0.31	2.70	0.00	0.00	0.00
7.25	0.83	0.31	2.70	0.00	0.00	0.00
7.30	0.83	0.31	2.70	0.00	0.00	0.00
7.35	0.83	0.31	2.69	0.00	0.00	0.00
7.40	0.83	0.31	2.69	0.00	0.00	0.00
7.45	0.83	0.31	2.69	0.00	0.00	0.00
7.50	0.83	0.31	2.68	0.00	0.00	0.00
7.55	0.83	0.31	2.68	0.00	0.00	0.00
7.60	0.83	0.31	2.68	0.00	0.00	0.00
7.65	0.83	0.31	2.68	0.00	0.00	0.00
7.70	0.83	0.31	2.67	0.00	0.00	0.00
7.75	0.83	0.31	2.67	0.00	0.00	0.00
7.80	0.83	0.31	2.67	0.00	0.00	0.00
7.85	0.83	0.31	2.66	0.00	0.00	0.00
7.90	0.83	0.31	2.66	0.00	0.00	0.00
7.95	0.83	0.31	2.66	0.00	0.00	0.00
8.00	0.83	0.31	2.66	0.00	0.00	0.00
8.05	0.83	0.31	2.65	0.00	0.00	0.00
8.10	0.83	0.31	2.65	0.00	0.00	0.00
8.15	0.83	0.31	2.65	0.00	0.00	0.00
8.20	0.83	0.31	2.64	0.00	0.00	0.00
8.25	0.83	0.31	2.64	0.00	0.00	0.00
8.30	0.83	0.31	2.64	0.00	0.00	0.00
8.35	0.83	0.31	2.64	0.00	0.00	0.00
8.40	0.83	0.32	2.64	0.00	0.00	0.00
8.45	0.83	0.32	2.63	0.00	0.00	0.00
8.50	0.83	0.32	2.63	0.00	0.00	0.00
8.55	0.83	0.32	2.63	0.00	0.00	0.00
8.60	0.83	0.32	2.63	0.00	0.00	0.00
8.65	0.83	0.32	2.62	0.00	0.00	0.00
8.70	0.83	0.32	2.62	0.00	0.00	0.00
8.75	0.83	0.32	2.62	0.00	0.00	0.00
8.80	0.83	0.32	2.62	0.00	0.00	0.00
8.85	0.83	0.32	2.61	0.00	0.00	0.00
8.90	0.83	0.32	2.61	0.00	0.00	0.00
8.95	0.83	0.32	2.61	0.00	0.00	0.00
9.00	0.83	0.32	2.61	0.00	0.00	0.00

9.05	0.83	0.32	2.61	0.00	0.00	0.00
9.10	0.83	0.32	2.60	0.00	0.00	0.00
9.15	0.83	0.32	2.60	0.00	0.00	0.00
9.20	0.83	0.32	2.60	0.00	0.00	0.00
9.25	0.83	0.32	2.60	0.00	0.00	0.00
9.30	0.83	0.32	2.60	0.00	0.00	0.00
9.35	0.83	0.32	2.59	0.00	0.00	0.00
9.40	0.83	0.32	2.59	0.00	0.00	0.00
9.45	0.83	0.32	2.59	0.00	0.00	0.00
9.50	0.83	0.32	2.59	0.00	0.00	0.00
9.55	0.83	0.32	2.59	0.00	0.00	0.00
9.60	0.83	0.32	2.59	0.00	0.00	0.00
9.65	0.83	0.32	2.58	0.00	0.00	0.00
9.70	0.83	0.32	2.58	0.00	0.00	0.00
9.75	0.83	0.32	2.58	0.00	0.00	0.00
9.80	0.83	0.32	2.58	0.00	0.00	0.00
9.85	0.83	0.32	2.58	0.00	0.00	0.00
9.90	0.83	0.32	2.58	0.00	0.00	0.00
9.95	0.83	0.32	2.57	0.00	0.00	0.00
10.00	0.83	0.32	2.57	0.00	0.00	0.00
10.05	0.83	0.32	2.57	0.00	0.00	0.00
10.10	0.83	0.32	2.57	0.00	0.00	0.00
10.15	0.83	0.32	2.57	0.00	0.00	0.00
10.20	0.83	0.32	2.57	0.00	0.00	0.00
10.25	0.83	0.32	2.56	0.00	0.00	0.00
10.30	0.83	0.32	2.56	0.00	0.00	0.00
10.35	0.83	0.32	2.56	0.00	0.00	0.00
10.40	0.83	0.32	2.56	0.00	0.00	0.00
10.45	0.83	0.32	2.56	0.00	0.00	0.00
10.50	0.83	0.33	2.56	0.00	0.00	0.00
10.55	0.83	0.33	2.55	0.00	0.00	0.00
10.60	0.83	0.33	2.55	0.00	0.00	0.00
10.65	0.83	0.33	2.55	0.00	0.00	0.00
10.70	0.83	0.33	2.55	0.00	0.00	0.00
10.75	0.83	0.33	2.55	0.00	0.00	0.00
10.80	0.83	0.33	2.55	0.00	0.00	0.00
10.85	0.83	0.33	2.55	0.00	0.00	0.00
10.90	0.83	0.33	2.54	0.00	0.00	0.00
10.95	0.83	0.33	2.54	0.00	0.00	0.00
11.00	0.83	0.33	2.54	0.00	0.00	0.00
11.05	0.83	0.33	2.54	0.00	0.00	0.00
11.10	0.83	0.33	2.54	0.00	0.00	0.00
11.15	0.83	0.33	2.54	0.00	0.00	0.00
11.20	0.83	0.33	2.54	0.00	0.00	0.00
11.25	0.83	0.33	2.53	0.00	0.00	0.00
11.30	0.83	0.33	2.53	0.00	0.00	0.00
11.35	0.83	0.33	2.53	0.00	0.00	0.00
11.40	0.83	0.33	2.53	0.00	0.00	0.00
11.45	0.83	0.33	2.53	0.00	0.00	0.00
11.50	0.83	0.33	2.53	0.00	0.00	0.00
11.55	0.83	0.33	2.53	0.00	0.00	0.00
11.60	0.83	0.33	2.53	0.00	0.00	0.00
11.65	0.83	0.33	2.52	0.00	0.00	0.00
11.70	0.83	0.33	2.52	0.00	0.00	0.00
11.75	0.83	0.33	2.52	0.00	0.00	0.00
11.80	0.83	0.33	2.52	0.00	0.00	0.00
11.85	0.83	0.33	2.52	0.00	0.00	0.00
11.90	0.83	0.33	2.52	0.00	0.00	0.00
11.95	0.83	0.33	2.52	0.00	0.00	0.00
12.00	0.83	0.33	2.52	0.00	0.00	0.00
12.05	0.83	0.33	2.52	0.00	0.00	0.00
12.10	0.83	0.33	2.52	0.00	0.00	0.00
12.15	0.83	0.33	2.52	0.00	0.00	0.00
12.20	0.83	0.33	2.51	0.00	0.00	0.00
12.25	0.83	0.33	2.51	0.00	0.00	0.00
12.30	0.83	0.33	2.51	0.00	0.00	0.00
12.35	0.83	0.33	2.51	0.00	0.00	0.00
12.40	0.83	0.33	2.51	0.00	0.00	0.00
12.45	0.83	0.33	2.51	0.00	0.00	0.00
12.50	0.83	0.33	2.51	0.00	0.00	0.00
12.55	0.83	0.33	2.51	0.00	0.00	0.00

12.60	0.83	0.33	2.51	0.00	0.00	0.00
12.65	0.83	0.33	2.51	0.00	0.00	0.00
12.70	0.83	0.33	2.51	0.00	0.00	0.00
12.75	0.83	0.33	2.51	0.00	0.00	0.00
12.80	0.83	0.33	2.51	0.00	0.00	0.00
12.85	0.83	0.33	2.51	0.00	0.00	0.00
12.90	0.83	0.33	2.51	0.00	0.00	0.00
12.95	0.83	0.33	2.51	0.00	0.00	0.00
13.00	0.83	0.33	2.51	0.00	0.00	0.00
13.05	0.83	0.33	2.51	0.00	0.00	0.00
13.10	0.83	0.33	2.51	0.00	0.00	0.00
13.15	0.83	0.33	2.51	0.00	0.00	0.00
13.20	0.83	0.33	2.51	0.00	0.00	0.00
13.25	0.83	0.33	2.51	0.00	0.00	0.00
13.30	0.83	0.33	2.51	0.00	0.00	0.00
13.35	0.83	0.33	2.51	0.00	0.00	0.00
13.40	0.83	0.33	2.51	0.00	0.00	0.00
13.45	0.83	0.33	2.51	0.00	0.00	0.00
13.50	0.83	0.33	2.51	0.00	0.00	0.00
13.55	0.83	0.33	2.51	0.00	0.00	0.00
13.60	0.83	0.33	2.51	0.00	0.00	0.00
13.65	0.83	0.33	2.51	0.00	0.00	0.00
13.70	0.83	0.33	2.51	0.00	0.00	0.00
13.75	0.83	0.33	2.51	0.00	0.00	0.00
13.80	0.83	0.33	2.51	0.00	0.00	0.00
13.85	0.83	0.33	2.50	0.00	0.00	0.00
13.90	0.83	0.33	2.50	0.00	0.00	0.00
13.95	0.83	0.33	2.50	0.00	0.00	0.00
14.00	0.83	0.33	2.50	0.00	0.00	0.00
14.05	0.83	0.33	2.50	0.00	0.00	0.00
14.10	0.83	0.33	2.50	0.00	0.00	0.00
14.15	0.83	0.33	2.50	0.00	0.00	0.00
14.20	0.83	0.33	2.50	0.00	0.00	0.00
14.25	0.83	0.33	2.50	0.00	0.00	0.00
14.30	0.83	0.33	2.50	0.00	0.00	0.00
14.35	0.83	0.33	2.50	0.00	0.00	0.00
14.40	0.83	0.33	2.50	0.00	0.00	0.00
14.45	0.83	0.33	2.50	0.00	0.00	0.00
14.50	0.83	0.33	2.50	0.00	0.00	0.00
14.55	0.83	0.33	2.50	0.00	0.00	0.00
14.60	0.83	0.33	2.50	0.00	0.00	0.00
14.65	0.83	0.33	2.50	0.00	0.00	0.00
14.70	0.83	0.33	2.50	0.00	0.00	0.00
14.75	0.83	0.33	2.50	0.00	0.00	0.00
14.80	0.83	0.33	2.50	0.00	0.00	0.00
14.85	0.83	0.33	2.50	0.00	0.00	0.00
14.90	0.83	0.33	2.50	0.00	0.00	0.00
14.95	0.83	0.33	2.50	0.00	0.00	0.00
15.00	0.83	0.33	2.50	0.00	0.00	0.00
15.05	0.83	0.33	2.50	0.00	0.00	0.00
15.10	0.83	0.33	2.50	0.00	0.00	0.00
15.15	0.83	0.33	2.50	0.00	0.00	0.00
15.20	0.83	0.33	2.50	0.00	0.00	0.00
15.25	0.83	0.33	2.50	0.00	0.00	0.00
15.30	0.83	0.33	2.50	0.00	0.00	0.00
15.35	0.83	0.33	2.50	0.00	0.00	0.00
15.40	0.83	0.33	2.50	0.00	0.00	0.00
15.45	0.83	0.33	2.50	0.00	0.00	0.00
15.50	0.83	0.33	2.50	0.00	0.00	0.00
15.55	0.83	0.33	2.50	0.00	0.00	0.00
15.60	0.83	0.33	2.49	0.00	0.00	0.00
15.65	0.83	0.33	2.49	0.00	0.00	0.00
15.70	0.83	0.33	2.49	0.00	0.00	0.00
15.75	0.83	0.33	2.49	0.00	0.00	0.00
15.80	0.83	0.33	2.49	0.00	0.00	0.00
15.85	0.83	0.33	2.49	0.00	0.00	0.00
15.90	0.83	0.33	2.49	0.00	0.00	0.00
15.95	0.83	0.33	2.49	0.00	0.00	0.00
16.00	0.83	0.33	2.49	0.00	0.00	0.00
16.05	0.83	0.33	2.49	0.00	0.00	0.00
16.10	0.83	0.33	2.49	0.00	0.00	0.00

16.15	0.83	0.33	2.49	0.00	0.00	0.00
16.20	0.83	0.33	2.49	0.00	0.00	0.00
16.25	0.83	0.33	2.49	0.00	0.00	0.00
16.30	0.83	0.33	2.49	0.00	0.00	0.00
16.35	0.83	0.33	2.49	0.00	0.00	0.00
16.40	0.83	0.33	2.49	0.00	0.00	0.00
16.45	0.83	0.33	2.49	0.00	0.00	0.00
16.50	0.83	0.33	2.49	0.00	0.00	0.00
16.55	0.83	0.33	2.49	0.00	0.00	0.00
16.60	0.83	0.33	2.49	0.00	0.00	0.00
16.65	0.83	0.33	2.49	0.00	0.00	0.00
16.70	0.83	0.33	2.49	0.00	0.00	0.00
16.75	0.83	0.33	2.49	0.00	0.00	0.00
16.80	0.83	0.33	2.49	0.00	0.00	0.00
16.85	0.83	0.33	2.48	0.00	0.00	0.00
16.90	0.83	0.33	2.48	0.00	0.00	0.00
16.95	0.83	0.33	2.48	0.00	0.00	0.00
17.00	0.83	0.33	2.48	0.00	0.00	0.00
17.05	0.83	0.33	2.48	0.00	0.00	0.00
17.10	0.83	0.33	2.48	0.00	0.00	0.00
17.15	0.83	0.33	2.48	0.00	0.00	0.00
17.20	0.83	0.33	2.48	0.00	0.00	0.00
17.25	0.83	0.33	2.48	0.00	0.00	0.00
17.30	0.83	0.33	2.48	0.00	0.00	0.00
17.35	0.83	0.33	2.48	0.00	0.00	0.00
17.40	0.83	0.33	2.48	0.00	0.00	0.00
17.45	0.83	0.33	2.48	0.00	0.00	0.00
17.50	0.83	0.33	2.48	0.00	0.00	0.00
17.55	0.83	0.33	2.48	0.00	0.00	0.00
17.60	0.83	0.33	2.48	0.00	0.00	0.00
17.65	0.83	0.33	2.48	0.00	0.00	0.00
17.70	0.83	0.33	2.48	0.00	0.00	0.00
17.75	0.83	0.33	2.48	0.00	0.00	0.00
17.80	0.83	0.33	2.48	0.00	0.00	0.00
17.85	0.83	0.33	2.48	0.00	0.00	0.00
17.90	0.83	0.33	2.48	0.00	0.00	0.00
17.95	0.83	0.33	2.48	0.00	0.00	0.00
18.00	0.83	0.33	2.48	0.00	0.00	0.00
18.05	0.83	0.33	2.48	0.00	0.00	0.00
18.10	0.83	0.33	2.48	0.00	0.00	0.00
18.15	0.83	0.33	2.48	0.00	0.00	0.00
18.20	0.83	0.33	2.48	0.00	0.00	0.00
18.25	0.83	0.33	2.48	0.00	0.00	0.00
18.30	0.83	0.33	2.48	0.00	0.00	0.00
18.35	0.83	0.33	2.48	0.00	0.00	0.00
18.40	0.83	0.33	2.48	0.00	0.00	0.00
18.45	0.83	0.33	2.48	0.00	0.00	0.00
18.50	0.83	0.33	2.48	0.00	0.00	0.00
18.55	0.83	0.33	2.48	0.00	0.00	0.00
18.60	0.83	0.34	2.48	0.00	0.00	0.00
18.65	0.83	0.34	2.48	0.00	0.00	0.00
18.70	0.83	0.34	2.48	0.00	0.00	0.00
18.75	0.83	0.34	2.48	0.00	0.00	0.00
18.80	0.83	0.34	2.48	0.00	0.00	0.00
18.85	0.83	0.34	2.48	0.00	0.00	0.00
18.90	0.83	0.34	2.48	0.00	0.00	0.00
18.95	0.83	0.34	2.48	0.00	0.00	0.00
19.00	0.83	0.34	2.48	0.00	0.00	0.00
19.05	0.83	0.34	2.48	0.00	0.00	0.00
19.10	0.83	0.34	2.48	0.00	0.00	0.00
19.15	0.83	0.34	2.48	0.00	0.00	0.00
19.20	0.83	0.34	2.48	0.00	0.00	0.00
19.25	0.83	0.34	2.48	0.00	0.00	0.00
19.30	0.83	0.34	2.48	0.00	0.00	0.00
19.35	0.83	0.34	2.48	0.00	0.00	0.00
19.40	0.83	0.34	2.48	0.00	0.00	0.00
19.45	0.83	0.34	2.48	0.00	0.00	0.00
19.50	0.83	0.34	2.48	0.00	0.00	0.00
19.55	0.83	0.34	2.48	0.00	0.00	0.00
19.60	0.83	0.34	2.48	0.00	0.00	0.00
19.65	0.83	0.34	2.48	0.00	0.00	0.00

19.70	0.83	0.34	2.48	0.00	0.00	0.00
19.75	0.83	0.34	2.48	0.00	0.00	0.00
19.80	0.83	0.34	2.48	0.00	0.00	0.00
19.85	0.83	0.34	2.48	0.00	0.00	0.00
19.90	0.83	0.34	2.48	0.00	0.00	0.00
19.95	0.83	0.34	2.48	0.00	0.00	0.00
20.00	0.83	0.34	2.48	0.00	0.00	0.00
20.05	0.83	0.34	2.48	0.00	0.00	0.00
20.10	0.83	0.34	2.48	0.00	0.00	0.00
20.15	0.83	0.34	2.48	0.00	0.00	0.00
20.20	0.83	0.34	2.48	0.00	0.00	0.00
20.25	0.83	0.34	2.48	0.00	0.00	0.00
20.30	0.83	0.34	2.48	0.00	0.00	0.00
20.35	0.83	0.34	2.48	0.00	0.00	0.00
20.40	0.83	0.34	2.48	0.00	0.00	0.00
20.45	0.83	0.34	2.48	0.00	0.00	0.00
20.50	0.83	0.34	2.47	0.00	0.00	0.00
20.55	0.83	0.34	2.47	0.00	0.00	0.00
20.60	0.83	0.34	2.47	0.00	0.00	0.00
20.65	0.83	0.34	2.47	0.00	0.00	0.00
20.70	0.83	0.34	2.47	0.00	0.00	0.00
20.75	0.83	0.34	2.47	0.00	0.00	0.00
20.80	0.83	0.34	2.47	0.00	0.00	0.00
20.85	0.83	0.34	2.47	0.00	0.00	0.00
20.90	0.83	0.34	2.47	0.00	0.00	0.00
20.95	0.83	0.34	2.47	0.00	0.00	0.00
21.00	0.83	0.34	2.47	0.00	0.00	0.00
21.05	0.83	0.34	2.47	0.00	0.00	0.00
21.10	0.83	0.34	2.47	0.00	0.00	0.00
21.15	0.83	0.34	2.47	0.00	0.00	0.00
21.20	0.83	0.34	2.47	0.00	0.00	0.00
21.25	0.83	0.34	2.47	0.00	0.00	0.00
21.30	0.83	0.34	2.47	0.00	0.00	0.00
21.35	0.83	0.34	2.47	0.00	0.00	0.00
21.40	0.83	0.34	2.47	0.00	0.00	0.00
21.45	0.83	0.34	2.47	0.00	0.00	0.00
21.50	0.83	0.34	2.47	0.00	0.00	0.00
21.55	0.83	0.34	2.47	0.00	0.00	0.00
21.60	0.83	0.34	2.47	0.00	0.00	0.00
21.65	0.83	0.34	2.47	0.00	0.00	0.00
21.70	0.83	0.34	2.47	0.00	0.00	0.00
21.75	0.83	0.34	2.47	0.00	0.00	0.00
21.80	0.83	0.34	2.47	0.00	0.00	0.00
21.85	0.83	0.34	2.47	0.00	0.00	0.00
21.90	0.83	0.34	2.47	0.00	0.00	0.00
21.95	0.83	0.34	2.47	0.00	0.00	0.00
22.00	0.83	0.34	2.47	0.00	0.00	0.00
22.05	0.83	0.34	2.47	0.00	0.00	0.00
22.10	0.83	0.34	2.47	0.00	0.00	0.00
22.15	0.83	0.34	2.47	0.00	0.00	0.00
22.20	0.83	0.34	2.47	0.00	0.00	0.00
22.25	0.83	0.34	2.46	0.00	0.00	0.00
22.30	0.83	0.34	2.46	0.00	0.00	0.00
22.35	0.83	0.34	2.46	0.00	0.00	0.00
22.40	0.83	0.34	2.46	0.00	0.00	0.00
22.45	0.83	0.34	2.46	0.00	0.00	0.00
22.50	0.83	0.34	2.46	0.00	0.00	0.00
22.55	0.83	0.34	2.46	0.00	0.00	0.00
22.60	0.83	0.34	2.46	0.00	0.00	0.00
22.65	0.83	0.34	2.46	0.00	0.00	0.00
22.70	0.83	0.34	2.46	0.00	0.00	0.00
22.75	0.83	0.34	2.46	0.00	0.00	0.00
22.80	0.83	0.34	2.46	0.00	0.00	0.00
22.85	0.83	0.34	2.46	0.00	0.00	0.00
22.90	0.83	0.34	2.46	0.00	0.00	0.00
22.95	0.83	0.34	2.46	0.00	0.00	0.00
23.00	0.83	0.34	2.46	0.00	0.00	0.00
23.05	0.83	0.34	2.46	0.00	0.00	0.00
23.10	0.83	0.34	2.46	0.00	0.00	0.00
23.15	0.83	0.34	2.46	0.00	0.00	0.00
23.20	0.83	0.34	2.46	0.00	0.00	0.00

23.25	0.83	0.34	2.46	0.00	0.00	0.00
23.30	0.83	0.34	2.46	0.00	0.00	0.00
23.35	0.83	0.34	2.46	0.00	0.00	0.00
23.40	0.83	0.34	2.46	0.00	0.00	0.00
23.45	0.83	0.34	2.46	0.00	0.00	0.00
23.50	0.83	0.34	2.46	0.00	0.00	0.00
23.55	0.83	0.34	2.46	0.00	0.00	0.00
23.60	0.83	0.34	2.46	0.00	0.00	0.00
23.65	0.83	0.34	2.46	0.00	0.00	0.00
23.70	0.83	0.34	2.46	0.00	0.00	0.00
23.75	0.83	0.34	2.46	0.00	0.00	0.00
23.80	0.83	0.34	2.46	0.00	0.00	0.00
23.85	0.83	0.34	2.46	0.00	0.00	0.00
23.90	0.83	0.34	2.46	0.00	0.00	0.00
23.95	0.83	0.34	2.46	0.00	0.00	0.00
24.00	0.83	0.34	2.46	0.00	0.00	0.00
24.05	0.83	0.34	2.46	0.00	0.00	0.00
24.10	0.83	0.34	2.46	0.00	0.00	0.00
24.15	0.83	0.34	2.46	0.00	0.00	0.00
24.20	0.83	0.34	2.46	0.00	0.00	0.00
24.25	0.83	0.34	2.46	0.00	0.00	0.00
24.30	0.83	0.34	2.46	0.00	0.00	0.00
24.35	0.83	0.34	2.46	0.00	0.00	0.00
24.40	0.83	0.34	2.46	0.00	0.00	0.00
24.45	0.83	0.34	2.46	0.00	0.00	0.00
24.50	0.83	0.34	2.46	0.00	0.00	0.00
24.55	0.83	0.34	2.46	0.00	0.00	0.00
24.60	0.83	0.34	2.46	0.00	0.00	0.00
24.65	0.83	0.34	2.46	0.00	0.00	0.00
24.70	0.83	0.34	2.46	0.00	0.00	0.00
24.75	0.83	0.34	2.46	0.00	0.00	0.00
24.80	0.83	0.34	2.46	0.00	0.00	0.00
24.85	0.83	0.34	2.46	0.00	0.00	0.00
24.90	0.83	0.34	2.46	0.00	0.00	0.00
24.95	0.83	0.34	2.45	0.00	0.00	0.00
25.00	0.83	0.34	2.45	0.00	0.00	0.00
25.05	0.83	0.34	2.45	0.00	0.00	0.00
25.10	0.83	0.34	2.45	0.00	0.00	0.00
25.15	0.83	0.34	2.45	0.00	0.00	0.00
25.20	0.83	0.34	2.45	0.00	0.00	0.00
25.25	0.83	0.34	2.45	0.00	0.00	0.00
25.30	0.83	0.34	2.45	0.00	0.00	0.00
25.35	0.83	0.34	2.46	0.00	0.00	0.00
25.40	0.83	0.34	2.46	0.00	0.00	0.00
25.45	0.83	0.34	2.46	0.00	0.00	0.00
25.50	0.83	0.34	2.46	0.00	0.00	0.00
25.55	0.83	0.34	2.46	0.00	0.00	0.00
25.60	0.83	0.34	2.46	0.00	0.00	0.00
25.65	0.83	0.34	2.46	0.00	0.00	0.00
25.70	0.83	0.34	2.46	0.00	0.00	0.00
25.75	0.83	0.34	2.46	0.00	0.00	0.00
25.80	0.83	0.34	2.46	0.00	0.00	0.00
25.85	0.83	0.34	2.46	0.00	0.00	0.00
25.90	0.83	0.34	2.46	0.00	0.00	0.00
25.95	0.83	0.34	2.46	0.00	0.00	0.00
26.00	0.83	0.34	2.46	0.00	0.00	0.00
26.05	0.83	0.34	2.46	0.00	0.00	0.00
26.10	0.83	0.34	2.46	0.00	0.00	0.00
26.15	0.83	0.34	2.46	0.00	0.00	0.00
26.20	0.83	0.34	2.46	0.00	0.00	0.00
26.25	0.83	0.34	2.46	0.00	0.00	0.00
26.30	0.83	0.34	2.46	0.00	0.00	0.00
26.35	0.83	0.34	2.46	0.00	0.00	0.00
26.40	0.83	0.34	2.46	0.00	0.00	0.00
26.45	0.83	0.34	2.46	0.00	0.00	0.00
26.50	0.83	0.34	2.46	0.00	0.00	0.00
26.55	0.83	0.34	2.46	0.00	0.00	0.00
26.60	0.83	0.34	2.46	0.00	0.00	0.00
26.65	0.83	0.34	2.46	0.00	0.00	0.00
26.70	0.83	0.34	2.46	0.00	0.00	0.00
26.75	0.83	0.34	2.46	0.00	0.00	0.00

26.80	0.83	0.34	2.46	0.00	0.00	0.00
26.85	0.83	0.34	2.46	0.00	0.00	0.00
26.90	0.83	0.34	2.46	0.00	0.00	0.00
26.95	0.83	0.34	2.46	0.00	0.00	0.00
27.00	0.83	0.34	2.46	0.00	0.00	0.00
27.05	0.83	0.34	2.46	0.00	0.00	0.00
27.10	0.83	0.34	2.46	0.00	0.00	0.00
27.15	0.83	0.34	2.46	0.00	0.00	0.00
27.20	0.83	0.34	2.46	0.00	0.00	0.00
27.25	0.83	0.34	2.46	0.00	0.00	0.00
27.30	0.83	0.34	2.46	0.00	0.00	0.00
27.35	0.83	0.34	2.46	0.00	0.00	0.00
27.40	0.83	0.34	2.46	0.00	0.00	0.00
27.45	0.83	0.34	2.46	0.00	0.00	0.00
27.50	0.83	0.34	2.46	0.00	0.00	0.00
27.55	0.83	0.34	2.46	0.00	0.00	0.00
27.60	0.83	0.34	2.46	0.00	0.00	0.00
27.65	0.83	0.34	2.46	0.00	0.00	0.00
27.70	0.83	0.34	2.46	0.00	0.00	0.00
27.75	0.83	0.34	2.46	0.00	0.00	0.00
27.80	0.83	0.34	2.46	0.00	0.00	0.00
27.85	0.83	0.34	2.46	0.00	0.00	0.00
27.90	0.83	0.34	2.46	0.00	0.00	0.00
27.95	0.83	0.34	2.46	0.00	0.00	0.00
28.00	0.83	0.34	2.46	0.00	0.00	0.00
28.05	0.83	0.34	2.46	0.00	0.00	0.00
28.10	0.83	0.34	2.46	0.00	0.00	0.00
28.15	0.83	0.34	2.46	0.00	0.00	0.00
28.20	0.83	0.34	2.46	0.00	0.00	0.00
28.25	0.83	0.34	2.46	0.00	0.00	0.00
28.30	0.83	0.34	2.46	0.00	0.00	0.00
28.35	0.83	0.34	2.46	0.00	0.00	0.00
28.40	0.83	0.34	2.46	0.00	0.00	0.00
28.45	0.83	0.34	2.46	0.00	0.00	0.00
28.50	0.83	0.34	2.46	0.00	0.00	0.00
28.55	0.83	0.34	2.46	0.00	0.00	0.00
28.60	0.83	0.34	2.46	0.00	0.00	0.00
28.65	0.83	0.34	2.46	0.00	0.00	0.00
28.70	0.83	0.34	2.46	0.00	0.00	0.00
28.75	0.83	0.34	2.46	0.00	0.00	0.00
28.80	0.83	0.34	2.46	0.00	0.00	0.00
28.85	0.83	0.34	2.46	0.00	0.00	0.00
28.90	0.83	0.34	2.46	0.00	0.00	0.00
28.95	0.83	0.34	2.46	0.00	0.00	0.00
29.00	0.83	0.34	2.46	0.00	0.00	0.00
29.05	0.83	0.34	2.46	0.00	0.00	0.00
29.10	0.83	0.34	2.46	0.00	0.00	0.00
29.15	0.83	0.34	2.46	0.00	0.00	0.00
29.20	0.83	0.34	2.46	0.00	0.00	0.00
29.25	0.83	0.34	2.46	0.00	0.00	0.00
29.30	0.83	0.34	2.46	0.00	0.00	0.00
29.35	0.83	0.34	2.46	0.00	0.00	0.00
29.40	0.83	0.34	2.46	0.00	0.00	0.00
29.45	0.83	0.34	2.46	0.00	0.00	0.00
29.50	0.83	0.34	2.46	0.00	0.00	0.00
29.55	0.83	0.34	2.46	0.00	0.00	0.00
29.60	0.83	0.34	2.46	0.00	0.00	0.00
29.65	0.83	0.34	2.46	0.00	0.00	0.00
29.70	0.83	0.34	2.46	0.00	0.00	0.00
29.75	0.83	0.34	2.46	0.00	0.00	0.00
29.80	0.83	0.34	2.46	0.00	0.00	0.00
29.85	0.83	0.34	2.46	0.00	0.00	0.00
29.90	0.83	0.34	2.46	0.00	0.00	0.00
29.95	0.83	0.34	2.46	0.00	0.00	0.00
30.00	0.83	0.34	2.46	0.00	0.00	0.00
30.05	0.83	0.34	2.47	0.00	0.00	0.00
30.10	0.83	0.34	2.47	0.00	0.00	0.00
30.15	0.83	0.34	2.47	0.00	0.00	0.00
30.20	0.83	0.34	2.47	0.00	0.00	0.00
30.25	0.83	0.34	2.47	0.00	0.00	0.00
30.30	0.83	0.34	2.47	0.00	0.00	0.00

30.35	0.83	0.34	2.47	0.00	0.00	0.00
30.40	0.83	0.34	2.47	0.00	0.00	0.00
30.45	0.83	0.34	2.47	0.00	0.00	0.00
30.50	0.83	0.34	2.47	0.00	0.00	0.00
30.55	0.83	0.34	2.47	0.00	0.00	0.00
30.60	0.83	0.34	2.48	0.00	0.00	0.00
30.65	0.83	0.34	2.48	0.00	0.00	0.00
30.70	0.83	0.34	2.48	0.00	0.00	0.00
30.75	0.83	0.34	2.48	0.00	0.00	0.00
30.80	0.83	0.34	2.48	0.00	0.00	0.00
30.85	0.83	0.33	2.48	0.00	0.00	0.00
30.90	0.83	0.33	2.48	0.00	0.00	0.00
30.95	0.83	0.33	2.48	0.00	0.00	0.00
31.00	0.83	0.33	2.48	0.00	0.00	0.00
31.05	0.83	0.33	2.48	0.00	0.00	0.00
31.10	0.83	0.33	2.49	0.00	0.00	0.00
31.15	0.83	0.33	2.49	0.00	0.00	0.00
31.20	0.83	0.33	2.49	0.00	0.00	0.00
31.25	0.83	0.33	2.49	0.00	0.00	0.00
31.30	0.83	0.33	2.49	0.00	0.00	0.00
31.35	0.83	0.33	2.49	0.00	0.00	0.00
31.40	0.83	0.33	2.49	0.00	0.00	0.00
31.45	0.83	0.33	2.49	0.00	0.00	0.00
31.50	0.83	0.33	2.49	0.00	0.00	0.00
31.55	0.83	0.33	2.49	0.00	0.00	0.00
31.60	0.83	0.33	2.49	0.00	0.00	0.00
31.65	0.83	0.33	2.50	0.00	0.00	0.00
31.70	0.83	0.33	2.50	0.00	0.00	0.00
31.75	0.83	0.33	2.50	0.00	0.00	0.00
31.80	0.83	0.33	2.50	0.00	0.00	0.00
31.85	0.83	0.33	2.50	0.00	0.00	0.00
31.90	0.83	0.33	2.50	0.00	0.00	0.00
31.95	0.83	0.33	2.50	0.00	0.00	0.00
32.00	0.83	0.33	2.50	0.00	0.00	0.00
32.05	0.83	0.33	2.50	0.00	0.00	0.00
32.10	0.83	0.33	2.50	0.00	0.00	0.00
32.15	0.83	0.33	2.51	0.00	0.00	0.00
32.20	0.83	0.33	2.51	0.00	0.00	0.00
32.25	0.83	0.33	2.51	0.00	0.00	0.00
32.30	0.83	0.33	2.51	0.00	0.00	0.00
32.35	0.83	0.33	2.51	0.00	0.00	0.00
32.40	0.83	0.33	2.51	0.00	0.00	0.00
32.45	0.83	0.33	2.51	0.00	0.00	0.00
32.50	0.83	0.33	2.51	0.00	0.00	0.00
32.55	0.83	0.33	2.51	0.00	0.00	0.00
32.60	0.83	0.33	2.51	0.00	0.00	0.00
32.65	0.83	0.33	2.52	0.00	0.00	0.00
32.70	0.83	0.33	2.52	0.00	0.00	0.00
32.75	0.83	0.33	2.52	0.00	0.00	0.00
32.80	0.83	0.33	2.52	0.00	0.00	0.00
32.85	0.83	0.33	2.52	0.00	0.00	0.00
32.90	0.83	0.33	2.52	0.00	0.00	0.00
32.95	0.83	0.33	2.52	0.00	0.00	0.00
33.00	0.83	0.33	2.52	0.00	0.00	0.00
33.05	0.83	0.33	2.52	0.00	0.00	0.00
33.10	0.83	0.33	2.52	0.00	0.00	0.00
33.15	0.83	0.33	2.53	0.00	0.00	0.00
33.20	0.83	0.33	2.53	0.00	0.00	0.00
33.25	0.83	0.33	2.53	0.00	0.00	0.00
33.30	0.83	0.33	2.53	0.00	0.00	0.00
33.35	0.83	0.33	2.53	0.00	0.00	0.00
33.40	0.83	0.33	2.53	0.00	0.00	0.00
33.45	0.83	0.33	2.53	0.00	0.00	0.00
33.50	0.83	0.33	2.53	0.00	0.00	0.00
33.55	0.83	0.33	2.53	0.00	0.00	0.00
33.60	0.83	0.33	2.53	0.00	0.00	0.00
33.65	0.83	0.33	2.54	0.00	0.00	0.00
33.70	0.83	0.33	2.54	0.00	0.00	0.00
33.75	0.83	0.33	2.54	0.00	0.00	0.00
33.80	0.83	0.33	2.54	0.00	0.00	0.00
33.85	0.83	0.33	2.54	0.00	0.00	0.00

33.90	0.83	0.33	2.54	0.00	0.00	0.00
33.95	0.83	0.33	2.54	0.00	0.00	0.00
34.00	0.83	0.33	2.54	0.00	0.00	0.00
34.05	0.83	0.33	2.54	0.00	0.00	0.00
34.10	0.83	0.33	2.55	0.00	0.00	0.00
34.15	0.83	0.33	2.55	0.00	0.00	0.00
34.20	0.83	0.33	2.55	0.00	0.00	0.00
34.25	0.83	0.33	2.55	0.00	0.00	0.00
34.30	0.83	0.33	2.55	0.00	0.00	0.00
34.35	0.83	0.33	2.55	0.00	0.00	0.00
34.40	0.83	0.33	2.55	0.00	0.00	0.00
34.45	0.83	0.33	2.55	0.00	0.00	0.00
34.50	0.83	0.33	2.55	0.00	0.00	0.00
34.55	0.83	0.33	2.55	0.00	0.00	0.00
34.60	0.83	0.33	2.56	0.00	0.00	0.00
34.65	0.83	0.32	2.56	0.00	0.00	0.00
34.70	0.83	0.32	2.56	0.00	0.00	0.00
34.75	0.83	0.32	2.56	0.00	0.00	0.00
34.80	0.83	0.32	2.56	0.00	0.00	0.00
34.85	0.83	0.32	2.56	0.00	0.00	0.00
34.90	0.83	0.32	2.56	0.00	0.00	0.00
34.95	0.83	0.32	2.56	0.00	0.00	0.00
35.00	0.83	0.32	2.56	0.00	0.00	0.00
35.05	0.83	0.32	2.56	0.00	0.00	0.00
35.10	0.83	0.32	2.57	0.00	0.00	0.00
35.15	0.83	0.32	2.57	0.00	0.00	0.00
35.20	0.83	0.32	2.57	0.00	0.00	0.00
35.25	0.83	0.32	2.57	0.00	0.00	0.00
35.30	0.83	0.32	2.57	0.00	0.00	0.00
35.35	0.83	0.32	2.57	0.00	0.00	0.00
35.40	0.83	0.32	2.57	0.00	0.00	0.00
35.45	0.83	0.32	2.57	0.00	0.00	0.00
35.50	0.83	0.32	2.58	0.00	0.00	0.00
35.55	0.83	0.32	2.58	0.00	0.00	0.00
35.60	0.83	0.32	2.58	0.00	0.00	0.00
35.65	0.83	0.32	2.58	0.00	0.00	0.00
35.70	0.83	0.32	2.58	0.00	0.00	0.00
35.75	0.83	0.32	2.58	0.00	0.00	0.00
35.80	0.83	0.32	2.58	0.00	0.00	0.00
35.85	0.83	0.32	2.58	0.00	0.00	0.00
35.90	0.83	0.32	2.58	0.00	0.00	0.00
35.95	0.83	0.32	2.59	0.00	0.00	0.00
36.00	0.83	0.32	2.59	0.00	0.00	0.00
36.05	0.83	0.32	2.59	0.00	0.00	0.00
36.10	0.83	0.32	2.59	0.00	0.00	0.00
36.15	0.83	0.32	2.59	0.00	0.00	0.00
36.20	0.83	0.32	2.59	0.00	0.00	0.00
36.25	0.83	0.32	2.59	0.00	0.00	0.00
36.30	0.83	0.32	2.59	0.00	0.00	0.00
36.35	0.83	0.32	2.60	0.00	0.00	0.00
36.40	0.83	0.32	2.60	0.00	0.00	0.00
36.45	0.83	0.32	2.60	0.00	0.00	0.00
36.50	0.83	0.32	2.60	0.00	0.00	0.00
36.55	0.83	0.32	2.60	0.00	0.00	0.00
36.60	0.83	0.32	2.60	0.00	0.00	0.00
36.65	0.83	0.32	2.60	0.00	0.00	0.00
36.70	0.83	0.32	2.60	0.00	0.00	0.00
36.75	0.83	0.32	2.60	0.00	0.00	0.00
36.80	0.83	0.32	2.61	0.00	0.00	0.00
36.85	0.83	0.32	2.61	0.00	0.00	0.00
36.90	0.83	0.32	2.61	0.00	0.00	0.00
36.95	0.83	0.32	2.61	0.00	0.00	0.00
37.00	0.83	0.32	2.61	0.00	0.00	0.00
37.05	0.83	0.32	2.61	0.00	0.00	0.00
37.10	0.83	0.32	2.61	0.00	0.00	0.00
37.15	0.83	0.32	2.61	0.00	0.00	0.00
37.20	0.83	0.32	2.62	0.00	0.00	0.00
37.25	0.83	0.32	2.62	0.00	0.00	0.00
37.30	0.83	0.32	2.62	0.00	0.00	0.00
37.35	0.83	0.32	2.62	0.00	0.00	0.00
37.40	0.83	0.32	2.62	0.00	0.00	0.00

37.45	0.83	0.32	2.62	0.00	0.00	0.00
37.50	0.83	0.32	2.62	0.00	0.00	0.00
37.55	0.83	0.32	2.62	0.00	0.00	0.00
37.60	0.83	0.32	2.63	0.00	0.00	0.00
37.65	0.83	0.32	2.63	0.00	0.00	0.00
37.70	0.83	0.32	2.63	0.00	0.00	0.00
37.75	0.83	0.32	2.63	0.00	0.00	0.00
37.80	0.83	0.32	2.63	0.00	0.00	0.00
37.85	0.83	0.32	2.63	0.00	0.00	0.00
37.90	0.83	0.32	2.63	0.00	0.00	0.00
37.95	0.83	0.32	2.63	0.00	0.00	0.00
38.00	0.83	0.32	2.63	0.00	0.00	0.00
38.05	0.83	0.32	2.64	0.00	0.00	0.00
38.10	0.83	0.31	2.64	0.00	0.00	0.00
38.15	0.83	0.31	2.64	0.00	0.00	0.00
38.20	0.83	0.31	2.64	0.00	0.00	0.00
38.25	0.83	0.31	2.64	0.00	0.00	0.00
38.30	0.83	0.31	2.64	0.00	0.00	0.00
38.35	0.83	0.31	2.64	0.00	0.00	0.00
38.40	0.83	0.31	2.64	0.00	0.00	0.00
38.45	0.83	0.31	2.65	0.00	0.00	0.00
38.50	0.83	0.31	2.65	0.00	0.00	0.00
38.55	0.83	0.31	2.65	0.00	0.00	0.00
38.60	0.83	0.31	2.65	0.00	0.00	0.00
38.65	0.83	0.31	2.65	0.00	0.00	0.00
38.70	0.83	0.31	2.65	0.00	0.00	0.00
38.75	0.83	0.31	2.65	0.00	0.00	0.00
38.80	0.83	0.31	2.65	0.00	0.00	0.00
38.85	0.83	0.31	2.66	0.00	0.00	0.00
38.90	0.83	0.31	2.66	0.00	0.00	0.00
38.95	0.83	0.31	2.66	0.00	0.00	0.00
39.00	0.83	0.31	2.66	0.00	0.00	0.00
39.05	0.83	0.31	2.66	0.00	0.00	0.00
39.10	0.83	0.31	2.66	0.00	0.00	0.00
39.15	0.83	0.31	2.66	0.00	0.00	0.00
39.20	0.83	0.31	2.66	0.00	0.00	0.00
39.25	0.83	0.31	2.67	0.00	0.00	0.00
39.30	0.83	0.31	2.67	0.00	0.00	0.00
39.35	0.83	0.31	2.67	0.00	0.00	0.00
39.40	0.83	0.31	2.67	0.00	0.00	0.00
39.45	0.83	0.31	2.67	0.00	0.00	0.00
39.50	0.83	0.31	2.67	0.00	0.00	0.00
39.55	0.83	0.31	2.67	0.00	0.00	0.00
39.60	0.83	0.31	2.67	0.00	0.00	0.00
39.65	0.83	0.31	2.68	0.00	0.00	0.00
39.70	0.83	0.31	2.68	0.00	0.00	0.00
39.75	0.83	0.31	2.68	0.00	0.00	0.00
39.80	0.83	0.31	2.68	0.00	0.00	0.00
39.85	0.83	0.31	2.68	0.00	0.00	0.00
39.90	0.83	0.31	2.68	0.00	0.00	0.00
39.95	0.83	0.31	2.68	0.00	0.00	0.00
40.00	0.83	0.31	2.68	0.00	0.00	0.00
40.05	0.83	0.31	2.69	0.00	0.00	0.00
40.10	0.83	0.31	2.69	0.00	0.00	0.00
40.15	0.83	0.31	2.69	0.00	0.00	0.00
40.20	0.83	0.31	2.69	0.00	0.00	0.00
40.25	0.83	0.31	2.69	0.00	0.00	0.00
40.30	0.83	0.31	2.69	0.00	0.00	0.00
40.35	0.83	0.31	2.69	0.00	0.00	0.00
40.40	0.83	0.31	2.70	0.00	0.00	0.00
40.45	0.83	0.31	2.70	0.00	0.00	0.00
40.50	0.83	0.31	2.70	0.00	0.00	0.00
40.55	0.83	0.31	2.70	0.00	0.00	0.00
40.60	0.83	0.31	2.70	0.00	0.00	0.00
40.65	0.83	0.31	2.70	0.00	0.00	0.00
40.70	0.83	0.31	2.70	0.00	0.00	0.00
40.75	0.83	0.31	2.70	0.00	0.00	0.00
40.80	0.83	0.31	2.71	0.00	0.00	0.00
40.85	0.83	0.31	2.71	0.00	0.00	0.00
40.90	0.83	0.31	2.71	0.00	0.00	0.00
40.95	0.83	0.31	2.71	0.00	0.00	0.00

41.00	0.83	0.31	2.71	0.00	0.00	0.00
41.05	0.83	0.31	2.71	0.00	0.00	0.00
41.10	0.83	0.31	2.71	0.00	0.00	0.00
41.15	0.83	0.31	2.72	0.00	0.00	0.00
41.20	0.83	0.31	2.72	0.00	0.00	0.00
41.25	0.83	0.31	2.72	0.00	0.00	0.00
41.30	0.83	0.31	2.72	0.00	0.00	0.00
41.35	0.83	0.31	2.72	0.00	0.00	0.00
41.40	0.83	0.31	2.72	0.00	0.00	0.00
41.45	0.83	0.31	2.72	0.00	0.00	0.00
41.50	0.83	0.30	2.72	0.00	0.00	0.00
41.55	0.83	0.30	2.73	0.00	0.00	0.00
41.60	0.83	0.30	2.73	0.00	0.00	0.00
41.65	0.83	0.30	2.73	0.00	0.00	0.00
41.70	0.83	0.30	2.73	0.00	0.00	0.00
41.75	0.83	0.30	2.73	0.00	0.00	0.00
41.80	0.83	0.30	2.73	0.00	0.00	0.00
41.85	0.83	0.30	2.73	0.00	0.00	0.00
41.90	0.83	0.30	2.74	0.00	0.00	0.00
41.95	0.83	0.30	2.74	0.00	0.00	0.00
42.00	0.83	0.30	2.74	0.00	0.00	0.00
42.05	0.83	0.30	2.74	0.00	0.00	0.00
42.10	0.83	0.30	2.74	0.00	0.00	0.00
42.15	0.83	0.30	2.74	0.00	0.00	0.00
42.20	0.83	0.30	2.74	0.00	0.00	0.00
42.25	0.83	0.30	2.75	0.00	0.00	0.00
42.30	0.83	0.30	2.75	0.00	0.00	0.00
42.35	0.83	0.30	2.75	0.00	0.00	0.00
42.40	0.83	0.30	2.75	0.00	0.00	0.00
42.45	0.83	0.30	2.75	0.00	0.00	0.00
42.50	0.83	0.30	2.75	0.00	0.00	0.00
42.55	0.83	0.30	2.75	0.00	0.00	0.00
42.60	0.83	0.30	2.75	0.00	0.00	0.00
42.65	0.83	0.30	2.76	0.00	0.00	0.00
42.70	0.83	0.30	2.76	0.00	0.00	0.00
42.75	0.83	0.30	2.76	0.00	0.00	0.00
42.80	0.83	0.30	2.76	0.00	0.00	0.00
42.85	0.83	0.30	2.76	0.00	0.00	0.00
42.90	0.83	0.30	2.76	0.00	0.00	0.00
42.95	0.83	0.30	2.76	0.00	0.00	0.00
43.00	0.83	0.30	2.77	0.00	0.00	0.00
43.05	0.83	0.30	2.77	0.00	0.00	0.00
43.10	0.83	0.30	2.77	0.00	0.00	0.00
43.15	0.83	0.30	2.77	0.00	0.00	0.00
43.20	0.83	0.30	2.77	0.00	0.00	0.00
43.25	0.83	0.30	2.77	0.00	0.00	0.00
43.30	0.83	0.30	2.77	0.00	0.00	0.00
43.35	0.83	0.30	2.78	0.00	0.00	0.00
43.40	0.83	0.30	2.78	0.00	0.00	0.00
43.45	0.83	0.30	2.78	0.00	0.00	0.00
43.50	0.83	0.30	2.78	0.00	0.00	0.00
43.55	0.83	0.30	2.78	0.00	0.00	0.00
43.60	0.83	0.30	2.78	0.00	0.00	0.00
43.65	0.83	0.30	2.78	0.00	0.00	0.00
43.70	0.83	0.30	2.79	0.00	0.00	0.00
43.75	0.83	0.30	2.79	0.00	0.00	0.00
43.80	0.83	0.30	2.79	0.00	0.00	0.00
43.85	0.83	0.30	2.79	0.00	0.00	0.00
43.90	0.83	0.30	2.79	0.00	0.00	0.00
43.95	0.83	0.30	2.79	0.00	0.00	0.00
44.00	0.83	0.30	2.79	0.00	0.00	0.00
44.05	0.83	0.30	2.80	0.00	0.00	0.00
44.10	0.83	0.30	2.80	0.00	0.00	0.00
44.15	0.83	0.30	2.80	0.00	0.00	0.00
44.20	0.83	0.30	2.80	0.00	0.00	0.00
44.25	0.83	0.30	2.80	0.00	0.00	0.00
44.30	0.83	0.30	2.80	0.00	0.00	0.00
44.35	0.83	0.30	2.80	0.00	0.00	0.00
44.40	0.83	0.30	2.81	0.00	0.00	0.00
44.45	0.83	0.30	2.81	0.00	0.00	0.00
44.50	0.83	0.30	2.81	0.00	0.00	0.00

44.55	0.83	0.30	2.81	0.00	0.00	0.00
44.60	0.83	0.30	2.81	0.00	0.00	0.00
44.65	0.83	0.30	2.81	0.00	0.00	0.00
44.70	0.83	0.30	2.81	0.00	0.00	0.00
44.75	0.83	0.30	2.82	0.00	0.00	0.00
44.80	0.83	0.29	2.82	0.00	0.00	0.00
44.85	0.83	0.29	2.82	0.00	0.00	0.00
44.90	0.83	0.29	2.82	0.00	0.00	0.00
44.95	0.83	0.29	2.82	0.00	0.00	0.00
45.00	0.83	0.29	2.82	0.00	0.00	0.00
45.05	0.83	0.29	2.82	0.00	0.00	0.00
45.10	0.84	0.29	2.84	0.00	0.00	0.00
45.15	0.84	0.29	2.84	0.00	0.00	0.00
45.20	0.84	0.29	2.84	0.00	0.00	0.00
45.25	0.84	0.29	2.85	0.00	0.00	0.00
45.30	0.84	0.29	2.85	0.00	0.00	0.00
45.35	0.84	0.29	2.85	0.00	0.00	0.00
45.40	0.83	0.29	2.85	0.00	0.00	0.00
45.45	0.83	0.29	2.85	0.00	0.00	0.00
45.50	0.83	0.29	2.85	0.00	0.00	0.00
45.55	0.83	0.29	2.85	0.00	0.00	0.00
45.60	0.83	0.29	2.85	0.00	0.00	0.00
45.65	0.83	0.29	2.85	0.00	0.00	0.00
45.70	0.83	0.29	2.85	0.00	0.00	0.00
45.75	0.83	0.29	2.85	0.00	0.00	0.00
45.80	0.83	0.29	2.86	0.00	0.00	0.00
45.85	0.83	0.29	2.86	0.00	0.00	0.00
45.90	0.83	0.29	2.86	0.00	0.00	0.00
45.95	0.83	0.29	2.86	0.00	0.00	0.00
46.00	0.83	0.29	2.86	0.00	0.00	0.00
46.05	0.83	0.29	2.86	0.00	0.00	0.00
46.10	0.83	0.29	2.86	0.00	0.00	0.00
46.15	0.83	0.29	2.86	0.00	0.00	0.00
46.20	0.83	0.29	2.86	0.00	0.00	0.00
46.25	0.83	0.29	2.86	0.00	0.00	0.00
46.30	0.83	0.29	2.87	0.00	0.00	0.00
46.35	0.83	0.29	2.87	0.00	0.00	0.00
46.40	0.83	0.29	2.87	0.00	0.00	0.00
46.45	0.83	0.29	2.87	0.00	0.00	0.00
46.50	0.83	0.29	2.87	0.00	0.00	0.00
46.55	0.83	0.29	2.87	0.00	0.00	0.00
46.60	0.83	0.29	2.87	0.00	0.00	0.00
46.65	0.83	0.29	2.87	0.00	0.00	0.00
46.70	0.83	0.29	2.87	0.00	0.00	0.00
46.75	0.83	0.29	2.87	0.00	0.00	0.00
46.80	0.83	0.29	2.88	0.00	0.00	0.00
46.85	0.83	0.29	2.88	0.00	0.00	0.00
46.90	0.83	0.29	2.88	0.00	0.00	0.00
46.95	0.83	0.29	2.88	0.00	0.00	0.00
47.00	0.83	0.29	2.88	0.00	0.00	0.00
47.05	0.83	0.29	2.88	0.00	0.00	0.00
47.10	0.83	0.29	2.88	0.00	0.00	0.00
47.15	0.83	0.29	2.88	0.00	0.00	0.00
47.20	0.83	0.29	2.88	0.00	0.00	0.00
47.25	0.83	0.29	2.88	0.00	0.00	0.00
47.30	0.83	0.29	2.88	0.00	0.00	0.00
47.35	0.83	0.29	2.89	0.00	0.00	0.00
47.40	0.83	0.29	2.89	0.00	0.00	0.00
47.45	0.83	0.29	2.89	0.00	0.00	0.00
47.50	0.83	0.29	2.89	0.00	0.00	0.00
47.55	0.83	0.29	2.89	0.00	0.00	0.00
47.60	0.83	0.29	2.89	0.00	0.00	0.00
47.65	0.83	0.29	2.89	0.00	0.00	0.00
47.70	0.83	0.29	2.89	0.00	0.00	0.00
47.75	0.83	0.29	2.89	0.00	0.00	0.00
47.80	0.83	0.29	2.89	0.00	0.00	0.00
47.85	0.83	0.29	2.90	0.00	0.00	0.00
47.90	0.83	0.29	2.90	0.00	0.00	0.00
47.95	0.83	0.29	2.90	0.00	0.00	0.00
48.00	0.83	0.29	2.90	0.00	0.00	0.00
48.05	0.83	0.29	2.90	0.00	0.00	0.00

48.10	0.83	0.28	2.90	0.00	0.00	0.00
48.15	0.83	0.28	2.90	0.00	0.00	0.00
48.20	0.83	0.28	2.90	0.00	0.00	0.00
48.25	0.83	0.28	2.90	0.00	0.00	0.00
48.30	0.83	0.28	2.90	0.00	0.00	0.00
48.35	0.83	0.28	2.91	0.00	0.00	0.00
48.40	0.83	0.28	2.91	0.00	0.00	0.00
48.45	0.83	0.28	2.91	0.00	0.00	0.00
48.50	0.83	0.28	2.91	0.00	0.00	0.00
48.55	0.83	0.28	2.91	0.00	0.00	0.00
48.60	0.82	0.28	2.91	0.00	0.00	0.00
48.65	0.82	0.28	2.91	0.00	0.00	0.00
48.70	0.82	0.28	2.91	0.00	0.00	0.00
48.75	0.82	0.28	2.91	0.00	0.00	0.00
48.80	0.82	0.28	2.91	0.00	0.00	0.00
48.85	0.82	0.28	2.92	0.00	0.00	0.00
48.90	0.82	0.28	2.92	0.00	0.00	0.00
48.95	0.82	0.28	2.92	0.00	0.00	0.00
49.00	0.82	0.28	2.92	0.00	0.00	0.00
49.05	0.82	0.28	2.92	0.00	0.00	0.00
49.10	0.82	0.28	2.92	0.00	0.00	0.00
49.15	0.82	0.28	2.92	0.00	0.00	0.00
49.20	0.82	0.28	2.92	0.00	0.00	0.00
49.25	0.82	0.28	2.92	0.00	0.00	0.00
49.30	0.82	0.28	2.93	0.00	0.00	0.00
49.35	0.82	0.28	2.93	0.00	0.00	0.00
49.40	0.82	0.28	2.93	0.00	0.00	0.00
49.45	0.82	0.28	2.93	0.00	0.00	0.00
49.50	0.82	0.28	2.93	0.00	0.00	0.00
49.55	0.82	0.28	2.93	0.00	0.00	0.00
49.60	0.82	0.28	2.93	0.00	0.00	0.00
49.65	0.82	0.28	2.93	0.00	0.00	0.00
49.70	0.82	0.28	2.93	0.00	0.00	0.00
49.75	0.82	0.28	2.93	0.00	0.00	0.00
49.80	0.82	0.28	2.94	0.00	0.00	0.00
49.85	0.82	0.28	2.94	0.00	0.00	0.00
49.90	0.82	0.28	2.94	0.00	0.00	0.00
49.95	0.82	0.28	2.94	0.00	0.00	0.00
50.00	0.82	0.28	2.94	0.00	0.00	0.00

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* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to S, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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1 atm (atmosphere) = 1 tsf (ton/ft2)

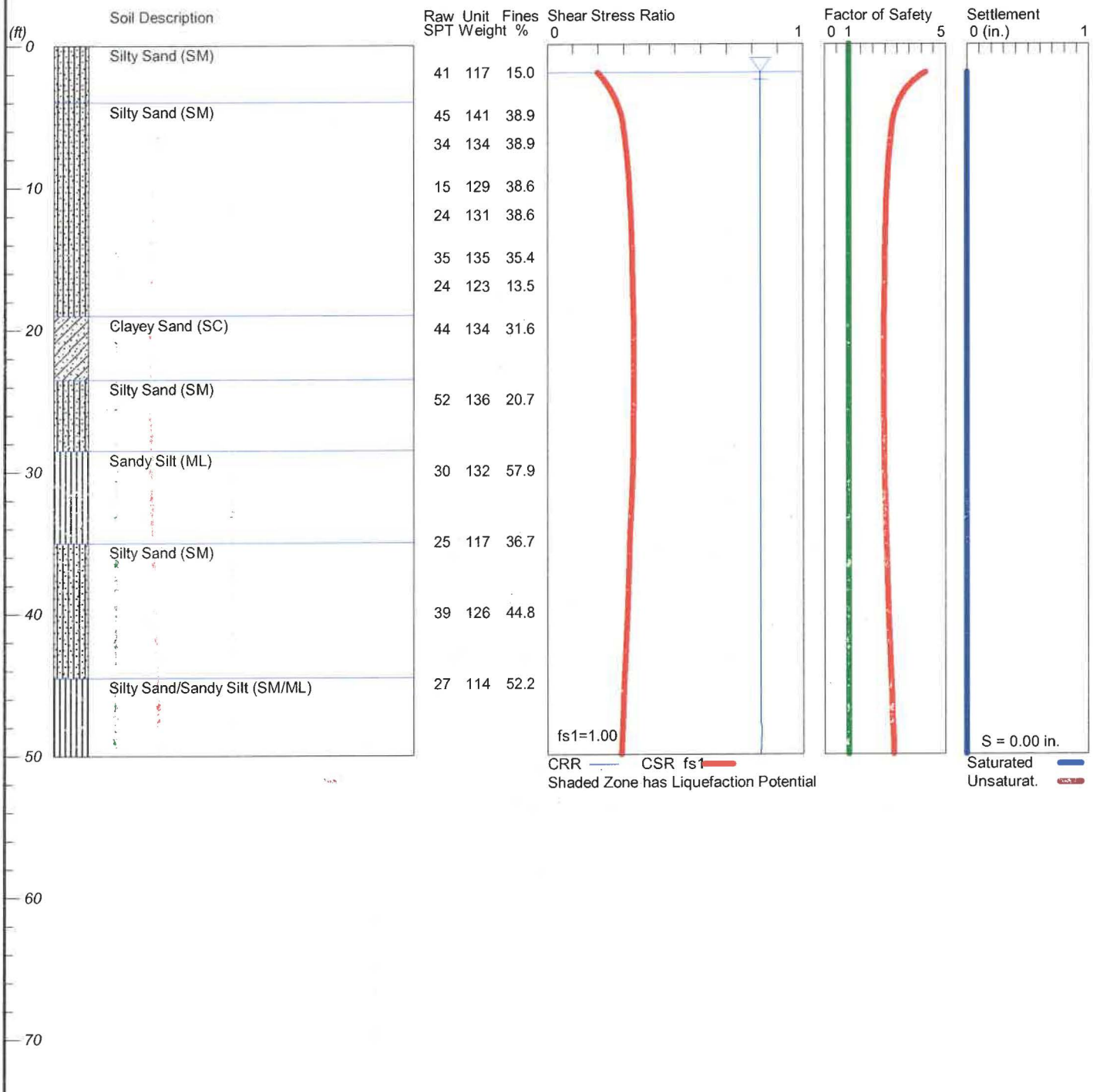
CRRm	Cyclic resistance ratio from soils
CSRsf	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S.	Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat	Settlement from saturated sands
S_dry	Settlement from Unsaturated Sands
S_all	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B3 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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Krazan

012-22165

Plate A-1

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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B3\01222165 B3 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-22165

Surface Elev.=
Hole No.=B3
Depth of Hole= 50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B3
Depth of Hole=50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.25
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	41.00	117.00	15.00
5.00	45.00	141.00	38.90
7.00	34.00	134.00	38.90
10.00	15.00	129.00	38.60
12.00	24.00	131.00	38.60
15.00	35.00	135.00	35.40
17.00	24.00	123.00	13.50
20.00	44.00	134.00	31.60
25.00	52.00	136.00	20.70
30.00	30.00	132.00	57.90
35.00	25.00	117.00	36.70
40.00	39.00	126.00	44.80
45.00	27.00	114.00	52.20

Output Results:
Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.00 in.
Differential Settlement=0.000 to 0.000 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

2.00	0.83	0.20	4.18	0.00	0.00	0.00
2.05	0.83	0.20	4.13	0.00	0.00	0.00
2.10	0.83	0.20	4.08	0.00	0.00	0.00
2.15	0.83	0.21	4.03	0.00	0.00	0.00
2.20	0.83	0.21	3.98	0.00	0.00	0.00
2.25	0.83	0.21	3.94	0.00	0.00	0.00
2.30	0.83	0.21	3.89	0.00	0.00	0.00
2.35	0.83	0.22	3.85	0.00	0.00	0.00
2.40	0.83	0.22	3.81	0.00	0.00	0.00
2.45	0.83	0.22	3.78	0.00	0.00	0.00
2.50	0.83	0.22	3.74	0.00	0.00	0.00
2.55	0.83	0.22	3.71	0.00	0.00	0.00
2.60	0.83	0.23	3.67	0.00	0.00	0.00
2.65	0.83	0.23	3.64	0.00	0.00	0.00
2.70	0.83	0.23	3.61	0.00	0.00	0.00
2.75	0.83	0.23	3.58	0.00	0.00	0.00
2.80	0.83	0.23	3.55	0.00	0.00	0.00
2.85	0.83	0.24	3.52	0.00	0.00	0.00
2.90	0.83	0.24	3.50	0.00	0.00	0.00
2.95	0.83	0.24	3.47	0.00	0.00	0.00
3.00	0.83	0.24	3.45	0.00	0.00	0.00
3.05	0.83	0.24	3.42	0.00	0.00	0.00
3.10	0.83	0.24	3.40	0.00	0.00	0.00
3.15	0.83	0.25	3.38	0.00	0.00	0.00
3.20	0.83	0.25	3.36	0.00	0.00	0.00
3.25	0.83	0.25	3.33	0.00	0.00	0.00
3.30	0.83	0.25	3.31	0.00	0.00	0.00
3.35	0.83	0.25	3.29	0.00	0.00	0.00
3.40	0.83	0.25	3.27	0.00	0.00	0.00
3.45	0.83	0.26	3.26	0.00	0.00	0.00
3.50	0.83	0.26	3.24	0.00	0.00	0.00
3.55	0.83	0.26	3.22	0.00	0.00	0.00
3.60	0.83	0.26	3.20	0.00	0.00	0.00
3.65	0.83	0.26	3.19	0.00	0.00	0.00
3.70	0.83	0.26	3.17	0.00	0.00	0.00
3.75	0.83	0.26	3.15	0.00	0.00	0.00
3.80	0.83	0.26	3.14	0.00	0.00	0.00
3.85	0.83	0.27	3.12	0.00	0.00	0.00
3.90	0.83	0.27	3.11	0.00	0.00	0.00
3.95	0.83	0.27	3.10	0.00	0.00	0.00
4.00	0.83	0.27	3.08	0.00	0.00	0.00
4.05	0.83	0.27	3.07	0.00	0.00	0.00
4.10	0.83	0.27	3.05	0.00	0.00	0.00
4.15	0.83	0.27	3.04	0.00	0.00	0.00
4.20	0.83	0.27	3.03	0.00	0.00	0.00
4.25	0.83	0.28	3.02	0.00	0.00	0.00
4.30	0.83	0.28	3.01	0.00	0.00	0.00
4.35	0.83	0.28	2.99	0.00	0.00	0.00
4.40	0.83	0.28	2.98	0.00	0.00	0.00
4.45	0.83	0.28	2.97	0.00	0.00	0.00
4.50	0.83	0.28	2.96	0.00	0.00	0.00
4.55	0.83	0.28	2.95	0.00	0.00	0.00
4.60	0.83	0.28	2.94	0.00	0.00	0.00
4.65	0.83	0.28	2.93	0.00	0.00	0.00
4.70	0.83	0.28	2.92	0.00	0.00	0.00
4.75	0.83	0.29	2.91	0.00	0.00	0.00
4.80	0.83	0.29	2.90	0.00	0.00	0.00
4.85	0.83	0.29	2.89	0.00	0.00	0.00
4.90	0.83	0.29	2.88	0.00	0.00	0.00
4.95	0.83	0.29	2.87	0.00	0.00	0.00
5.00	0.83	0.29	2.86	0.00	0.00	0.00
5.05	0.83	0.29	2.86	0.00	0.00	0.00
5.10	0.83	0.29	2.85	0.00	0.00	0.00
5.15	0.83	0.29	2.85	0.00	0.00	0.00
5.20	0.83	0.29	2.84	0.00	0.00	0.00
5.25	0.83	0.29	2.84	0.00	0.00	0.00
5.30	0.83	0.29	2.83	0.00	0.00	0.00
5.35	0.83	0.29	2.83	0.00	0.00	0.00
5.40	0.83	0.29	2.82	0.00	0.00	0.00
5.45	0.83	0.29	2.82	0.00	0.00	0.00

5.50	0.83	0.30	2.81	0.00	0.00	0.00
5.55	0.83	0.30	2.81	0.00	0.00	0.00
5.60	0.83	0.30	2.80	0.00	0.00	0.00
5.65	0.83	0.30	2.80	0.00	0.00	0.00
5.70	0.83	0.30	2.79	0.00	0.00	0.00
5.75	0.83	0.30	2.79	0.00	0.00	0.00
5.80	0.83	0.30	2.79	0.00	0.00	0.00
5.85	0.83	0.30	2.78	0.00	0.00	0.00
5.90	0.83	0.30	2.78	0.00	0.00	0.00
5.95	0.83	0.30	2.77	0.00	0.00	0.00
6.00	0.83	0.30	2.77	0.00	0.00	0.00
6.05	0.83	0.30	2.77	0.00	0.00	0.00
6.10	0.83	0.30	2.76	0.00	0.00	0.00
6.15	0.83	0.30	2.76	0.00	0.00	0.00
6.20	0.83	0.30	2.76	0.00	0.00	0.00
6.25	0.83	0.30	2.75	0.00	0.00	0.00
6.30	0.83	0.30	2.75	0.00	0.00	0.00
6.35	0.83	0.30	2.75	0.00	0.00	0.00
6.40	0.83	0.30	2.74	0.00	0.00	0.00
6.45	0.83	0.30	2.74	0.00	0.00	0.00
6.50	0.83	0.30	2.74	0.00	0.00	0.00
6.55	0.83	0.30	2.73	0.00	0.00	0.00
6.60	0.83	0.30	2.73	0.00	0.00	0.00
6.65	0.83	0.30	2.73	0.00	0.00	0.00
6.70	0.83	0.30	2.73	0.00	0.00	0.00
6.75	0.83	0.31	2.72	0.00	0.00	0.00
6.80	0.83	0.31	2.72	0.00	0.00	0.00
6.85	0.83	0.31	2.72	0.00	0.00	0.00
6.90	0.83	0.31	2.71	0.00	0.00	0.00
6.95	0.83	0.31	2.71	0.00	0.00	0.00
7.00	0.83	0.31	2.71	0.00	0.00	0.00
7.05	0.83	0.31	2.71	0.00	0.00	0.00
7.10	0.83	0.31	2.70	0.00	0.00	0.00
7.15	0.83	0.31	2.70	0.00	0.00	0.00
7.20	0.83	0.31	2.70	0.00	0.00	0.00
7.25	0.83	0.31	2.69	0.00	0.00	0.00
7.30	0.83	0.31	2.69	0.00	0.00	0.00
7.35	0.83	0.31	2.69	0.00	0.00	0.00
7.40	0.83	0.31	2.69	0.00	0.00	0.00
7.45	0.83	0.31	2.68	0.00	0.00	0.00
7.50	0.83	0.31	2.68	0.00	0.00	0.00
7.55	0.83	0.31	2.68	0.00	0.00	0.00
7.60	0.83	0.31	2.67	0.00	0.00	0.00
7.65	0.83	0.31	2.67	0.00	0.00	0.00
7.70	0.83	0.31	2.67	0.00	0.00	0.00
7.75	0.83	0.31	2.67	0.00	0.00	0.00
7.80	0.83	0.31	2.66	0.00	0.00	0.00
7.85	0.83	0.31	2.66	0.00	0.00	0.00
7.90	0.83	0.31	2.66	0.00	0.00	0.00
7.95	0.83	0.31	2.66	0.00	0.00	0.00
8.00	0.83	0.31	2.66	0.00	0.00	0.00
8.05	0.83	0.31	2.65	0.00	0.00	0.00
8.10	0.83	0.31	2.65	0.00	0.00	0.00
8.15	0.83	0.31	2.65	0.00	0.00	0.00
8.20	0.83	0.31	2.65	0.00	0.00	0.00
8.25	0.83	0.31	2.64	0.00	0.00	0.00
8.30	0.83	0.31	2.64	0.00	0.00	0.00
8.35	0.83	0.31	2.64	0.00	0.00	0.00
8.40	0.83	0.31	2.64	0.00	0.00	0.00
8.45	0.83	0.32	2.64	0.00	0.00	0.00
8.50	0.83	0.32	2.63	0.00	0.00	0.00
8.55	0.83	0.32	2.63	0.00	0.00	0.00
8.60	0.83	0.32	2.63	0.00	0.00	0.00
8.65	0.83	0.32	2.63	0.00	0.00	0.00
8.70	0.83	0.32	2.63	0.00	0.00	0.00
8.75	0.83	0.32	2.62	0.00	0.00	0.00
8.80	0.83	0.32	2.62	0.00	0.00	0.00
8.85	0.83	0.32	2.62	0.00	0.00	0.00
8.90	0.83	0.32	2.62	0.00	0.00	0.00
8.95	0.83	0.32	2.62	0.00	0.00	0.00
9.00	0.83	0.32	2.62	0.00	0.00	0.00

9.05	0.83	0.32	2.61	0.00	0.00	0.00
9.10	0.83	0.32	2.61	0.00	0.00	0.00
9.15	0.83	0.32	2.61	0.00	0.00	0.00
9.20	0.83	0.32	2.61	0.00	0.00	0.00
9.25	0.83	0.32	2.61	0.00	0.00	0.00
9.30	0.83	0.32	2.61	0.00	0.00	0.00
9.35	0.83	0.32	2.60	0.00	0.00	0.00
9.40	0.83	0.32	2.60	0.00	0.00	0.00
9.45	0.83	0.32	2.60	0.00	0.00	0.00
9.50	0.83	0.32	2.60	0.00	0.00	0.00
9.55	0.83	0.32	2.60	0.00	0.00	0.00
9.60	0.83	0.32	2.60	0.00	0.00	0.00
9.65	0.83	0.32	2.60	0.00	0.00	0.00
9.70	0.83	0.32	2.59	0.00	0.00	0.00
9.75	0.83	0.32	2.59	0.00	0.00	0.00
9.80	0.83	0.32	2.59	0.00	0.00	0.00
9.85	0.83	0.32	2.59	0.00	0.00	0.00
9.90	0.83	0.32	2.59	0.00	0.00	0.00
9.95	0.83	0.32	2.59	0.00	0.00	0.00
10.00	0.83	0.32	2.59	0.00	0.00	0.00
10.05	0.83	0.32	2.58	0.00	0.00	0.00
10.10	0.83	0.32	2.58	0.00	0.00	0.00
10.15	0.83	0.32	2.58	0.00	0.00	0.00
10.20	0.83	0.32	2.58	0.00	0.00	0.00
10.25	0.83	0.32	2.58	0.00	0.00	0.00
10.30	0.83	0.32	2.58	0.00	0.00	0.00
10.35	0.83	0.32	2.57	0.00	0.00	0.00
10.40	0.83	0.32	2.57	0.00	0.00	0.00
10.45	0.83	0.32	2.57	0.00	0.00	0.00
10.50	0.83	0.32	2.57	0.00	0.00	0.00
10.55	0.83	0.32	2.57	0.00	0.00	0.00
10.60	0.83	0.32	2.57	0.00	0.00	0.00
10.65	0.83	0.32	2.57	0.00	0.00	0.00
10.70	0.83	0.32	2.56	0.00	0.00	0.00
10.75	0.83	0.32	2.56	0.00	0.00	0.00
10.80	0.83	0.32	2.56	0.00	0.00	0.00
10.85	0.83	0.32	2.56	0.00	0.00	0.00
10.90	0.83	0.32	2.56	0.00	0.00	0.00
10.95	0.83	0.32	2.56	0.00	0.00	0.00
11.00	0.83	0.32	2.56	0.00	0.00	0.00
11.05	0.83	0.33	2.55	0.00	0.00	0.00
11.10	0.83	0.33	2.55	0.00	0.00	0.00
11.15	0.83	0.33	2.55	0.00	0.00	0.00
11.20	0.83	0.33	2.55	0.00	0.00	0.00
11.25	0.83	0.33	2.55	0.00	0.00	0.00
11.30	0.83	0.33	2.55	0.00	0.00	0.00
11.35	0.83	0.33	2.55	0.00	0.00	0.00
11.40	0.83	0.33	2.55	0.00	0.00	0.00
11.45	0.83	0.33	2.54	0.00	0.00	0.00
11.50	0.83	0.33	2.54	0.00	0.00	0.00
11.55	0.83	0.33	2.54	0.00	0.00	0.00
11.60	0.83	0.33	2.54	0.00	0.00	0.00
11.65	0.83	0.33	2.54	0.00	0.00	0.00
11.70	0.83	0.33	2.54	0.00	0.00	0.00
11.75	0.83	0.33	2.54	0.00	0.00	0.00
11.80	0.83	0.33	2.54	0.00	0.00	0.00
11.85	0.83	0.33	2.54	0.00	0.00	0.00
11.90	0.83	0.33	2.53	0.00	0.00	0.00
11.95	0.83	0.33	2.53	0.00	0.00	0.00
12.00	0.83	0.33	2.53	0.00	0.00	0.00
12.05	0.83	0.33	2.53	0.00	0.00	0.00
12.10	0.83	0.33	2.53	0.00	0.00	0.00
12.15	0.83	0.33	2.53	0.00	0.00	0.00
12.20	0.83	0.33	2.53	0.00	0.00	0.00
12.25	0.83	0.33	2.53	0.00	0.00	0.00
12.30	0.83	0.33	2.53	0.00	0.00	0.00
12.35	0.83	0.33	2.53	0.00	0.00	0.00
12.40	0.83	0.33	2.53	0.00	0.00	0.00
12.45	0.83	0.33	2.52	0.00	0.00	0.00
12.50	0.83	0.33	2.52	0.00	0.00	0.00
12.55	0.83	0.33	2.52	0.00	0.00	0.00

12.60	0.83	0.33	2.52	0.00	0.00	0.00
12.65	0.83	0.33	2.52	0.00	0.00	0.00
12.70	0.83	0.33	2.52	0.00	0.00	0.00
12.75	0.83	0.33	2.52	0.00	0.00	0.00
12.80	0.83	0.33	2.52	0.00	0.00	0.00
12.85	0.83	0.33	2.52	0.00	0.00	0.00
12.90	0.83	0.33	2.52	0.00	0.00	0.00
12.95	0.83	0.33	2.52	0.00	0.00	0.00
13.00	0.83	0.33	2.52	0.00	0.00	0.00
13.05	0.83	0.33	2.51	0.00	0.00	0.00
13.10	0.83	0.33	2.51	0.00	0.00	0.00
13.15	0.83	0.33	2.51	0.00	0.00	0.00
13.20	0.83	0.33	2.51	0.00	0.00	0.00
13.25	0.83	0.33	2.51	0.00	0.00	0.00
13.30	0.83	0.33	2.51	0.00	0.00	0.00
13.35	0.83	0.33	2.51	0.00	0.00	0.00
13.40	0.83	0.33	2.51	0.00	0.00	0.00
13.45	0.83	0.33	2.51	0.00	0.00	0.00
13.50	0.83	0.33	2.51	0.00	0.00	0.00
13.55	0.83	0.33	2.51	0.00	0.00	0.00
13.60	0.83	0.33	2.51	0.00	0.00	0.00
13.65	0.83	0.33	2.51	0.00	0.00	0.00
13.70	0.83	0.33	2.51	0.00	0.00	0.00
13.75	0.83	0.33	2.51	0.00	0.00	0.00
13.80	0.83	0.33	2.50	0.00	0.00	0.00
13.85	0.83	0.33	2.50	0.00	0.00	0.00
13.90	0.83	0.33	2.50	0.00	0.00	0.00
13.95	0.83	0.33	2.50	0.00	0.00	0.00
14.00	0.83	0.33	2.50	0.00	0.00	0.00
14.05	0.83	0.33	2.50	0.00	0.00	0.00
14.10	0.83	0.33	2.50	0.00	0.00	0.00
14.15	0.83	0.33	2.50	0.00	0.00	0.00
14.20	0.83	0.33	2.50	0.00	0.00	0.00
14.25	0.83	0.33	2.50	0.00	0.00	0.00
14.30	0.83	0.33	2.50	0.00	0.00	0.00
14.35	0.83	0.33	2.50	0.00	0.00	0.00
14.40	0.83	0.33	2.50	0.00	0.00	0.00
14.45	0.83	0.33	2.50	0.00	0.00	0.00
14.50	0.83	0.33	2.50	0.00	0.00	0.00
14.55	0.83	0.33	2.50	0.00	0.00	0.00
14.60	0.83	0.33	2.50	0.00	0.00	0.00
14.65	0.83	0.33	2.49	0.00	0.00	0.00
14.70	0.83	0.33	2.49	0.00	0.00	0.00
14.75	0.83	0.33	2.49	0.00	0.00	0.00
14.80	0.83	0.33	2.49	0.00	0.00	0.00
14.85	0.83	0.33	2.49	0.00	0.00	0.00
14.90	0.83	0.33	2.49	0.00	0.00	0.00
14.95	0.83	0.33	2.49	0.00	0.00	0.00
15.00	0.83	0.33	2.49	0.00	0.00	0.00
15.05	0.83	0.33	2.49	0.00	0.00	0.00
15.10	0.83	0.33	2.49	0.00	0.00	0.00
15.15	0.83	0.33	2.49	0.00	0.00	0.00
15.20	0.83	0.33	2.49	0.00	0.00	0.00
15.25	0.83	0.33	2.49	0.00	0.00	0.00
15.30	0.83	0.33	2.49	0.00	0.00	0.00
15.35	0.83	0.33	2.49	0.00	0.00	0.00
15.40	0.83	0.33	2.49	0.00	0.00	0.00
15.45	0.83	0.33	2.49	0.00	0.00	0.00
15.50	0.83	0.33	2.49	0.00	0.00	0.00
15.55	0.83	0.33	2.49	0.00	0.00	0.00
15.60	0.83	0.33	2.49	0.00	0.00	0.00
15.65	0.83	0.33	2.49	0.00	0.00	0.00
15.70	0.83	0.33	2.49	0.00	0.00	0.00
15.75	0.83	0.33	2.49	0.00	0.00	0.00
15.80	0.83	0.33	2.49	0.00	0.00	0.00
15.85	0.83	0.33	2.49	0.00	0.00	0.00
15.90	0.83	0.33	2.49	0.00	0.00	0.00
15.95	0.83	0.33	2.49	0.00	0.00	0.00
16.00	0.83	0.33	2.49	0.00	0.00	0.00
16.05	0.83	0.33	2.49	0.00	0.00	0.00
16.10	0.83	0.33	2.49	0.00	0.00	0.00

16.15	0.83	0.33	2.49	0.00	0.00	0.00
16.20	0.83	0.33	2.49	0.00	0.00	0.00
16.25	0.83	0.33	2.48	0.00	0.00	0.00
16.30	0.83	0.33	2.48	0.00	0.00	0.00
16.35	0.83	0.33	2.48	0.00	0.00	0.00
16.40	0.83	0.33	2.48	0.00	0.00	0.00
16.45	0.83	0.33	2.48	0.00	0.00	0.00
16.50	0.83	0.33	2.48	0.00	0.00	0.00
16.55	0.83	0.33	2.48	0.00	0.00	0.00
16.60	0.83	0.33	2.48	0.00	0.00	0.00
16.65	0.83	0.33	2.48	0.00	0.00	0.00
16.70	0.83	0.33	2.48	0.00	0.00	0.00
16.75	0.83	0.33	2.48	0.00	0.00	0.00
16.80	0.83	0.33	2.48	0.00	0.00	0.00
16.85	0.83	0.33	2.48	0.00	0.00	0.00
16.90	0.83	0.33	2.48	0.00	0.00	0.00
16.95	0.83	0.33	2.48	0.00	0.00	0.00
17.00	0.83	0.33	2.48	0.00	0.00	0.00
17.05	0.83	0.33	2.48	0.00	0.00	0.00
17.10	0.83	0.33	2.48	0.00	0.00	0.00
17.15	0.83	0.33	2.48	0.00	0.00	0.00
17.20	0.83	0.34	2.48	0.00	0.00	0.00
17.25	0.83	0.34	2.48	0.00	0.00	0.00
17.30	0.83	0.34	2.48	0.00	0.00	0.00
17.35	0.83	0.34	2.48	0.00	0.00	0.00
17.40	0.83	0.34	2.48	0.00	0.00	0.00
17.45	0.83	0.34	2.48	0.00	0.00	0.00
17.50	0.83	0.34	2.48	0.00	0.00	0.00
17.55	0.83	0.34	2.48	0.00	0.00	0.00
17.60	0.83	0.34	2.47	0.00	0.00	0.00
17.65	0.83	0.34	2.47	0.00	0.00	0.00
17.70	0.83	0.34	2.47	0.00	0.00	0.00
17.75	0.83	0.34	2.47	0.00	0.00	0.00
17.80	0.83	0.34	2.47	0.00	0.00	0.00
17.85	0.83	0.34	2.47	0.00	0.00	0.00
17.90	0.83	0.34	2.47	0.00	0.00	0.00
17.95	0.83	0.34	2.47	0.00	0.00	0.00
18.00	0.83	0.34	2.47	0.00	0.00	0.00
18.05	0.83	0.34	2.47	0.00	0.00	0.00
18.10	0.83	0.34	2.47	0.00	0.00	0.00
18.15	0.83	0.34	2.47	0.00	0.00	0.00
18.20	0.83	0.34	2.47	0.00	0.00	0.00
18.25	0.83	0.34	2.47	0.00	0.00	0.00
18.30	0.83	0.34	2.47	0.00	0.00	0.00
18.35	0.83	0.34	2.47	0.00	0.00	0.00
18.40	0.83	0.34	2.47	0.00	0.00	0.00
18.45	0.83	0.34	2.46	0.00	0.00	0.00
18.50	0.83	0.34	2.46	0.00	0.00	0.00
18.55	0.83	0.34	2.46	0.00	0.00	0.00
18.60	0.83	0.34	2.46	0.00	0.00	0.00
18.65	0.83	0.34	2.46	0.00	0.00	0.00
18.70	0.83	0.34	2.46	0.00	0.00	0.00
18.75	0.83	0.34	2.46	0.00	0.00	0.00
18.80	0.83	0.34	2.46	0.00	0.00	0.00
18.85	0.83	0.34	2.46	0.00	0.00	0.00
18.90	0.83	0.34	2.46	0.00	0.00	0.00
18.95	0.83	0.34	2.46	0.00	0.00	0.00
19.00	0.83	0.34	2.46	0.00	0.00	0.00
19.05	0.83	0.34	2.46	0.00	0.00	0.00
19.10	0.83	0.34	2.46	0.00	0.00	0.00
19.15	0.83	0.34	2.46	0.00	0.00	0.00
19.20	0.83	0.34	2.46	0.00	0.00	0.00
19.25	0.83	0.34	2.46	0.00	0.00	0.00
19.30	0.83	0.34	2.46	0.00	0.00	0.00
19.35	0.83	0.34	2.46	0.00	0.00	0.00
19.40	0.83	0.34	2.46	0.00	0.00	0.00
19.45	0.83	0.34	2.45	0.00	0.00	0.00
19.50	0.83	0.34	2.45	0.00	0.00	0.00
19.55	0.83	0.34	2.45	0.00	0.00	0.00
19.60	0.83	0.34	2.45	0.00	0.00	0.00
19.65	0.83	0.34	2.45	0.00	0.00	0.00

19.70	0.83	0.34	2.45	0.00	0.00	0.00
19.75	0.83	0.34	2.45	0.00	0.00	0.00
19.80	0.83	0.34	2.45	0.00	0.00	0.00
19.85	0.83	0.34	2.45	0.00	0.00	0.00
19.90	0.83	0.34	2.45	0.00	0.00	0.00
19.95	0.83	0.34	2.45	0.00	0.00	0.00
20.00	0.83	0.34	2.45	0.00	0.00	0.00
20.05	0.83	0.34	2.45	0.00	0.00	0.00
20.10	0.83	0.34	2.45	0.00	0.00	0.00
20.15	0.83	0.34	2.45	0.00	0.00	0.00
20.20	0.83	0.34	2.45	0.00	0.00	0.00
20.25	0.83	0.34	2.45	0.00	0.00	0.00
20.30	0.83	0.34	2.45	0.00	0.00	0.00
20.35	0.83	0.34	2.45	0.00	0.00	0.00
20.40	0.83	0.34	2.45	0.00	0.00	0.00
20.45	0.83	0.34	2.45	0.00	0.00	0.00
20.50	0.83	0.34	2.45	0.00	0.00	0.00
20.55	0.83	0.34	2.45	0.00	0.00	0.00
20.60	0.83	0.34	2.45	0.00	0.00	0.00
20.65	0.83	0.34	2.45	0.00	0.00	0.00
20.70	0.83	0.34	2.45	0.00	0.00	0.00
20.75	0.83	0.34	2.45	0.00	0.00	0.00
20.80	0.83	0.34	2.45	0.00	0.00	0.00
20.85	0.83	0.34	2.45	0.00	0.00	0.00
20.90	0.83	0.34	2.45	0.00	0.00	0.00
20.95	0.83	0.34	2.45	0.00	0.00	0.00
21.00	0.83	0.34	2.45	0.00	0.00	0.00
21.05	0.83	0.34	2.45	0.00	0.00	0.00
21.10	0.83	0.34	2.45	0.00	0.00	0.00
21.15	0.83	0.34	2.45	0.00	0.00	0.00
21.20	0.83	0.34	2.45	0.00	0.00	0.00
21.25	0.83	0.34	2.45	0.00	0.00	0.00
21.30	0.83	0.34	2.45	0.00	0.00	0.00
21.35	0.83	0.34	2.45	0.00	0.00	0.00
21.40	0.83	0.34	2.45	0.00	0.00	0.00
21.45	0.83	0.34	2.45	0.00	0.00	0.00
21.50	0.83	0.34	2.45	0.00	0.00	0.00
21.55	0.83	0.34	2.45	0.00	0.00	0.00
21.60	0.83	0.34	2.45	0.00	0.00	0.00
21.65	0.83	0.34	2.45	0.00	0.00	0.00
21.70	0.83	0.34	2.45	0.00	0.00	0.00
21.75	0.83	0.34	2.45	0.00	0.00	0.00
21.80	0.83	0.34	2.45	0.00	0.00	0.00
21.85	0.83	0.34	2.45	0.00	0.00	0.00
21.90	0.83	0.34	2.45	0.00	0.00	0.00
21.95	0.83	0.34	2.45	0.00	0.00	0.00
22.00	0.83	0.34	2.45	0.00	0.00	0.00
22.05	0.83	0.34	2.45	0.00	0.00	0.00
22.10	0.83	0.34	2.45	0.00	0.00	0.00
22.15	0.83	0.34	2.45	0.00	0.00	0.00
22.20	0.83	0.34	2.45	0.00	0.00	0.00
22.25	0.83	0.34	2.45	0.00	0.00	0.00
22.30	0.83	0.34	2.45	0.00	0.00	0.00
22.35	0.83	0.34	2.45	0.00	0.00	0.00
22.40	0.83	0.34	2.45	0.00	0.00	0.00
22.45	0.83	0.34	2.45	0.00	0.00	0.00
22.50	0.83	0.34	2.45	0.00	0.00	0.00
22.55	0.83	0.34	2.45	0.00	0.00	0.00
22.60	0.83	0.34	2.45	0.00	0.00	0.00
22.65	0.83	0.34	2.45	0.00	0.00	0.00
22.70	0.83	0.34	2.45	0.00	0.00	0.00
22.75	0.83	0.34	2.45	0.00	0.00	0.00
22.80	0.83	0.34	2.45	0.00	0.00	0.00
22.85	0.83	0.34	2.45	0.00	0.00	0.00
22.90	0.83	0.34	2.45	0.00	0.00	0.00
22.95	0.83	0.34	2.45	0.00	0.00	0.00
23.00	0.83	0.34	2.45	0.00	0.00	0.00
23.05	0.83	0.34	2.45	0.00	0.00	0.00
23.10	0.83	0.34	2.45	0.00	0.00	0.00
23.15	0.83	0.34	2.45	0.00	0.00	0.00
23.20	0.83	0.34	2.45	0.00	0.00	0.00

23.25	0.83	0.34	2.45	0.00	0.00	0.00
23.30	0.83	0.34	2.45	0.00	0.00	0.00
23.35	0.83	0.34	2.45	0.00	0.00	0.00
23.40	0.83	0.34	2.45	0.00	0.00	0.00
23.45	0.83	0.34	2.45	0.00	0.00	0.00
23.50	0.83	0.34	2.45	0.00	0.00	0.00
23.55	0.83	0.34	2.45	0.00	0.00	0.00
23.60	0.83	0.34	2.45	0.00	0.00	0.00
23.65	0.83	0.34	2.45	0.00	0.00	0.00
23.70	0.83	0.34	2.45	0.00	0.00	0.00
23.75	0.83	0.34	2.45	0.00	0.00	0.00
23.80	0.83	0.34	2.45	0.00	0.00	0.00
23.85	0.83	0.34	2.45	0.00	0.00	0.00
23.90	0.83	0.34	2.45	0.00	0.00	0.00
23.95	0.83	0.34	2.45	0.00	0.00	0.00
24.00	0.83	0.34	2.45	0.00	0.00	0.00
24.05	0.83	0.34	2.45	0.00	0.00	0.00
24.10	0.83	0.34	2.45	0.00	0.00	0.00
24.15	0.83	0.34	2.45	0.00	0.00	0.00
24.20	0.83	0.34	2.45	0.00	0.00	0.00
24.25	0.83	0.34	2.45	0.00	0.00	0.00
24.30	0.83	0.34	2.45	0.00	0.00	0.00
24.35	0.83	0.34	2.45	0.00	0.00	0.00
24.40	0.83	0.34	2.45	0.00	0.00	0.00
24.45	0.83	0.34	2.45	0.00	0.00	0.00
24.50	0.83	0.34	2.45	0.00	0.00	0.00
24.55	0.83	0.34	2.45	0.00	0.00	0.00
24.60	0.83	0.34	2.45	0.00	0.00	0.00
24.65	0.83	0.34	2.45	0.00	0.00	0.00
24.70	0.83	0.34	2.45	0.00	0.00	0.00
24.75	0.83	0.34	2.45	0.00	0.00	0.00
24.80	0.83	0.34	2.45	0.00	0.00	0.00
24.85	0.83	0.34	2.46	0.00	0.00	0.00
24.90	0.83	0.34	2.46	0.00	0.00	0.00
24.95	0.83	0.34	2.46	0.00	0.00	0.00
25.00	0.83	0.34	2.46	0.00	0.00	0.00
25.05	0.83	0.34	2.46	0.00	0.00	0.00
25.10	0.83	0.34	2.46	0.00	0.00	0.00
25.15	0.83	0.34	2.46	0.00	0.00	0.00
25.20	0.83	0.34	2.46	0.00	0.00	0.00
25.25	0.83	0.34	2.46	0.00	0.00	0.00
25.30	0.83	0.34	2.46	0.00	0.00	0.00
25.35	0.83	0.34	2.46	0.00	0.00	0.00
25.40	0.83	0.34	2.46	0.00	0.00	0.00
25.45	0.83	0.34	2.46	0.00	0.00	0.00
25.50	0.83	0.34	2.46	0.00	0.00	0.00
25.55	0.83	0.34	2.46	0.00	0.00	0.00
25.60	0.83	0.34	2.46	0.00	0.00	0.00
25.65	0.83	0.34	2.46	0.00	0.00	0.00
25.70	0.83	0.34	2.46	0.00	0.00	0.00
25.75	0.83	0.34	2.46	0.00	0.00	0.00
25.80	0.83	0.34	2.46	0.00	0.00	0.00
25.85	0.83	0.34	2.46	0.00	0.00	0.00
25.90	0.83	0.34	2.46	0.00	0.00	0.00
25.95	0.83	0.34	2.46	0.00	0.00	0.00
26.00	0.83	0.34	2.46	0.00	0.00	0.00
26.05	0.83	0.34	2.46	0.00	0.00	0.00
26.10	0.83	0.34	2.46	0.00	0.00	0.00
26.15	0.83	0.34	2.46	0.00	0.00	0.00
26.20	0.83	0.34	2.46	0.00	0.00	0.00
26.25	0.83	0.34	2.46	0.00	0.00	0.00
26.30	0.83	0.34	2.46	0.00	0.00	0.00
26.35	0.83	0.34	2.46	0.00	0.00	0.00
26.40	0.83	0.34	2.46	0.00	0.00	0.00
26.45	0.83	0.34	2.46	0.00	0.00	0.00
26.50	0.83	0.34	2.46	0.00	0.00	0.00
26.55	0.83	0.34	2.46	0.00	0.00	0.00
26.60	0.83	0.34	2.46	0.00	0.00	0.00
26.65	0.83	0.34	2.46	0.00	0.00	0.00
26.70	0.83	0.34	2.46	0.00	0.00	0.00
26.75	0.83	0.34	2.46	0.00	0.00	0.00

26.80	0.83	0.34	2.46	0.00	0.00	0.00
26.85	0.83	0.34	2.46	0.00	0.00	0.00
26.90	0.83	0.34	2.46	0.00	0.00	0.00
26.95	0.83	0.34	2.46	0.00	0.00	0.00
27.00	0.83	0.34	2.46	0.00	0.00	0.00
27.05	0.83	0.34	2.46	0.00	0.00	0.00
27.10	0.83	0.34	2.46	0.00	0.00	0.00
27.15	0.83	0.34	2.46	0.00	0.00	0.00
27.20	0.83	0.34	2.46	0.00	0.00	0.00
27.25	0.83	0.34	2.46	0.00	0.00	0.00
27.30	0.83	0.34	2.46	0.00	0.00	0.00
27.35	0.83	0.34	2.46	0.00	0.00	0.00
27.40	0.83	0.34	2.46	0.00	0.00	0.00
27.45	0.83	0.34	2.46	0.00	0.00	0.00
27.50	0.83	0.34	2.46	0.00	0.00	0.00
27.55	0.83	0.34	2.46	0.00	0.00	0.00
27.60	0.83	0.34	2.47	0.00	0.00	0.00
27.65	0.83	0.34	2.47	0.00	0.00	0.00
27.70	0.83	0.34	2.47	0.00	0.00	0.00
27.75	0.83	0.34	2.47	0.00	0.00	0.00
27.80	0.83	0.34	2.47	0.00	0.00	0.00
27.85	0.83	0.34	2.47	0.00	0.00	0.00
27.90	0.83	0.34	2.47	0.00	0.00	0.00
27.95	0.83	0.34	2.47	0.00	0.00	0.00
28.00	0.83	0.34	2.47	0.00	0.00	0.00
28.05	0.83	0.34	2.47	0.00	0.00	0.00
28.10	0.83	0.34	2.47	0.00	0.00	0.00
28.15	0.83	0.34	2.47	0.00	0.00	0.00
28.20	0.83	0.34	2.47	0.00	0.00	0.00
28.25	0.83	0.34	2.47	0.00	0.00	0.00
28.30	0.83	0.34	2.47	0.00	0.00	0.00
28.35	0.83	0.34	2.47	0.00	0.00	0.00
28.40	0.83	0.34	2.47	0.00	0.00	0.00
28.45	0.83	0.34	2.47	0.00	0.00	0.00
28.50	0.83	0.34	2.47	0.00	0.00	0.00
28.55	0.83	0.34	2.47	0.00	0.00	0.00
28.60	0.83	0.34	2.47	0.00	0.00	0.00
28.65	0.83	0.34	2.47	0.00	0.00	0.00
28.70	0.83	0.34	2.47	0.00	0.00	0.00
28.75	0.83	0.34	2.47	0.00	0.00	0.00
28.80	0.83	0.34	2.47	0.00	0.00	0.00
28.85	0.83	0.34	2.47	0.00	0.00	0.00
28.90	0.83	0.34	2.47	0.00	0.00	0.00
28.95	0.83	0.34	2.47	0.00	0.00	0.00
29.00	0.83	0.34	2.47	0.00	0.00	0.00
29.05	0.83	0.34	2.47	0.00	0.00	0.00
29.10	0.83	0.34	2.47	0.00	0.00	0.00
29.15	0.83	0.34	2.47	0.00	0.00	0.00
29.20	0.83	0.34	2.47	0.00	0.00	0.00
29.25	0.83	0.34	2.47	0.00	0.00	0.00
29.30	0.83	0.34	2.47	0.00	0.00	0.00
29.35	0.83	0.34	2.47	0.00	0.00	0.00
29.40	0.83	0.34	2.47	0.00	0.00	0.00
29.45	0.83	0.34	2.47	0.00	0.00	0.00
29.50	0.83	0.34	2.47	0.00	0.00	0.00
29.55	0.83	0.34	2.47	0.00	0.00	0.00
29.60	0.83	0.34	2.47	0.00	0.00	0.00
29.65	0.83	0.34	2.47	0.00	0.00	0.00
29.70	0.83	0.34	2.47	0.00	0.00	0.00
29.75	0.83	0.34	2.47	0.00	0.00	0.00
29.80	0.83	0.34	2.47	0.00	0.00	0.00
29.85	0.83	0.34	2.47	0.00	0.00	0.00
29.90	0.83	0.34	2.47	0.00	0.00	0.00
29.95	0.83	0.34	2.47	0.00	0.00	0.00
30.00	0.83	0.34	2.48	0.00	0.00	0.00
30.05	0.83	0.34	2.48	0.00	0.00	0.00
30.10	0.83	0.34	2.48	0.00	0.00	0.00
30.15	0.83	0.34	2.48	0.00	0.00	0.00
30.20	0.83	0.34	2.48	0.00	0.00	0.00
30.25	0.83	0.33	2.48	0.00	0.00	0.00
30.30	0.83	0.33	2.48	0.00	0.00	0.00

30.35	0.83	0.33	2.48	0.00	0.00	0.00
30.40	0.83	0.33	2.48	0.00	0.00	0.00
30.45	0.83	0.33	2.48	0.00	0.00	0.00
30.50	0.83	0.33	2.48	0.00	0.00	0.00
30.55	0.83	0.33	2.49	0.00	0.00	0.00
30.60	0.83	0.33	2.49	0.00	0.00	0.00
30.65	0.83	0.33	2.49	0.00	0.00	0.00
30.70	0.83	0.33	2.49	0.00	0.00	0.00
30.75	0.83	0.33	2.49	0.00	0.00	0.00
30.80	0.83	0.33	2.49	0.00	0.00	0.00
30.85	0.83	0.33	2.49	0.00	0.00	0.00
30.90	0.83	0.33	2.49	0.00	0.00	0.00
30.95	0.83	0.33	2.49	0.00	0.00	0.00
31.00	0.83	0.33	2.49	0.00	0.00	0.00
31.05	0.83	0.33	2.49	0.00	0.00	0.00
31.10	0.83	0.33	2.50	0.00	0.00	0.00
31.15	0.83	0.33	2.50	0.00	0.00	0.00
31.20	0.83	0.33	2.50	0.00	0.00	0.00
31.25	0.83	0.33	2.50	0.00	0.00	0.00
31.30	0.83	0.33	2.50	0.00	0.00	0.00
31.35	0.83	0.33	2.50	0.00	0.00	0.00
31.40	0.83	0.33	2.50	0.00	0.00	0.00
31.45	0.83	0.33	2.50	0.00	0.00	0.00
31.50	0.83	0.33	2.50	0.00	0.00	0.00
31.55	0.83	0.33	2.50	0.00	0.00	0.00
31.60	0.83	0.33	2.50	0.00	0.00	0.00
31.65	0.83	0.33	2.51	0.00	0.00	0.00
31.70	0.83	0.33	2.51	0.00	0.00	0.00
31.75	0.83	0.33	2.51	0.00	0.00	0.00
31.80	0.83	0.33	2.51	0.00	0.00	0.00
31.85	0.83	0.33	2.51	0.00	0.00	0.00
31.90	0.83	0.33	2.51	0.00	0.00	0.00
31.95	0.83	0.33	2.51	0.00	0.00	0.00
32.00	0.83	0.33	2.51	0.00	0.00	0.00
32.05	0.83	0.33	2.51	0.00	0.00	0.00
32.10	0.83	0.33	2.51	0.00	0.00	0.00
32.15	0.83	0.33	2.52	0.00	0.00	0.00
32.20	0.83	0.33	2.52	0.00	0.00	0.00
32.25	0.83	0.33	2.52	0.00	0.00	0.00
32.30	0.83	0.33	2.52	0.00	0.00	0.00
32.35	0.83	0.33	2.52	0.00	0.00	0.00
32.40	0.83	0.33	2.52	0.00	0.00	0.00
32.45	0.83	0.33	2.52	0.00	0.00	0.00
32.50	0.83	0.33	2.52	0.00	0.00	0.00
32.55	0.83	0.33	2.52	0.00	0.00	0.00
32.60	0.83	0.33	2.52	0.00	0.00	0.00
32.65	0.83	0.33	2.52	0.00	0.00	0.00
32.70	0.83	0.33	2.53	0.00	0.00	0.00
32.75	0.83	0.33	2.53	0.00	0.00	0.00
32.80	0.83	0.33	2.53	0.00	0.00	0.00
32.85	0.83	0.33	2.53	0.00	0.00	0.00
32.90	0.83	0.33	2.53	0.00	0.00	0.00
32.95	0.83	0.33	2.53	0.00	0.00	0.00
33.00	0.83	0.33	2.53	0.00	0.00	0.00
33.05	0.83	0.33	2.53	0.00	0.00	0.00
33.10	0.83	0.33	2.53	0.00	0.00	0.00
33.15	0.83	0.33	2.53	0.00	0.00	0.00
33.20	0.83	0.33	2.54	0.00	0.00	0.00
33.25	0.83	0.33	2.54	0.00	0.00	0.00
33.30	0.83	0.33	2.54	0.00	0.00	0.00
33.35	0.83	0.33	2.54	0.00	0.00	0.00
33.40	0.83	0.33	2.54	0.00	0.00	0.00
33.45	0.83	0.33	2.54	0.00	0.00	0.00
33.50	0.83	0.33	2.54	0.00	0.00	0.00
33.55	0.83	0.33	2.54	0.00	0.00	0.00
33.60	0.83	0.33	2.54	0.00	0.00	0.00
33.65	0.83	0.33	2.54	0.00	0.00	0.00
33.70	0.83	0.33	2.55	0.00	0.00	0.00
33.75	0.83	0.33	2.55	0.00	0.00	0.00
33.80	0.83	0.33	2.55	0.00	0.00	0.00
33.85	0.83	0.33	2.55	0.00	0.00	0.00

33.90	0.83	0.33	2.55	0.00	0.00	0.00
33.95	0.83	0.33	2.55	0.00	0.00	0.00
34.00	0.83	0.33	2.55	0.00	0.00	0.00
34.05	0.83	0.33	2.55	0.00	0.00	0.00
34.10	0.83	0.33	2.55	0.00	0.00	0.00
34.15	0.83	0.33	2.55	0.00	0.00	0.00
34.20	0.83	0.33	2.56	0.00	0.00	0.00
34.25	0.83	0.32	2.56	0.00	0.00	0.00
34.30	0.83	0.32	2.56	0.00	0.00	0.00
34.35	0.83	0.32	2.56	0.00	0.00	0.00
34.40	0.83	0.32	2.56	0.00	0.00	0.00
34.45	0.83	0.32	2.56	0.00	0.00	0.00
34.50	0.83	0.32	2.56	0.00	0.00	0.00
34.55	0.83	0.32	2.56	0.00	0.00	0.00
34.60	0.83	0.32	2.56	0.00	0.00	0.00
34.65	0.83	0.32	2.56	0.00	0.00	0.00
34.70	0.83	0.32	2.57	0.00	0.00	0.00
34.75	0.83	0.32	2.57	0.00	0.00	0.00
34.80	0.83	0.32	2.57	0.00	0.00	0.00
34.85	0.83	0.32	2.57	0.00	0.00	0.00
34.90	0.83	0.32	2.57	0.00	0.00	0.00
34.95	0.83	0.32	2.57	0.00	0.00	0.00
35.00	0.83	0.32	2.57	0.00	0.00	0.00
35.05	0.83	0.32	2.57	0.00	0.00	0.00
35.10	0.83	0.32	2.57	0.00	0.00	0.00
35.15	0.83	0.32	2.57	0.00	0.00	0.00
35.20	0.83	0.32	2.57	0.00	0.00	0.00
35.25	0.83	0.32	2.58	0.00	0.00	0.00
35.30	0.83	0.32	2.58	0.00	0.00	0.00
35.35	0.83	0.32	2.58	0.00	0.00	0.00
35.40	0.83	0.32	2.58	0.00	0.00	0.00
35.45	0.83	0.32	2.58	0.00	0.00	0.00
35.50	0.83	0.32	2.58	0.00	0.00	0.00
35.55	0.83	0.32	2.58	0.00	0.00	0.00
35.60	0.83	0.32	2.58	0.00	0.00	0.00
35.65	0.83	0.32	2.58	0.00	0.00	0.00
35.70	0.83	0.32	2.58	0.00	0.00	0.00
35.75	0.83	0.32	2.58	0.00	0.00	0.00
35.80	0.83	0.32	2.58	0.00	0.00	0.00
35.85	0.83	0.32	2.58	0.00	0.00	0.00
35.90	0.83	0.32	2.58	0.00	0.00	0.00
35.95	0.83	0.32	2.59	0.00	0.00	0.00
36.00	0.83	0.32	2.59	0.00	0.00	0.00
36.05	0.83	0.32	2.59	0.00	0.00	0.00
36.10	0.83	0.32	2.59	0.00	0.00	0.00
36.15	0.83	0.32	2.59	0.00	0.00	0.00
36.20	0.83	0.32	2.59	0.00	0.00	0.00
36.25	0.83	0.32	2.59	0.00	0.00	0.00
36.30	0.83	0.32	2.59	0.00	0.00	0.00
36.35	0.83	0.32	2.59	0.00	0.00	0.00
36.40	0.83	0.32	2.59	0.00	0.00	0.00
36.45	0.83	0.32	2.59	0.00	0.00	0.00
36.50	0.83	0.32	2.59	0.00	0.00	0.00
36.55	0.83	0.32	2.59	0.00	0.00	0.00
36.60	0.83	0.32	2.59	0.00	0.00	0.00
36.65	0.83	0.32	2.60	0.00	0.00	0.00
36.70	0.83	0.32	2.60	0.00	0.00	0.00
36.75	0.83	0.32	2.60	0.00	0.00	0.00
36.80	0.83	0.32	2.60	0.00	0.00	0.00
36.85	0.83	0.32	2.60	0.00	0.00	0.00
36.90	0.83	0.32	2.60	0.00	0.00	0.00
36.95	0.83	0.32	2.60	0.00	0.00	0.00
37.00	0.83	0.32	2.60	0.00	0.00	0.00
37.05	0.83	0.32	2.60	0.00	0.00	0.00
37.10	0.83	0.32	2.60	0.00	0.00	0.00
37.15	0.83	0.32	2.60	0.00	0.00	0.00
37.20	0.83	0.32	2.60	0.00	0.00	0.00
37.25	0.83	0.32	2.60	0.00	0.00	0.00
37.30	0.83	0.32	2.61	0.00	0.00	0.00
37.35	0.83	0.32	2.61	0.00	0.00	0.00
37.40	0.83	0.32	2.61	0.00	0.00	0.00

37.45	0.83	0.32	2.61	0.00	0.00	0.00
37.50	0.83	0.32	2.61	0.00	0.00	0.00
37.55	0.83	0.32	2.61	0.00	0.00	0.00
37.60	0.83	0.32	2.61	0.00	0.00	0.00
37.65	0.83	0.32	2.61	0.00	0.00	0.00
37.70	0.83	0.32	2.61	0.00	0.00	0.00
37.75	0.83	0.32	2.61	0.00	0.00	0.00
37.80	0.83	0.32	2.61	0.00	0.00	0.00
37.85	0.83	0.32	2.61	0.00	0.00	0.00
37.90	0.83	0.32	2.61	0.00	0.00	0.00
37.95	0.83	0.32	2.62	0.00	0.00	0.00
38.00	0.83	0.32	2.62	0.00	0.00	0.00
38.05	0.83	0.32	2.62	0.00	0.00	0.00
38.10	0.83	0.32	2.62	0.00	0.00	0.00
38.15	0.83	0.32	2.62	0.00	0.00	0.00
38.20	0.83	0.32	2.62	0.00	0.00	0.00
38.25	0.83	0.32	2.62	0.00	0.00	0.00
38.30	0.83	0.32	2.62	0.00	0.00	0.00
38.35	0.83	0.32	2.62	0.00	0.00	0.00
38.40	0.83	0.32	2.62	0.00	0.00	0.00
38.45	0.83	0.32	2.62	0.00	0.00	0.00
38.50	0.83	0.32	2.62	0.00	0.00	0.00
38.55	0.83	0.32	2.62	0.00	0.00	0.00
38.60	0.83	0.32	2.63	0.00	0.00	0.00
38.65	0.83	0.32	2.63	0.00	0.00	0.00
38.70	0.83	0.32	2.63	0.00	0.00	0.00
38.75	0.83	0.32	2.63	0.00	0.00	0.00
38.80	0.83	0.32	2.63	0.00	0.00	0.00
38.85	0.83	0.32	2.63	0.00	0.00	0.00
38.90	0.83	0.32	2.63	0.00	0.00	0.00
38.95	0.83	0.32	2.63	0.00	0.00	0.00
39.00	0.83	0.32	2.63	0.00	0.00	0.00
39.05	0.83	0.32	2.63	0.00	0.00	0.00
39.10	0.83	0.32	2.63	0.00	0.00	0.00
39.15	0.83	0.32	2.63	0.00	0.00	0.00
39.20	0.83	0.32	2.64	0.00	0.00	0.00
39.25	0.83	0.32	2.64	0.00	0.00	0.00
39.30	0.83	0.31	2.64	0.00	0.00	0.00
39.35	0.83	0.31	2.64	0.00	0.00	0.00
39.40	0.83	0.31	2.64	0.00	0.00	0.00
39.45	0.83	0.31	2.64	0.00	0.00	0.00
39.50	0.83	0.31	2.64	0.00	0.00	0.00
39.55	0.83	0.31	2.64	0.00	0.00	0.00
39.60	0.83	0.31	2.64	0.00	0.00	0.00
39.65	0.83	0.31	2.64	0.00	0.00	0.00
39.70	0.83	0.31	2.64	0.00	0.00	0.00
39.75	0.83	0.31	2.64	0.00	0.00	0.00
39.80	0.83	0.31	2.65	0.00	0.00	0.00
39.85	0.83	0.31	2.65	0.00	0.00	0.00
39.90	0.83	0.31	2.65	0.00	0.00	0.00
39.95	0.83	0.31	2.65	0.00	0.00	0.00
40.00	0.83	0.31	2.65	0.00	0.00	0.00
40.05	0.83	0.31	2.65	0.00	0.00	0.00
40.10	0.83	0.31	2.65	0.00	0.00	0.00
40.15	0.83	0.31	2.65	0.00	0.00	0.00
40.20	0.83	0.31	2.65	0.00	0.00	0.00
40.25	0.83	0.31	2.65	0.00	0.00	0.00
40.30	0.83	0.31	2.66	0.00	0.00	0.00
40.35	0.83	0.31	2.66	0.00	0.00	0.00
40.40	0.83	0.31	2.66	0.00	0.00	0.00
40.45	0.83	0.31	2.66	0.00	0.00	0.00
40.50	0.83	0.31	2.66	0.00	0.00	0.00
40.55	0.83	0.31	2.66	0.00	0.00	0.00
40.60	0.83	0.31	2.66	0.00	0.00	0.00
40.65	0.83	0.31	2.66	0.00	0.00	0.00
40.70	0.83	0.31	2.66	0.00	0.00	0.00
40.75	0.83	0.31	2.67	0.00	0.00	0.00
40.80	0.83	0.31	2.67	0.00	0.00	0.00
40.85	0.83	0.31	2.67	0.00	0.00	0.00
40.90	0.83	0.31	2.67	0.00	0.00	0.00
40.95	0.83	0.31	2.67	0.00	0.00	0.00

41.00	0.83	0.31	2.67	0.00	0.00	0.00
41.05	0.83	0.31	2.67	0.00	0.00	0.00
41.10	0.83	0.31	2.67	0.00	0.00	0.00
41.15	0.83	0.31	2.67	0.00	0.00	0.00
41.20	0.83	0.31	2.67	0.00	0.00	0.00
41.25	0.83	0.31	2.68	0.00	0.00	0.00
41.30	0.83	0.31	2.68	0.00	0.00	0.00
41.35	0.83	0.31	2.68	0.00	0.00	0.00
41.40	0.83	0.31	2.68	0.00	0.00	0.00
41.45	0.83	0.31	2.68	0.00	0.00	0.00
41.50	0.83	0.31	2.68	0.00	0.00	0.00
41.55	0.83	0.31	2.68	0.00	0.00	0.00
41.60	0.83	0.31	2.68	0.00	0.00	0.00
41.65	0.83	0.31	2.68	0.00	0.00	0.00
41.70	0.83	0.31	2.69	0.00	0.00	0.00
41.75	0.83	0.31	2.69	0.00	0.00	0.00
41.80	0.83	0.31	2.69	0.00	0.00	0.00
41.85	0.83	0.31	2.69	0.00	0.00	0.00
41.90	0.83	0.31	2.69	0.00	0.00	0.00
41.95	0.83	0.31	2.69	0.00	0.00	0.00
42.00	0.83	0.31	2.69	0.00	0.00	0.00
42.05	0.83	0.31	2.69	0.00	0.00	0.00
42.10	0.83	0.31	2.69	0.00	0.00	0.00
42.15	0.83	0.31	2.70	0.00	0.00	0.00
42.20	0.83	0.31	2.70	0.00	0.00	0.00
42.25	0.83	0.31	2.70	0.00	0.00	0.00
42.30	0.83	0.31	2.70	0.00	0.00	0.00
42.35	0.83	0.31	2.70	0.00	0.00	0.00
42.40	0.83	0.31	2.70	0.00	0.00	0.00
42.45	0.83	0.31	2.70	0.00	0.00	0.00
42.50	0.83	0.31	2.70	0.00	0.00	0.00
42.55	0.83	0.31	2.71	0.00	0.00	0.00
42.60	0.83	0.31	2.71	0.00	0.00	0.00
42.65	0.83	0.31	2.71	0.00	0.00	0.00
42.70	0.83	0.31	2.71	0.00	0.00	0.00
42.75	0.83	0.31	2.71	0.00	0.00	0.00
42.80	0.83	0.31	2.71	0.00	0.00	0.00
42.85	0.83	0.31	2.71	0.00	0.00	0.00
42.90	0.83	0.31	2.71	0.00	0.00	0.00
42.95	0.83	0.31	2.71	0.00	0.00	0.00
43.00	0.83	0.31	2.72	0.00	0.00	0.00
43.05	0.83	0.31	2.72	0.00	0.00	0.00
43.10	0.83	0.31	2.72	0.00	0.00	0.00
43.15	0.83	0.31	2.72	0.00	0.00	0.00
43.20	0.83	0.31	2.72	0.00	0.00	0.00
43.25	0.83	0.31	2.72	0.00	0.00	0.00
43.30	0.83	0.31	2.72	0.00	0.00	0.00
43.35	0.83	0.31	2.72	0.00	0.00	0.00
43.40	0.83	0.30	2.72	0.00	0.00	0.00
43.45	0.83	0.30	2.73	0.00	0.00	0.00
43.50	0.83	0.30	2.73	0.00	0.00	0.00
43.55	0.83	0.30	2.73	0.00	0.00	0.00
43.60	0.83	0.30	2.73	0.00	0.00	0.00
43.65	0.83	0.30	2.73	0.00	0.00	0.00
43.70	0.83	0.30	2.73	0.00	0.00	0.00
43.75	0.83	0.30	2.73	0.00	0.00	0.00
43.80	0.83	0.30	2.73	0.00	0.00	0.00
43.85	0.83	0.30	2.74	0.00	0.00	0.00
43.90	0.83	0.30	2.74	0.00	0.00	0.00
43.95	0.83	0.30	2.74	0.00	0.00	0.00
44.00	0.83	0.30	2.74	0.00	0.00	0.00
44.05	0.83	0.30	2.74	0.00	0.00	0.00
44.10	0.83	0.30	2.74	0.00	0.00	0.00
44.15	0.83	0.30	2.74	0.00	0.00	0.00
44.20	0.83	0.30	2.74	0.00	0.00	0.00
44.25	0.83	0.30	2.74	0.00	0.00	0.00
44.30	0.83	0.30	2.75	0.00	0.00	0.00
44.35	0.83	0.30	2.75	0.00	0.00	0.00
44.40	0.83	0.30	2.75	0.00	0.00	0.00
44.45	0.83	0.30	2.75	0.00	0.00	0.00
44.50	0.83	0.30	2.75	0.00	0.00	0.00

44.55	0.83	0.30	2.75	0.00	0.00	0.00
44.60	0.83	0.30	2.75	0.00	0.00	0.00
44.65	0.83	0.30	2.75	0.00	0.00	0.00
44.70	0.83	0.30	2.76	0.00	0.00	0.00
44.75	0.83	0.30	2.76	0.00	0.00	0.00
44.80	0.83	0.30	2.76	0.00	0.00	0.00
44.85	0.83	0.30	2.76	0.00	0.00	0.00
44.90	0.83	0.30	2.76	0.00	0.00	0.00
44.95	0.83	0.30	2.76	0.00	0.00	0.00
45.00	0.83	0.30	2.76	0.00	0.00	0.00
45.05	0.83	0.30	2.76	0.00	0.00	0.00
45.10	0.83	0.30	2.76	0.00	0.00	0.00
45.15	0.83	0.30	2.77	0.00	0.00	0.00
45.20	0.83	0.30	2.77	0.00	0.00	0.00
45.25	0.83	0.30	2.77	0.00	0.00	0.00
45.30	0.83	0.30	2.77	0.00	0.00	0.00
45.35	0.83	0.30	2.77	0.00	0.00	0.00
45.40	0.83	0.30	2.77	0.00	0.00	0.00
45.45	0.83	0.30	2.77	0.00	0.00	0.00
45.50	0.83	0.30	2.77	0.00	0.00	0.00
45.55	0.83	0.30	2.77	0.00	0.00	0.00
45.60	0.83	0.30	2.77	0.00	0.00	0.00
45.65	0.83	0.30	2.78	0.00	0.00	0.00
45.70	0.83	0.30	2.78	0.00	0.00	0.00
45.75	0.83	0.30	2.78	0.00	0.00	0.00
45.80	0.83	0.30	2.78	0.00	0.00	0.00
45.85	0.83	0.30	2.78	0.00	0.00	0.00
45.90	0.83	0.30	2.78	0.00	0.00	0.00
45.95	0.83	0.30	2.78	0.00	0.00	0.00
46.00	0.83	0.30	2.78	0.00	0.00	0.00
46.05	0.83	0.30	2.78	0.00	0.00	0.00
46.10	0.83	0.30	2.78	0.00	0.00	0.00
46.15	0.83	0.30	2.79	0.00	0.00	0.00
46.20	0.83	0.30	2.79	0.00	0.00	0.00
46.25	0.83	0.30	2.79	0.00	0.00	0.00
46.30	0.83	0.30	2.79	0.00	0.00	0.00
46.35	0.83	0.30	2.79	0.00	0.00	0.00
46.40	0.83	0.30	2.79	0.00	0.00	0.00
46.45	0.83	0.30	2.79	0.00	0.00	0.00
46.50	0.83	0.30	2.79	0.00	0.00	0.00
46.55	0.83	0.30	2.79	0.00	0.00	0.00
46.60	0.83	0.30	2.79	0.00	0.00	0.00
46.65	0.83	0.30	2.80	0.00	0.00	0.00
46.70	0.83	0.30	2.80	0.00	0.00	0.00
46.75	0.83	0.30	2.80	0.00	0.00	0.00
46.80	0.83	0.30	2.80	0.00	0.00	0.00
46.85	0.83	0.30	2.80	0.00	0.00	0.00
46.90	0.83	0.30	2.80	0.00	0.00	0.00
46.95	0.83	0.30	2.80	0.00	0.00	0.00
47.00	0.83	0.30	2.80	0.00	0.00	0.00
47.05	0.83	0.30	2.80	0.00	0.00	0.00
47.10	0.83	0.30	2.81	0.00	0.00	0.00
47.15	0.83	0.30	2.81	0.00	0.00	0.00
47.20	0.83	0.30	2.81	0.00	0.00	0.00
47.25	0.83	0.30	2.81	0.00	0.00	0.00
47.30	0.83	0.30	2.81	0.00	0.00	0.00
47.35	0.83	0.30	2.81	0.00	0.00	0.00
47.40	0.83	0.30	2.81	0.00	0.00	0.00
47.45	0.83	0.30	2.81	0.00	0.00	0.00
47.50	0.83	0.30	2.81	0.00	0.00	0.00
47.55	0.83	0.30	2.81	0.00	0.00	0.00
47.60	0.83	0.30	2.82	0.00	0.00	0.00
47.65	0.83	0.29	2.82	0.00	0.00	0.00
47.70	0.83	0.29	2.82	0.00	0.00	0.00
47.75	0.83	0.29	2.82	0.00	0.00	0.00
47.80	0.83	0.29	2.82	0.00	0.00	0.00
47.85	0.83	0.29	2.82	0.00	0.00	0.00
47.90	0.83	0.29	2.82	0.00	0.00	0.00
47.95	0.83	0.29	2.82	0.00	0.00	0.00
48.00	0.84	0.29	2.84	0.00	0.00	0.00
48.05	0.84	0.29	2.84	0.00	0.00	0.00

48.10	0.84	0.29	2.84	0.00	0.00	0.00
48.15	0.84	0.29	2.84	0.00	0.00	0.00
48.20	0.84	0.29	2.84	0.00	0.00	0.00
48.25	0.84	0.29	2.85	0.00	0.00	0.00
48.30	0.84	0.29	2.85	0.00	0.00	0.00
48.35	0.84	0.29	2.85	0.00	0.00	0.00
48.40	0.84	0.29	2.85	0.00	0.00	0.00
48.45	0.83	0.29	2.85	0.00	0.00	0.00
48.50	0.83	0.29	2.85	0.00	0.00	0.00
48.55	0.83	0.29	2.85	0.00	0.00	0.00
48.60	0.83	0.29	2.85	0.00	0.00	0.00
48.65	0.83	0.29	2.85	0.00	0.00	0.00
48.70	0.83	0.29	2.85	0.00	0.00	0.00
48.75	0.83	0.29	2.85	0.00	0.00	0.00
48.80	0.83	0.29	2.85	0.00	0.00	0.00
48.85	0.83	0.29	2.85	0.00	0.00	0.00
48.90	0.83	0.29	2.86	0.00	0.00	0.00
48.95	0.83	0.29	2.86	0.00	0.00	0.00
49.00	0.83	0.29	2.86	0.00	0.00	0.00
49.05	0.83	0.29	2.86	0.00	0.00	0.00
49.10	0.83	0.29	2.86	0.00	0.00	0.00
49.15	0.83	0.29	2.86	0.00	0.00	0.00
49.20	0.83	0.29	2.86	0.00	0.00	0.00
49.25	0.83	0.29	2.86	0.00	0.00	0.00
49.30	0.83	0.29	2.86	0.00	0.00	0.00
49.35	0.83	0.29	2.86	0.00	0.00	0.00
49.40	0.83	0.29	2.86	0.00	0.00	0.00
49.45	0.83	0.29	2.86	0.00	0.00	0.00
49.50	0.83	0.29	2.86	0.00	0.00	0.00
49.55	0.83	0.29	2.87	0.00	0.00	0.00
49.60	0.83	0.29	2.87	0.00	0.00	0.00
49.65	0.83	0.29	2.87	0.00	0.00	0.00
49.70	0.83	0.29	2.87	0.00	0.00	0.00
49.75	0.83	0.29	2.87	0.00	0.00	0.00
49.80	0.83	0.29	2.87	0.00	0.00	0.00
49.85	0.83	0.29	2.87	0.00	0.00	0.00
49.90	0.83	0.29	2.87	0.00	0.00	0.00
49.95	0.83	0.29	2.87	0.00	0.00	0.00
50.00	0.83	0.29	2.87	0.00	0.00	0.00

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* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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1 atm (atmosphere) = 1 tsf (ton/ft2)

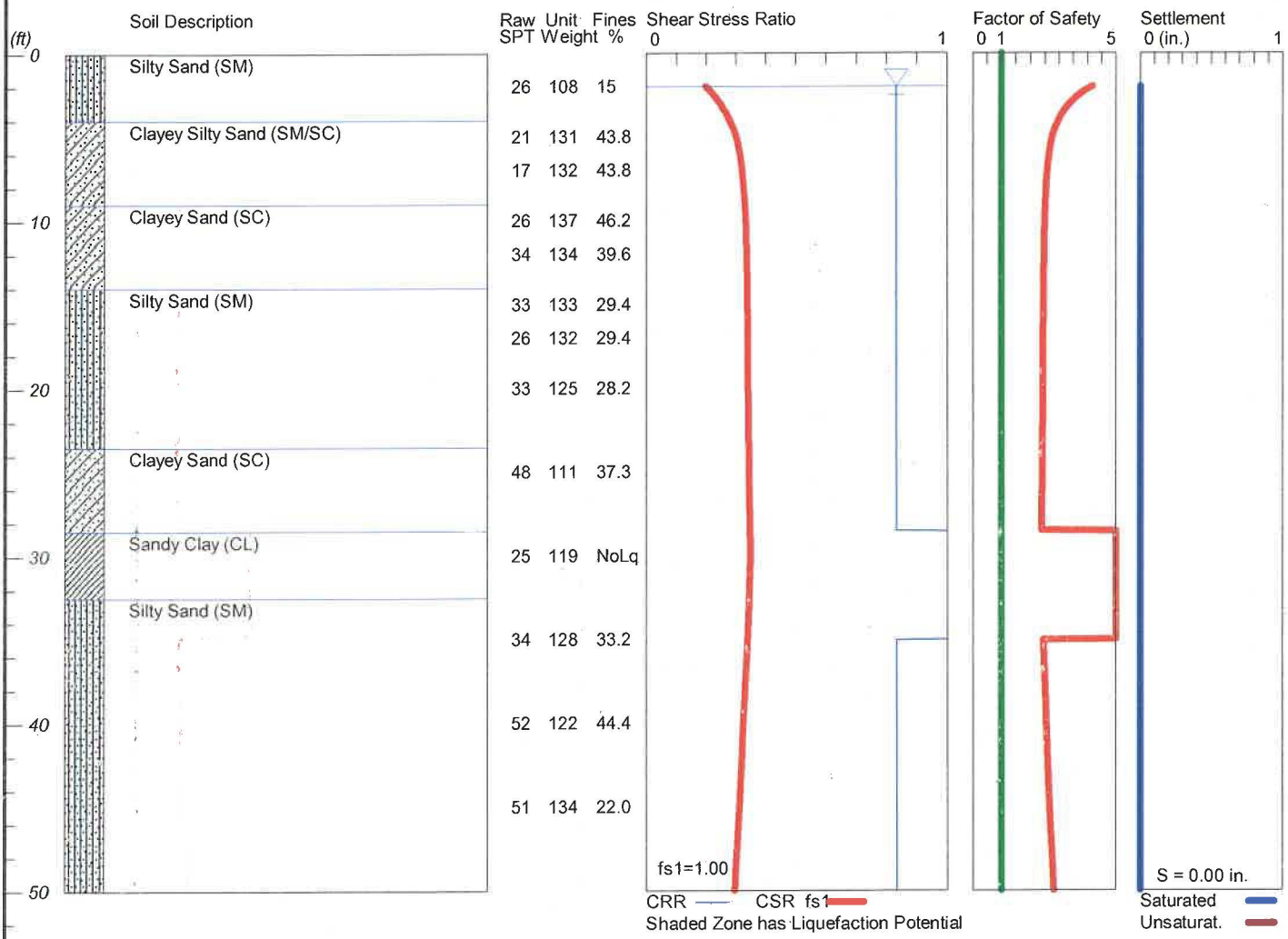
CRRm	Cyclic resistance ratio from soils
CSRsf	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S.	Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat	Settlement from saturated sands
S_dry	Settlement from Unsaturated Sands
S_all	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B4 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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Krazan

012-22165

Plate A-1

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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\16S Triangle Development\B4\0122216S B4 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-2216S

Surface Elev.=
Hole No.=B4
Depth of Hole= S0.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.1S

Input Data:
Surface Elev.=
Hole No.=B4
Depth of Hole=S0.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
S. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.2S
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	26.00	108.00	1S.00
S.00	21.00	131.00	43.80
7.00	17.00	132.00	43.80
10.00	26.00	137.00	46.20
12.00	34.00	134.00	39.60
1S.00	33.00	133.00	29.40
17.00	26.00	132.00	29.40
20.00	33.00	12S.00	28.20
2S.00	48.00	111.00	37.30
30.00	2S.00	119.00	NoLiq
3S.00	34.00	128.00	33.20
40.00	S2.00	122.00	44.40
45.00	S1.00	134.00	22.00

Output Results:
Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.00 in.
Differential Settlement=0.000 to 0.000 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

2.00	0.83	0.20	4.18	0.00	0.00	0.00
2.05	0.83	0.20	4.12	0.00	0.00	0.00
2.10	0.83	0.20	4.07	0.00	0.00	0.00
2.15	0.83	0.21	4.02	0.00	0.00	0.00
2.20	0.83	0.21	3.96	0.00	0.00	0.00
2.25	0.83	0.21	3.92	0.00	0.00	0.00
2.30	0.83	0.21	3.87	0.00	0.00	0.00
2.35	0.83	0.22	3.83	0.00	0.00	0.00
2.40	0.83	0.22	3.78	0.00	0.00	0.00
2.45	0.83	0.22	3.74	0.00	0.00	0.00
2.50	0.83	0.22	3.70	0.00	0.00	0.00
2.55	0.83	0.23	3.67	0.00	0.00	0.00
2.60	0.83	0.23	3.63	0.00	0.00	0.00
2.65	0.83	0.23	3.60	0.00	0.00	0.00
2.70	0.83	0.23	3.56	0.00	0.00	0.00
2.75	0.83	0.24	3.53	0.00	0.00	0.00
2.80	0.83	0.24	3.50	0.00	0.00	0.00
2.85	0.83	0.24	3.47	0.00	0.00	0.00
2.90	0.83	0.24	3.44	0.00	0.00	0.00
2.95	0.83	0.24	3.41	0.00	0.00	0.00
3.00	0.83	0.25	3.38	0.00	0.00	0.00
3.05	0.83	0.25	3.36	0.00	0.00	0.00
3.10	0.83	0.25	3.33	0.00	0.00	0.00
3.15	0.83	0.25	3.31	0.00	0.00	0.00
3.20	0.83	0.25	3.29	0.00	0.00	0.00
3.25	0.83	0.25	3.26	0.00	0.00	0.00
3.30	0.83	0.26	3.24	0.00	0.00	0.00
3.35	0.83	0.26	3.22	0.00	0.00	0.00
3.40	0.83	0.26	3.20	0.00	0.00	0.00
3.45	0.83	0.26	3.18	0.00	0.00	0.00
3.50	0.83	0.26	3.16	0.00	0.00	0.00
3.55	0.83	0.26	3.14	0.00	0.00	0.00
3.60	0.83	0.27	3.12	0.00	0.00	0.00
3.65	0.83	0.27	3.10	0.00	0.00	0.00
3.70	0.83	0.27	3.08	0.00	0.00	0.00
3.75	0.83	0.27	3.07	0.00	0.00	0.00
3.80	0.83	0.27	3.05	0.00	0.00	0.00
3.85	0.83	0.27	3.03	0.00	0.00	0.00
3.90	0.83	0.28	3.02	0.00	0.00	0.00
3.95	0.83	0.28	3.00	0.00	0.00	0.00
4.00	0.83	0.28	2.99	0.00	0.00	0.00
4.05	0.83	0.28	2.97	0.00	0.00	0.00
4.10	0.83	0.28	2.96	0.00	0.00	0.00
4.15	0.83	0.28	2.95	0.00	0.00	0.00
4.20	0.83	0.28	2.93	0.00	0.00	0.00
4.25	0.83	0.28	2.92	0.00	0.00	0.00
4.30	0.83	0.29	2.91	0.00	0.00	0.00
4.35	0.83	0.29	2.89	0.00	0.00	0.00
4.40	0.83	0.29	2.88	0.00	0.00	0.00
4.45	0.83	0.29	2.87	0.00	0.00	0.00
4.50	0.83	0.29	2.86	0.00	0.00	0.00
4.55	0.83	0.29	2.85	0.00	0.00	0.00
4.60	0.83	0.29	2.83	0.00	0.00	0.00
4.65	0.83	0.29	2.82	0.00	0.00	0.00
4.70	0.83	0.30	2.81	0.00	0.00	0.00
4.75	0.83	0.30	2.80	0.00	0.00	0.00
4.80	0.83	0.30	2.79	0.00	0.00	0.00
4.85	0.83	0.30	2.78	0.00	0.00	0.00
4.90	0.83	0.30	2.77	0.00	0.00	0.00
4.95	0.83	0.30	2.76	0.00	0.00	0.00
5.00	0.83	0.30	2.75	0.00	0.00	0.00
5.05	0.83	0.30	2.75	0.00	0.00	0.00
5.10	0.83	0.30	2.74	0.00	0.00	0.00
5.15	0.83	0.30	2.73	0.00	0.00	0.00
5.20	0.83	0.30	2.73	0.00	0.00	0.00
5.25	0.83	0.31	2.72	0.00	0.00	0.00
5.30	0.83	0.31	2.72	0.00	0.00	0.00
5.35	0.83	0.31	2.71	0.00	0.00	0.00
5.40	0.83	0.31	2.71	0.00	0.00	0.00
5.45	0.83	0.31	2.70	0.00	0.00	0.00

5.50	0.83	0.31	2.70	0.00	0.00	0.00
5.55	0.83	0.31	2.69	0.00	0.00	0.00
5.60	0.83	0.31	2.69	0.00	0.00	0.00
5.65	0.83	0.31	2.68	0.00	0.00	0.00
5.70	0.83	0.31	2.68	0.00	0.00	0.00
5.75	0.83	0.31	2.67	0.00	0.00	0.00
5.80	0.83	0.31	2.67	0.00	0.00	0.00
5.85	0.83	0.31	2.66	0.00	0.00	0.00
5.90	0.83	0.31	2.66	0.00	0.00	0.00
5.95	0.83	0.31	2.66	0.00	0.00	0.00
6.00	0.83	0.31	2.65	0.00	0.00	0.00
6.05	0.83	0.31	2.65	0.00	0.00	0.00
6.10	0.83	0.31	2.64	0.00	0.00	0.00
6.15	0.83	0.31	2.64	0.00	0.00	0.00
6.20	0.83	0.32	2.64	0.00	0.00	0.00
6.25	0.83	0.32	2.63	0.00	0.00	0.00
6.30	0.83	0.32	2.63	0.00	0.00	0.00
6.35	0.83	0.32	2.63	0.00	0.00	0.00
6.40	0.83	0.32	2.62	0.00	0.00	0.00
6.45	0.83	0.32	2.62	0.00	0.00	0.00
6.50	0.83	0.32	2.62	0.00	0.00	0.00
6.55	0.83	0.32	2.61	0.00	0.00	0.00
6.60	0.83	0.32	2.61	0.00	0.00	0.00
6.65	0.83	0.32	2.61	0.00	0.00	0.00
6.70	0.83	0.32	2.60	0.00	0.00	0.00
6.75	0.83	0.32	2.60	0.00	0.00	0.00
6.80	0.83	0.32	2.60	0.00	0.00	0.00
6.85	0.83	0.32	2.59	0.00	0.00	0.00
6.90	0.83	0.32	2.59	0.00	0.00	0.00
6.95	0.83	0.32	2.59	0.00	0.00	0.00
7.00	0.83	0.32	2.59	0.00	0.00	0.00
7.05	0.83	0.32	2.58	0.00	0.00	0.00
7.10	0.83	0.32	2.58	0.00	0.00	0.00
7.15	0.83	0.32	2.58	0.00	0.00	0.00
7.20	0.83	0.32	2.58	0.00	0.00	0.00
7.25	0.83	0.32	2.57	0.00	0.00	0.00
7.30	0.83	0.32	2.57	0.00	0.00	0.00
7.35	0.83	0.32	2.57	0.00	0.00	0.00
7.40	0.83	0.32	2.57	0.00	0.00	0.00
7.45	0.83	0.32	2.56	0.00	0.00	0.00
7.50	0.83	0.32	2.56	0.00	0.00	0.00
7.55	0.83	0.32	2.56	0.00	0.00	0.00
7.60	0.83	0.32	2.56	0.00	0.00	0.00
7.65	0.83	0.33	2.56	0.00	0.00	0.00
7.70	0.83	0.33	2.55	0.00	0.00	0.00
7.75	0.83	0.33	2.55	0.00	0.00	0.00
7.80	0.83	0.33	2.55	0.00	0.00	0.00
7.85	0.83	0.33	2.55	0.00	0.00	0.00
7.90	0.83	0.33	2.55	0.00	0.00	0.00
7.95	0.83	0.33	2.54	0.00	0.00	0.00
8.00	0.83	0.33	2.54	0.00	0.00	0.00
8.05	0.83	0.33	2.54	0.00	0.00	0.00
8.10	0.83	0.33	2.54	0.00	0.00	0.00
8.15	0.83	0.33	2.54	0.00	0.00	0.00
8.20	0.83	0.33	2.53	0.00	0.00	0.00
8.25	0.83	0.33	2.53	0.00	0.00	0.00
8.30	0.83	0.33	2.53	0.00	0.00	0.00
8.35	0.83	0.33	2.53	0.00	0.00	0.00
8.40	0.83	0.33	2.53	0.00	0.00	0.00
8.45	0.83	0.33	2.53	0.00	0.00	0.00
8.50	0.83	0.33	2.52	0.00	0.00	0.00
8.55	0.83	0.33	2.52	0.00	0.00	0.00
8.60	0.83	0.33	2.52	0.00	0.00	0.00
8.65	0.83	0.33	2.52	0.00	0.00	0.00
8.70	0.83	0.33	2.52	0.00	0.00	0.00
8.75	0.83	0.33	2.52	0.00	0.00	0.00
8.80	0.83	0.33	2.52	0.00	0.00	0.00
8.85	0.83	0.33	2.51	0.00	0.00	0.00
8.90	0.83	0.33	2.51	0.00	0.00	0.00
8.95	0.83	0.33	2.51	0.00	0.00	0.00
9.00	0.83	0.33	2.51	0.00	0.00	0.00

9.05	0.83	0.33	2.51	0.00	0.00	0.00
9.10	0.83	0.33	2.51	0.00	0.00	0.00
9.15	0.83	0.33	2.51	0.00	0.00	0.00
9.20	0.83	0.33	2.50	0.00	0.00	0.00
9.25	0.83	0.33	2.50	0.00	0.00	0.00
9.30	0.83	0.33	2.50	0.00	0.00	0.00
9.35	0.83	0.33	2.50	0.00	0.00	0.00
9.40	0.83	0.33	2.50	0.00	0.00	0.00
9.45	0.83	0.33	2.50	0.00	0.00	0.00
9.50	0.83	0.33	2.50	0.00	0.00	0.00
9.55	0.83	0.33	2.50	0.00	0.00	0.00
9.60	0.83	0.33	2.49	0.00	0.00	0.00
9.65	0.83	0.33	2.49	0.00	0.00	0.00
9.70	0.83	0.33	2.49	0.00	0.00	0.00
9.75	0.83	0.33	2.49	0.00	0.00	0.00
9.80	0.83	0.33	2.49	0.00	0.00	0.00
9.85	0.83	0.33	2.49	0.00	0.00	0.00
9.90	0.83	0.33	2.49	0.00	0.00	0.00
9.95	0.83	0.33	2.49	0.00	0.00	0.00
10.00	0.83	0.33	2.49	0.00	0.00	0.00
10.05	0.83	0.33	2.49	0.00	0.00	0.00
10.10	0.83	0.33	2.48	0.00	0.00	0.00
10.15	0.83	0.33	2.48	0.00	0.00	0.00
10.20	0.83	0.33	2.48	0.00	0.00	0.00
10.25	0.83	0.33	2.48	0.00	0.00	0.00
10.30	0.83	0.33	2.48	0.00	0.00	0.00
10.35	0.83	0.33	2.48	0.00	0.00	0.00
10.40	0.83	0.33	2.48	0.00	0.00	0.00
10.45	0.83	0.33	2.48	0.00	0.00	0.00
10.50	0.83	0.33	2.48	0.00	0.00	0.00
10.55	0.83	0.34	2.48	0.00	0.00	0.00
10.60	0.83	0.34	2.48	0.00	0.00	0.00
10.65	0.83	0.34	2.48	0.00	0.00	0.00
10.70	0.83	0.34	2.48	0.00	0.00	0.00
10.75	0.83	0.34	2.48	0.00	0.00	0.00
10.80	0.83	0.34	2.48	0.00	0.00	0.00
10.85	0.83	0.34	2.48	0.00	0.00	0.00
10.90	0.83	0.34	2.48	0.00	0.00	0.00
10.95	0.83	0.34	2.48	0.00	0.00	0.00
11.00	0.83	0.34	2.48	0.00	0.00	0.00
11.05	0.83	0.34	2.47	0.00	0.00	0.00
11.10	0.83	0.34	2.47	0.00	0.00	0.00
11.15	0.83	0.34	2.47	0.00	0.00	0.00
11.20	0.83	0.34	2.47	0.00	0.00	0.00
11.25	0.83	0.34	2.47	0.00	0.00	0.00
11.30	0.83	0.34	2.47	0.00	0.00	0.00
11.35	0.83	0.34	2.47	0.00	0.00	0.00
11.40	0.83	0.34	2.47	0.00	0.00	0.00
11.45	0.83	0.34	2.47	0.00	0.00	0.00
11.50	0.83	0.34	2.47	0.00	0.00	0.00
11.55	0.83	0.34	2.47	0.00	0.00	0.00
11.60	0.83	0.34	2.47	0.00	0.00	0.00
11.65	0.83	0.34	2.47	0.00	0.00	0.00
11.70	0.83	0.34	2.47	0.00	0.00	0.00
11.75	0.83	0.34	2.47	0.00	0.00	0.00
11.80	0.83	0.34	2.47	0.00	0.00	0.00
11.85	0.83	0.34	2.47	0.00	0.00	0.00
11.90	0.83	0.34	2.47	0.00	0.00	0.00
11.95	0.83	0.34	2.47	0.00	0.00	0.00
12.00	0.83	0.34	2.47	0.00	0.00	0.00
12.05	0.83	0.34	2.47	0.00	0.00	0.00
12.10	0.83	0.34	2.47	0.00	0.00	0.00
12.15	0.83	0.34	2.47	0.00	0.00	0.00
12.20	0.83	0.34	2.47	0.00	0.00	0.00
12.25	0.83	0.34	2.46	0.00	0.00	0.00
12.30	0.83	0.34	2.46	0.00	0.00	0.00
12.35	0.83	0.34	2.46	0.00	0.00	0.00
12.40	0.83	0.34	2.46	0.00	0.00	0.00
12.45	0.83	0.34	2.46	0.00	0.00	0.00
12.50	0.83	0.34	2.46	0.00	0.00	0.00
12.55	0.83	0.34	2.46	0.00	0.00	0.00

12.60	0.83	0.34	2.46	0.00	0.00	0.00
12.65	0.83	0.34	2.46	0.00	0.00	0.00
12.70	0.83	0.34	2.46	0.00	0.00	0.00
12.75	0.83	0.34	2.46	0.00	0.00	0.00
12.80	0.83	0.34	2.46	0.00	0.00	0.00
12.85	0.83	0.34	2.46	0.00	0.00	0.00
12.90	0.83	0.34	2.46	0.00	0.00	0.00
12.95	0.83	0.34	2.46	0.00	0.00	0.00
13.00	0.83	0.34	2.46	0.00	0.00	0.00
13.05	0.83	0.34	2.46	0.00	0.00	0.00
13.10	0.83	0.34	2.46	0.00	0.00	0.00
13.15	0.83	0.34	2.46	0.00	0.00	0.00
13.20	0.83	0.34	2.46	0.00	0.00	0.00
13.25	0.83	0.34	2.46	0.00	0.00	0.00
13.30	0.83	0.34	2.46	0.00	0.00	0.00
13.35	0.83	0.34	2.46	0.00	0.00	0.00
13.40	0.83	0.34	2.46	0.00	0.00	0.00
13.45	0.83	0.34	2.45	0.00	0.00	0.00
13.50	0.83	0.34	2.45	0.00	0.00	0.00
13.55	0.83	0.34	2.45	0.00	0.00	0.00
13.60	0.83	0.34	2.45	0.00	0.00	0.00
13.65	0.83	0.34	2.45	0.00	0.00	0.00
13.70	0.83	0.34	2.45	0.00	0.00	0.00
13.75	0.83	0.34	2.45	0.00	0.00	0.00
13.80	0.83	0.34	2.45	0.00	0.00	0.00
13.85	0.83	0.34	2.45	0.00	0.00	0.00
13.90	0.83	0.34	2.45	0.00	0.00	0.00
13.95	0.83	0.34	2.45	0.00	0.00	0.00
14.00	0.83	0.34	2.45	0.00	0.00	0.00
14.05	0.83	0.34	2.45	0.00	0.00	0.00
14.10	0.83	0.34	2.45	0.00	0.00	0.00
14.15	0.83	0.34	2.45	0.00	0.00	0.00
14.20	0.83	0.34	2.45	0.00	0.00	0.00
14.25	0.83	0.34	2.45	0.00	0.00	0.00
14.30	0.83	0.34	2.45	0.00	0.00	0.00
14.35	0.83	0.34	2.45	0.00	0.00	0.00
14.40	0.83	0.34	2.45	0.00	0.00	0.00
14.45	0.83	0.34	2.45	0.00	0.00	0.00
14.50	0.83	0.34	2.45	0.00	0.00	0.00
14.55	0.83	0.34	2.45	0.00	0.00	0.00
14.60	0.83	0.34	2.45	0.00	0.00	0.00
14.65	0.83	0.34	2.45	0.00	0.00	0.00
14.70	0.83	0.34	2.45	0.00	0.00	0.00
14.75	0.83	0.34	2.45	0.00	0.00	0.00
14.80	0.83	0.34	2.45	0.00	0.00	0.00
14.85	0.83	0.34	2.45	0.00	0.00	0.00
14.90	0.83	0.34	2.45	0.00	0.00	0.00
14.95	0.83	0.34	2.45	0.00	0.00	0.00
15.00	0.83	0.34	2.45	0.00	0.00	0.00
15.05	0.83	0.34	2.45	0.00	0.00	0.00
15.10	0.83	0.34	2.45	0.00	0.00	0.00
15.15	0.83	0.34	2.45	0.00	0.00	0.00
15.20	0.83	0.34	2.45	0.00	0.00	0.00
15.25	0.83	0.34	2.45	0.00	0.00	0.00
15.30	0.83	0.34	2.44	0.00	0.00	0.00
15.35	0.83	0.34	2.44	0.00	0.00	0.00
15.40	0.83	0.34	2.44	0.00	0.00	0.00
15.45	0.83	0.34	2.44	0.00	0.00	0.00
15.50	0.83	0.34	2.44	0.00	0.00	0.00
15.55	0.83	0.34	2.44	0.00	0.00	0.00
15.60	0.83	0.34	2.44	0.00	0.00	0.00
15.65	0.83	0.34	2.44	0.00	0.00	0.00
15.70	0.83	0.34	2.44	0.00	0.00	0.00
15.75	0.83	0.34	2.44	0.00	0.00	0.00
15.80	0.83	0.34	2.44	0.00	0.00	0.00
15.85	0.83	0.34	2.44	0.00	0.00	0.00
15.90	0.83	0.34	2.44	0.00	0.00	0.00
15.95	0.83	0.34	2.44	0.00	0.00	0.00
16.00	0.83	0.34	2.44	0.00	0.00	0.00
16.05	0.83	0.34	2.44	0.00	0.00	0.00
16.10	0.83	0.34	2.44	0.00	0.00	0.00

16.15	0.83	0.34	2.44	0.00	0.00	0.00
16.20	0.83	0.34	2.44	0.00	0.00	0.00
16.25	0.83	0.34	2.44	0.00	0.00	0.00
16.30	0.83	0.34	2.44	0.00	0.00	0.00
16.35	0.83	0.34	2.44	0.00	0.00	0.00
16.40	0.83	0.34	2.44	0.00	0.00	0.00
16.45	0.83	0.34	2.44	0.00	0.00	0.00
16.50	0.83	0.34	2.44	0.00	0.00	0.00
16.55	0.83	0.34	2.44	0.00	0.00	0.00
16.60	0.83	0.34	2.44	0.00	0.00	0.00
16.65	0.83	0.34	2.44	0.00	0.00	0.00
16.70	0.83	0.34	2.44	0.00	0.00	0.00
16.75	0.83	0.34	2.44	0.00	0.00	0.00
16.80	0.83	0.34	2.44	0.00	0.00	0.00
16.85	0.83	0.34	2.44	0.00	0.00	0.00
16.90	0.83	0.34	2.44	0.00	0.00	0.00
16.95	0.83	0.34	2.44	0.00	0.00	0.00
17.00	0.83	0.34	2.44	0.00	0.00	0.00
17.05	0.83	0.34	2.44	0.00	0.00	0.00
17.10	0.83	0.34	2.44	0.00	0.00	0.00
17.15	0.83	0.34	2.44	0.00	0.00	0.00
17.20	0.83	0.34	2.44	0.00	0.00	0.00
17.25	0.83	0.34	2.44	0.00	0.00	0.00
17.30	0.83	0.34	2.44	0.00	0.00	0.00
17.35	0.83	0.34	2.44	0.00	0.00	0.00
17.40	0.83	0.34	2.44	0.00	0.00	0.00
17.45	0.83	0.34	2.44	0.00	0.00	0.00
17.50	0.83	0.34	2.44	0.00	0.00	0.00
17.55	0.83	0.34	2.44	0.00	0.00	0.00
17.60	0.83	0.34	2.44	0.00	0.00	0.00
17.65	0.83	0.34	2.44	0.00	0.00	0.00
17.70	0.83	0.34	2.44	0.00	0.00	0.00
17.75	0.83	0.34	2.44	0.00	0.00	0.00
17.80	0.83	0.34	2.44	0.00	0.00	0.00
17.85	0.83	0.34	2.44	0.00	0.00	0.00
17.90	0.83	0.34	2.44	0.00	0.00	0.00
17.95	0.83	0.34	2.44	0.00	0.00	0.00
18.00	0.83	0.34	2.44	0.00	0.00	0.00
18.05	0.83	0.34	2.44	0.00	0.00	0.00
18.10	0.83	0.34	2.44	0.00	0.00	0.00
18.15	0.83	0.34	2.44	0.00	0.00	0.00
18.20	0.83	0.34	2.44	0.00	0.00	0.00
18.25	0.83	0.34	2.44	0.00	0.00	0.00
18.30	0.83	0.34	2.44	0.00	0.00	0.00
18.35	0.83	0.34	2.43	0.00	0.00	0.00
18.40	0.83	0.34	2.43	0.00	0.00	0.00
18.45	0.83	0.34	2.43	0.00	0.00	0.00
18.50	0.83	0.34	2.43	0.00	0.00	0.00
18.55	0.83	0.34	2.43	0.00	0.00	0.00
18.60	0.83	0.34	2.43	0.00	0.00	0.00
18.65	0.83	0.34	2.43	0.00	0.00	0.00
18.70	0.83	0.34	2.43	0.00	0.00	0.00
18.75	0.83	0.34	2.43	0.00	0.00	0.00
18.80	0.83	0.34	2.43	0.00	0.00	0.00
18.85	0.83	0.34	2.43	0.00	0.00	0.00
18.90	0.83	0.34	2.43	0.00	0.00	0.00
18.95	0.83	0.34	2.43	0.00	0.00	0.00
19.00	0.83	0.34	2.43	0.00	0.00	0.00
19.05	0.83	0.34	2.43	0.00	0.00	0.00
19.10	0.83	0.34	2.43	0.00	0.00	0.00
19.15	0.83	0.34	2.43	0.00	0.00	0.00
19.20	0.83	0.34	2.43	0.00	0.00	0.00
19.25	0.83	0.34	2.43	0.00	0.00	0.00
19.30	0.83	0.34	2.43	0.00	0.00	0.00
19.35	0.83	0.34	2.43	0.00	0.00	0.00
19.40	0.83	0.34	2.43	0.00	0.00	0.00
19.45	0.83	0.34	2.43	0.00	0.00	0.00
19.50	0.83	0.34	2.43	0.00	0.00	0.00
19.55	0.83	0.34	2.43	0.00	0.00	0.00
19.60	0.83	0.34	2.43	0.00	0.00	0.00
19.65	0.83	0.34	2.43	0.00	0.00	0.00

19.70	0.83	0.34	2.43	0.00	0.00	0.00
19.75	0.83	0.34	2.43	0.00	0.00	0.00
19.80	0.83	0.34	2.43	0.00	0.00	0.00
19.85	0.83	0.34	2.43	0.00	0.00	0.00
19.90	0.83	0.34	2.43	0.00	0.00	0.00
19.95	0.83	0.34	2.43	0.00	0.00	0.00
20.00	0.83	0.34	2.43	0.00	0.00	0.00
20.05	0.83	0.34	2.43	0.00	0.00	0.00
20.10	0.83	0.34	2.43	0.00	0.00	0.00
20.15	0.83	0.34	2.43	0.00	0.00	0.00
20.20	0.83	0.34	2.43	0.00	0.00	0.00
20.25	0.83	0.34	2.43	0.00	0.00	0.00
20.30	0.83	0.34	2.43	0.00	0.00	0.00
20.35	0.83	0.34	2.43	0.00	0.00	0.00
20.40	0.83	0.34	2.43	0.00	0.00	0.00
20.45	0.83	0.34	2.43	0.00	0.00	0.00
20.50	0.83	0.34	2.43	0.00	0.00	0.00
20.55	0.83	0.34	2.43	0.00	0.00	0.00
20.60	0.83	0.34	2.43	0.00	0.00	0.00
20.65	0.83	0.34	2.43	0.00	0.00	0.00
20.70	0.83	0.34	2.43	0.00	0.00	0.00
20.75	0.83	0.34	2.43	0.00	0.00	0.00
20.80	0.83	0.34	2.43	0.00	0.00	0.00
20.85	0.83	0.34	2.43	0.00	0.00	0.00
20.90	0.83	0.34	2.43	0.00	0.00	0.00
20.95	0.83	0.34	2.43	0.00	0.00	0.00
21.00	0.83	0.34	2.43	0.00	0.00	0.00
21.05	0.83	0.34	2.43	0.00	0.00	0.00
21.10	0.83	0.34	2.43	0.00	0.00	0.00
21.15	0.83	0.34	2.43	0.00	0.00	0.00
21.20	0.83	0.34	2.43	0.00	0.00	0.00
21.25	0.83	0.34	2.43	0.00	0.00	0.00
21.30	0.83	0.34	2.43	0.00	0.00	0.00
21.35	0.83	0.34	2.43	0.00	0.00	0.00
21.40	0.83	0.34	2.43	0.00	0.00	0.00
21.45	0.83	0.34	2.43	0.00	0.00	0.00
21.50	0.83	0.34	2.42	0.00	0.00	0.00
21.55	0.83	0.34	2.42	0.00	0.00	0.00
21.60	0.83	0.34	2.42	0.00	0.00	0.00
21.65	0.83	0.34	2.42	0.00	0.00	0.00
21.70	0.83	0.34	2.42	0.00	0.00	0.00
21.75	0.83	0.34	2.42	0.00	0.00	0.00
21.80	0.83	0.34	2.42	0.00	0.00	0.00
21.85	0.83	0.34	2.42	0.00	0.00	0.00
21.90	0.83	0.34	2.42	0.00	0.00	0.00
21.95	0.83	0.34	2.42	0.00	0.00	0.00
22.00	0.83	0.34	2.42	0.00	0.00	0.00
22.05	0.83	0.34	2.42	0.00	0.00	0.00
22.10	0.83	0.34	2.42	0.00	0.00	0.00
22.15	0.83	0.34	2.42	0.00	0.00	0.00
22.20	0.83	0.34	2.42	0.00	0.00	0.00
22.25	0.83	0.34	2.42	0.00	0.00	0.00
22.30	0.83	0.34	2.42	0.00	0.00	0.00
22.35	0.83	0.34	2.42	0.00	0.00	0.00
22.40	0.83	0.34	2.42	0.00	0.00	0.00
22.45	0.83	0.34	2.42	0.00	0.00	0.00
22.50	0.83	0.34	2.42	0.00	0.00	0.00
22.55	0.83	0.34	2.42	0.00	0.00	0.00
22.60	0.83	0.34	2.42	0.00	0.00	0.00
22.65	0.83	0.34	2.42	0.00	0.00	0.00
22.70	0.83	0.34	2.42	0.00	0.00	0.00
22.75	0.83	0.34	2.42	0.00	0.00	0.00
22.80	0.83	0.34	2.42	0.00	0.00	0.00
22.85	0.83	0.34	2.42	0.00	0.00	0.00
22.90	0.83	0.34	2.42	0.00	0.00	0.00
22.95	0.83	0.34	2.42	0.00	0.00	0.00
23.00	0.83	0.34	2.42	0.00	0.00	0.00
23.05	0.83	0.34	2.42	0.00	0.00	0.00
23.10	0.83	0.34	2.42	0.00	0.00	0.00
23.15	0.83	0.34	2.42	0.00	0.00	0.00
23.20	0.83	0.34	2.42	0.00	0.00	0.00

23.25	0.83	0.34	2.42	0.00	0.00	0.00
23.30	0.83	0.34	2.42	0.00	0.00	0.00
23.35	0.83	0.34	2.42	0.00	0.00	0.00
23.40	0.83	0.34	2.42	0.00	0.00	0.00
23.45	0.83	0.34	2.42	0.00	0.00	0.00
23.50	0.83	0.34	2.42	0.00	0.00	0.00
23.55	0.83	0.34	2.42	0.00	0.00	0.00
23.60	0.83	0.34	2.42	0.00	0.00	0.00
23.65	0.83	0.34	2.42	0.00	0.00	0.00
23.70	0.83	0.34	2.42	0.00	0.00	0.00
23.75	0.83	0.34	2.42	0.00	0.00	0.00
23.80	0.83	0.34	2.42	0.00	0.00	0.00
23.85	0.83	0.34	2.42	0.00	0.00	0.00
23.90	0.83	0.34	2.42	0.00	0.00	0.00
23.95	0.83	0.34	2.42	0.00	0.00	0.00
24.00	0.83	0.34	2.42	0.00	0.00	0.00
24.05	0.83	0.34	2.42	0.00	0.00	0.00
24.10	0.83	0.34	2.42	0.00	0.00	0.00
24.15	0.83	0.34	2.42	0.00	0.00	0.00
24.20	0.83	0.34	2.42	0.00	0.00	0.00
24.25	0.83	0.34	2.42	0.00	0.00	0.00
24.30	0.83	0.34	2.42	0.00	0.00	0.00
24.35	0.83	0.34	2.42	0.00	0.00	0.00
24.40	0.83	0.34	2.41	0.00	0.00	0.00
24.45	0.83	0.34	2.41	0.00	0.00	0.00
24.50	0.83	0.34	2.41	0.00	0.00	0.00
24.55	0.83	0.34	2.41	0.00	0.00	0.00
24.60	0.83	0.34	2.41	0.00	0.00	0.00
24.65	0.83	0.34	2.41	0.00	0.00	0.00
24.70	0.83	0.34	2.41	0.00	0.00	0.00
24.75	0.83	0.34	2.41	0.00	0.00	0.00
24.80	0.83	0.34	2.41	0.00	0.00	0.00
24.85	0.83	0.34	2.41	0.00	0.00	0.00
24.90	0.83	0.34	2.41	0.00	0.00	0.00
24.95	0.83	0.34	2.41	0.00	0.00	0.00
25.00	0.83	0.34	2.41	0.00	0.00	0.00
25.05	0.83	0.34	2.41	0.00	0.00	0.00
25.10	0.83	0.34	2.41	0.00	0.00	0.00
25.15	0.83	0.34	2.41	0.00	0.00	0.00
25.20	0.83	0.34	2.41	0.00	0.00	0.00
25.25	0.83	0.34	2.41	0.00	0.00	0.00
25.30	0.83	0.34	2.41	0.00	0.00	0.00
25.35	0.83	0.34	2.41	0.00	0.00	0.00
25.40	0.83	0.34	2.41	0.00	0.00	0.00
25.45	0.83	0.34	2.41	0.00	0.00	0.00
25.50	0.83	0.34	2.41	0.00	0.00	0.00
25.55	0.83	0.34	2.41	0.00	0.00	0.00
25.60	0.83	0.34	2.41	0.00	0.00	0.00
25.65	0.83	0.35	2.41	0.00	0.00	0.00
25.70	0.83	0.35	2.41	0.00	0.00	0.00
25.75	0.83	0.35	2.41	0.00	0.00	0.00
25.80	0.83	0.35	2.41	0.00	0.00	0.00
25.85	0.83	0.35	2.41	0.00	0.00	0.00
25.90	0.83	0.35	2.40	0.00	0.00	0.00
25.95	0.83	0.35	2.40	0.00	0.00	0.00
26.00	0.83	0.35	2.40	0.00	0.00	0.00
26.05	0.83	0.35	2.40	0.00	0.00	0.00
26.10	0.83	0.35	2.40	0.00	0.00	0.00
26.15	0.83	0.35	2.40	0.00	0.00	0.00
26.20	0.83	0.35	2.40	0.00	0.00	0.00
26.25	0.83	0.35	2.40	0.00	0.00	0.00
26.30	0.83	0.35	2.40	0.00	0.00	0.00
26.35	0.83	0.35	2.40	0.00	0.00	0.00
26.40	0.83	0.35	2.40	0.00	0.00	0.00
26.45	0.83	0.35	2.40	0.00	0.00	0.00
26.50	0.83	0.35	2.40	0.00	0.00	0.00
26.55	0.83	0.35	2.40	0.00	0.00	0.00
26.60	0.83	0.35	2.40	0.00	0.00	0.00
26.65	0.83	0.35	2.40	0.00	0.00	0.00
26.70	0.83	0.35	2.40	0.00	0.00	0.00
26.75	0.83	0.35	2.40	0.00	0.00	0.00

26.80	0.83	0.35	2.40	0.00	0.00	0.00
26.85	0.83	0.35	2.40	0.00	0.00	0.00
26.90	0.83	0.35	2.40	0.00	0.00	0.00
26.95	0.83	0.35	2.40	0.00	0.00	0.00
27.00	0.83	0.35	2.39	0.00	0.00	0.00
27.05	0.83	0.35	2.39	0.00	0.00	0.00
27.10	0.83	0.35	2.39	0.00	0.00	0.00
27.15	0.83	0.35	2.39	0.00	0.00	0.00
27.20	0.83	0.35	2.39	0.00	0.00	0.00
27.25	0.83	0.35	2.39	0.00	0.00	0.00
27.30	0.83	0.35	2.39	0.00	0.00	0.00
27.35	0.83	0.35	2.39	0.00	0.00	0.00
27.40	0.83	0.35	2.39	0.00	0.00	0.00
27.45	0.83	0.35	2.39	0.00	0.00	0.00
27.50	0.83	0.35	2.39	0.00	0.00	0.00
27.55	0.83	0.35	2.39	0.00	0.00	0.00
27.60	0.83	0.35	2.39	0.00	0.00	0.00
27.65	0.83	0.35	2.39	0.00	0.00	0.00
27.70	0.83	0.35	2.39	0.00	0.00	0.00
27.75	0.83	0.35	2.39	0.00	0.00	0.00
27.80	0.83	0.35	2.39	0.00	0.00	0.00
27.85	0.83	0.35	2.39	0.00	0.00	0.00
27.90	0.83	0.35	2.39	0.00	0.00	0.00
27.95	0.83	0.35	2.39	0.00	0.00	0.00
28.00	0.83	0.35	2.39	0.00	0.00	0.00
28.05	0.83	0.35	2.39	0.00	0.00	0.00
28.10	0.83	0.35	2.39	0.00	0.00	0.00
28.15	0.83	0.35	2.39	0.00	0.00	0.00
28.20	0.83	0.35	2.38	0.00	0.00	0.00
28.25	0.83	0.35	2.38	0.00	0.00	0.00
28.30	0.83	0.35	2.38	0.00	0.00	0.00
28.35	0.83	0.35	2.38	0.00	0.00	0.00
28.40	0.83	0.35	2.38	0.00	0.00	0.00
28.45	0.83	0.35	2.38	0.00	0.00	0.00
28.50	0.83	0.35	2.38	0.00	0.00	0.00
28.55	2.00	0.35	5.00	0.00	0.00	0.00
28.60	2.00	0.35	5.00	0.00	0.00	0.00
28.65	2.00	0.35	5.00	0.00	0.00	0.00
28.70	2.00	0.35	5.00	0.00	0.00	0.00
28.75	2.00	0.35	5.00	0.00	0.00	0.00
28.80	2.00	0.35	5.00	0.00	0.00	0.00
28.85	2.00	0.35	5.00	0.00	0.00	0.00
28.90	2.00	0.35	5.00	0.00	0.00	0.00
28.95	2.00	0.35	5.00	0.00	0.00	0.00
29.00	2.00	0.35	5.00	0.00	0.00	0.00
29.05	2.00	0.35	5.00	0.00	0.00	0.00
29.10	2.00	0.35	5.00	0.00	0.00	0.00
29.15	2.00	0.35	5.00	0.00	0.00	0.00
29.20	2.00	0.35	5.00	0.00	0.00	0.00
29.25	2.00	0.35	5.00	0.00	0.00	0.00
29.30	2.00	0.35	5.00	0.00	0.00	0.00
29.35	2.00	0.35	5.00	0.00	0.00	0.00
29.40	2.00	0.35	5.00	0.00	0.00	0.00
29.45	2.00	0.35	5.00	0.00	0.00	0.00
29.50	2.00	0.35	5.00	0.00	0.00	0.00
29.55	2.00	0.35	5.00	0.00	0.00	0.00
29.60	2.00	0.35	5.00	0.00	0.00	0.00
29.65	2.00	0.35	5.00	0.00	0.00	0.00
29.70	2.00	0.35	5.00	0.00	0.00	0.00
29.75	2.00	0.35	5.00	0.00	0.00	0.00
29.80	2.00	0.35	5.00	0.00	0.00	0.00
29.85	2.00	0.35	5.00	0.00	0.00	0.00
29.90	2.00	0.35	5.00	0.00	0.00	0.00
29.95	2.00	0.35	5.00	0.00	0.00	0.00
30.00	2.00	0.35	5.00	0.00	0.00	0.00
30.05	2.00	0.35	5.00	0.00	0.00	0.00
30.10	2.00	0.35	5.00	0.00	0.00	0.00
30.15	2.00	0.35	5.00	0.00	0.00	0.00
30.20	2.00	0.35	5.00	0.00	0.00	0.00
30.25	2.00	0.35	5.00	0.00	0.00	0.00
30.30	2.00	0.35	5.00	0.00	0.00	0.00

30.35	2.00	0.35	5.00	0.00	0.00	0.00
30.40	2.00	0.35	5.00	0.00	0.00	0.00
30.45	2.00	0.35	5.00	0.00	0.00	0.00
30.50	2.00	0.35	5.00	0.00	0.00	0.00
30.55	2.00	0.35	5.00	0.00	0.00	0.00
30.60	2.00	0.35	5.00	0.00	0.00	0.00
30.65	2.00	0.35	5.00	0.00	0.00	0.00
30.70	2.00	0.35	5.00	0.00	0.00	0.00
30.75	2.00	0.35	5.00	0.00	0.00	0.00
30.80	2.00	0.35	5.00	0.00	0.00	0.00
30.85	2.00	0.35	5.00	0.00	0.00	0.00
30.90	2.00	0.35	5.00	0.00	0.00	0.00
30.95	2.00	0.35	5.00	0.00	0.00	0.00
31.00	2.00	0.35	5.00	0.00	0.00	0.00
31.05	2.00	0.35	5.00	0.00	0.00	0.00
31.10	2.00	0.35	5.00	0.00	0.00	0.00
31.15	2.00	0.35	5.00	0.00	0.00	0.00
31.20	2.00	0.35	5.00	0.00	0.00	0.00
31.25	2.00	0.35	5.00	0.00	0.00	0.00
31.30	2.00	0.35	5.00	0.00	0.00	0.00
31.35	2.00	0.35	5.00	0.00	0.00	0.00
31.40	2.00	0.35	5.00	0.00	0.00	0.00
31.45	2.00	0.35	5.00	0.00	0.00	0.00
31.50	2.00	0.35	5.00	0.00	0.00	0.00
31.55	2.00	0.35	5.00	0.00	0.00	0.00
31.60	2.00	0.35	5.00	0.00	0.00	0.00
31.65	2.00	0.35	5.00	0.00	0.00	0.00
31.70	2.00	0.35	5.00	0.00	0.00	0.00
31.75	2.00	0.35	5.00	0.00	0.00	0.00
31.80	2.00	0.35	5.00	0.00	0.00	0.00
31.85	2.00	0.35	5.00	0.00	0.00	0.00
31.90	2.00	0.35	5.00	0.00	0.00	0.00
31.95	2.00	0.35	5.00	0.00	0.00	0.00
32.00	2.00	0.35	5.00	0.00	0.00	0.00
32.05	2.00	0.35	5.00	0.00	0.00	0.00
32.10	2.00	0.35	5.00	0.00	0.00	0.00
32.15	2.00	0.35	5.00	0.00	0.00	0.00
32.20	2.00	0.35	5.00	0.00	0.00	0.00
32.25	2.00	0.35	5.00	0.00	0.00	0.00
32.30	2.00	0.35	5.00	0.00	0.00	0.00
32.35	2.00	0.35	5.00	0.00	0.00	0.00
32.40	2.00	0.35	5.00	0.00	0.00	0.00
32.45	2.00	0.35	5.00	0.00	0.00	0.00
32.50	2.00	0.35	5.00	0.00	0.00	0.00
32.55	2.00	0.35	5.00	0.00	0.00	0.00
32.60	2.00	0.34	5.00	0.00	0.00	0.00
32.65	2.00	0.34	5.00	0.00	0.00	0.00
32.70	2.00	0.34	5.00	0.00	0.00	0.00
32.75	2.00	0.34	5.00	0.00	0.00	0.00
32.80	2.00	0.34	5.00	0.00	0.00	0.00
32.85	2.00	0.34	5.00	0.00	0.00	0.00
32.90	2.00	0.34	5.00	0.00	0.00	0.00
32.95	2.00	0.34	5.00	0.00	0.00	0.00
33.00	2.00	0.34	5.00	0.00	0.00	0.00
33.05	2.00	0.34	5.00	0.00	0.00	0.00
33.10	2.00	0.34	5.00	0.00	0.00	0.00
33.15	2.00	0.34	5.00	0.00	0.00	0.00
33.20	2.00	0.34	5.00	0.00	0.00	0.00
33.25	2.00	0.34	5.00	0.00	0.00	0.00
33.30	2.00	0.34	5.00	0.00	0.00	0.00
33.35	2.00	0.34	5.00	0.00	0.00	0.00
33.40	2.00	0.34	5.00	0.00	0.00	0.00
33.45	2.00	0.34	5.00	0.00	0.00	0.00
33.50	2.00	0.34	5.00	0.00	0.00	0.00
33.55	2.00	0.34	5.00	0.00	0.00	0.00
33.60	2.00	0.34	5.00	0.00	0.00	0.00
33.65	2.00	0.34	5.00	0.00	0.00	0.00
33.70	2.00	0.34	5.00	0.00	0.00	0.00
33.75	2.00	0.34	5.00	0.00	0.00	0.00
33.80	2.00	0.34	5.00	0.00	0.00	0.00
33.85	2.00	0.34	5.00	0.00	0.00	0.00

33.90	2.00	0.34	5.00	0.00	0.00	0.00
33.95	2.00	0.34	5.00	0.00	0.00	0.00
34.00	2.00	0.34	5.00	0.00	0.00	0.00
34.05	2.00	0.34	5.00	0.00	0.00	0.00
34.10	2.00	0.34	5.00	0.00	0.00	0.00
34.15	2.00	0.34	5.00	0.00	0.00	0.00
34.20	2.00	0.34	5.00	0.00	0.00	0.00
34.25	2.00	0.34	5.00	0.00	0.00	0.00
34.30	2.00	0.34	5.00	0.00	0.00	0.00
34.35	2.00	0.34	5.00	0.00	0.00	0.00
34.40	2.00	0.34	5.00	0.00	0.00	0.00
34.45	2.00	0.34	5.00	0.00	0.00	0.00
34.50	2.00	0.34	5.00	0.00	0.00	0.00
34.55	2.00	0.34	5.00	0.00	0.00	0.00
34.60	2.00	0.34	5.00	0.00	0.00	0.00
34.65	2.00	0.34	5.00	0.00	0.00	0.00
34.70	2.00	0.34	5.00	0.00	0.00	0.00
34.75	2.00	0.34	5.00	0.00	0.00	0.00
34.80	2.00	0.34	5.00	0.00	0.00	0.00
34.85	2.00	0.34	5.00	0.00	0.00	0.00
34.90	2.00	0.34	5.00	0.00	0.00	0.00
34.95	2.00	0.34	5.00	0.00	0.00	0.00
35.00	2.00	0.34	5.00	0.00	0.00	0.00
35.05	0.83	0.34	2.45	0.00	0.00	0.00
35.10	0.83	0.34	2.45	0.00	0.00	0.00
35.15	0.83	0.34	2.45	0.00	0.00	0.00
35.20	0.83	0.34	2.45	0.00	0.00	0.00
35.25	0.83	0.34	2.45	0.00	0.00	0.00
35.30	0.83	0.34	2.45	0.00	0.00	0.00
35.35	0.83	0.34	2.45	0.00	0.00	0.00
35.40	0.83	0.34	2.45	0.00	0.00	0.00
35.45	0.83	0.34	2.46	0.00	0.00	0.00
35.50	0.83	0.34	2.46	0.00	0.00	0.00
35.55	0.83	0.34	2.46	0.00	0.00	0.00
35.60	0.83	0.34	2.46	0.00	0.00	0.00
35.65	0.83	0.34	2.46	0.00	0.00	0.00
35.70	0.83	0.34	2.46	0.00	0.00	0.00
35.75	0.83	0.34	2.46	0.00	0.00	0.00
35.80	0.83	0.34	2.46	0.00	0.00	0.00
35.85	0.83	0.34	2.46	0.00	0.00	0.00
35.90	0.83	0.34	2.46	0.00	0.00	0.00
35.95	0.83	0.34	2.47	0.00	0.00	0.00
36.00	0.83	0.34	2.47	0.00	0.00	0.00
36.05	0.83	0.34	2.47	0.00	0.00	0.00
36.10	0.83	0.34	2.47	0.00	0.00	0.00
36.15	0.83	0.34	2.47	0.00	0.00	0.00
36.20	0.83	0.34	2.47	0.00	0.00	0.00
36.25	0.83	0.34	2.47	0.00	0.00	0.00
36.30	0.83	0.34	2.47	0.00	0.00	0.00
36.35	0.83	0.34	2.47	0.00	0.00	0.00
36.40	0.83	0.34	2.48	0.00	0.00	0.00
36.45	0.83	0.34	2.48	0.00	0.00	0.00
36.50	0.83	0.34	2.48	0.00	0.00	0.00
36.55	0.83	0.34	2.48	0.00	0.00	0.00
36.60	0.83	0.33	2.48	0.00	0.00	0.00
36.65	0.83	0.33	2.48	0.00	0.00	0.00
36.70	0.83	0.33	2.48	0.00	0.00	0.00
36.75	0.83	0.33	2.48	0.00	0.00	0.00
36.80	0.83	0.33	2.48	0.00	0.00	0.00
36.85	0.83	0.33	2.49	0.00	0.00	0.00
36.90	0.83	0.33	2.49	0.00	0.00	0.00
36.95	0.83	0.33	2.49	0.00	0.00	0.00
37.00	0.83	0.33	2.49	0.00	0.00	0.00
37.05	0.83	0.33	2.49	0.00	0.00	0.00
37.10	0.83	0.33	2.49	0.00	0.00	0.00
37.15	0.83	0.33	2.49	0.00	0.00	0.00
37.20	0.83	0.33	2.49	0.00	0.00	0.00
37.25	0.83	0.33	2.49	0.00	0.00	0.00
37.30	0.83	0.33	2.50	0.00	0.00	0.00
37.35	0.83	0.33	2.50	0.00	0.00	0.00
37.40	0.83	0.33	2.50	0.00	0.00	0.00

37.45	0.83	0.33	2.50	0.00	0.00	0.00
37.50	0.83	0.33	2.50	0.00	0.00	0.00
37.55	0.83	0.33	2.50	0.00	0.00	0.00
37.60	0.83	0.33	2.50	0.00	0.00	0.00
37.65	0.83	0.33	2.50	0.00	0.00	0.00
37.70	0.83	0.33	2.50	0.00	0.00	0.00
37.75	0.83	0.33	2.51	0.00	0.00	0.00
37.80	0.83	0.33	2.51	0.00	0.00	0.00
37.85	0.83	0.33	2.51	0.00	0.00	0.00
37.90	0.83	0.33	2.51	0.00	0.00	0.00
37.95	0.83	0.33	2.51	0.00	0.00	0.00
38.00	0.83	0.33	2.51	0.00	0.00	0.00
38.05	0.83	0.33	2.51	0.00	0.00	0.00
38.10	0.83	0.33	2.51	0.00	0.00	0.00
38.15	0.83	0.33	2.51	0.00	0.00	0.00
38.20	0.83	0.33	2.52	0.00	0.00	0.00
38.25	0.83	0.33	2.52	0.00	0.00	0.00
38.30	0.83	0.33	2.52	0.00	0.00	0.00
38.35	0.83	0.33	2.52	0.00	0.00	0.00
38.40	0.83	0.33	2.52	0.00	0.00	0.00
38.45	0.83	0.33	2.52	0.00	0.00	0.00
38.50	0.83	0.33	2.52	0.00	0.00	0.00
38.55	0.83	0.33	2.52	0.00	0.00	0.00
38.60	0.83	0.33	2.52	0.00	0.00	0.00
38.65	0.83	0.33	2.53	0.00	0.00	0.00
38.70	0.83	0.33	2.53	0.00	0.00	0.00
38.75	0.83	0.33	2.53	0.00	0.00	0.00
38.80	0.83	0.33	2.53	0.00	0.00	0.00
38.85	0.83	0.33	2.53	0.00	0.00	0.00
38.90	0.83	0.33	2.53	0.00	0.00	0.00
38.95	0.83	0.33	2.53	0.00	0.00	0.00
39.00	0.83	0.33	2.53	0.00	0.00	0.00
39.05	0.83	0.33	2.53	0.00	0.00	0.00
39.10	0.83	0.33	2.54	0.00	0.00	0.00
39.15	0.83	0.33	2.54	0.00	0.00	0.00
39.20	0.83	0.33	2.54	0.00	0.00	0.00
39.25	0.83	0.33	2.54	0.00	0.00	0.00
39.30	0.83	0.33	2.54	0.00	0.00	0.00
39.35	0.83	0.33	2.54	0.00	0.00	0.00
39.40	0.83	0.33	2.54	0.00	0.00	0.00
39.45	0.83	0.33	2.54	0.00	0.00	0.00
39.50	0.83	0.33	2.54	0.00	0.00	0.00
39.55	0.83	0.33	2.55	0.00	0.00	0.00
39.60	0.83	0.33	2.55	0.00	0.00	0.00
39.65	0.83	0.33	2.55	0.00	0.00	0.00
39.70	0.83	0.33	2.55	0.00	0.00	0.00
39.75	0.83	0.33	2.55	0.00	0.00	0.00
39.80	0.83	0.33	2.55	0.00	0.00	0.00
39.85	0.83	0.33	2.55	0.00	0.00	0.00
39.90	0.83	0.33	2.55	0.00	0.00	0.00
39.95	0.83	0.33	2.56	0.00	0.00	0.00
40.00	0.83	0.32	2.56	0.00	0.00	0.00
40.05	0.83	0.32	2.56	0.00	0.00	0.00
40.10	0.83	0.32	2.56	0.00	0.00	0.00
40.15	0.83	0.32	2.56	0.00	0.00	0.00
40.20	0.83	0.32	2.56	0.00	0.00	0.00
40.25	0.83	0.32	2.56	0.00	0.00	0.00
40.30	0.83	0.32	2.56	0.00	0.00	0.00
40.35	0.83	0.32	2.56	0.00	0.00	0.00
40.40	0.83	0.32	2.56	0.00	0.00	0.00
40.45	0.83	0.32	2.57	0.00	0.00	0.00
40.50	0.83	0.32	2.57	0.00	0.00	0.00
40.55	0.83	0.32	2.57	0.00	0.00	0.00
40.60	0.83	0.32	2.57	0.00	0.00	0.00
40.65	0.83	0.32	2.57	0.00	0.00	0.00
40.70	0.83	0.32	2.57	0.00	0.00	0.00
40.75	0.83	0.32	2.57	0.00	0.00	0.00
40.80	0.83	0.32	2.57	0.00	0.00	0.00
40.85	0.83	0.32	2.57	0.00	0.00	0.00
40.90	0.83	0.32	2.58	0.00	0.00	0.00
40.95	0.83	0.32	2.58	0.00	0.00	0.00

41.00	0.83	0.32	2.58	0.00	0.00	0.00
41.05	0.83	0.32	2.58	0.00	0.00	0.00
41.10	0.83	0.32	2.58	0.00	0.00	0.00
41.15	0.83	0.32	2.58	0.00	0.00	0.00
41.20	0.83	0.32	2.58	0.00	0.00	0.00
41.25	0.83	0.32	2.58	0.00	0.00	0.00
41.30	0.83	0.32	2.58	0.00	0.00	0.00
41.35	0.83	0.32	2.59	0.00	0.00	0.00
41.40	0.83	0.32	2.59	0.00	0.00	0.00
41.45	0.83	0.32	2.59	0.00	0.00	0.00
41.50	0.83	0.32	2.59	0.00	0.00	0.00
41.55	0.83	0.32	2.59	0.00	0.00	0.00
41.60	0.83	0.32	2.59	0.00	0.00	0.00
41.65	0.83	0.32	2.59	0.00	0.00	0.00
41.70	0.83	0.32	2.59	0.00	0.00	0.00
41.75	0.83	0.32	2.59	0.00	0.00	0.00
41.80	0.83	0.32	2.59	0.00	0.00	0.00
41.85	0.83	0.32	2.60	0.00	0.00	0.00
41.90	0.83	0.32	2.60	0.00	0.00	0.00
41.95	0.83	0.32	2.60	0.00	0.00	0.00
42.00	0.83	0.32	2.60	0.00	0.00	0.00
42.05	0.83	0.32	2.60	0.00	0.00	0.00
42.10	0.83	0.32	2.60	0.00	0.00	0.00
42.15	0.83	0.32	2.60	0.00	0.00	0.00
42.20	0.83	0.32	2.60	0.00	0.00	0.00
42.25	0.83	0.32	2.60	0.00	0.00	0.00
42.30	0.83	0.32	2.61	0.00	0.00	0.00
42.35	0.83	0.32	2.61	0.00	0.00	0.00
42.40	0.83	0.32	2.61	0.00	0.00	0.00
42.45	0.83	0.32	2.61	0.00	0.00	0.00
42.50	0.83	0.32	2.61	0.00	0.00	0.00
42.55	0.83	0.32	2.61	0.00	0.00	0.00
42.60	0.83	0.32	2.61	0.00	0.00	0.00
42.65	0.83	0.32	2.61	0.00	0.00	0.00
42.70	0.83	0.32	2.61	0.00	0.00	0.00
42.75	0.83	0.32	2.62	0.00	0.00	0.00
42.80	0.83	0.32	2.62	0.00	0.00	0.00
42.85	0.83	0.32	2.62	0.00	0.00	0.00
42.90	0.83	0.32	2.62	0.00	0.00	0.00
42.95	0.83	0.32	2.62	0.00	0.00	0.00
43.00	0.83	0.32	2.62	0.00	0.00	0.00
43.05	0.83	0.32	2.62	0.00	0.00	0.00
43.10	0.83	0.32	2.62	0.00	0.00	0.00
43.15	0.83	0.32	2.62	0.00	0.00	0.00
43.20	0.83	0.32	2.63	0.00	0.00	0.00
43.25	0.83	0.32	2.63	0.00	0.00	0.00
43.30	0.83	0.32	2.63	0.00	0.00	0.00
43.35	0.83	0.32	2.63	0.00	0.00	0.00
43.40	0.83	0.32	2.63	0.00	0.00	0.00
43.45	0.83	0.32	2.63	0.00	0.00	0.00
43.50	0.83	0.32	2.63	0.00	0.00	0.00
43.55	0.83	0.32	2.63	0.00	0.00	0.00
43.60	0.83	0.32	2.63	0.00	0.00	0.00
43.65	0.83	0.32	2.64	0.00	0.00	0.00
43.70	0.83	0.32	2.64	0.00	0.00	0.00
43.75	0.83	0.31	2.64	0.00	0.00	0.00
43.80	0.83	0.31	2.64	0.00	0.00	0.00
43.85	0.83	0.31	2.64	0.00	0.00	0.00
43.90	0.83	0.31	2.64	0.00	0.00	0.00
43.95	0.83	0.31	2.64	0.00	0.00	0.00
44.00	0.83	0.31	2.64	0.00	0.00	0.00
44.05	0.83	0.31	2.64	0.00	0.00	0.00
44.10	0.83	0.31	2.65	0.00	0.00	0.00
44.15	0.83	0.31	2.65	0.00	0.00	0.00
44.20	0.83	0.31	2.65	0.00	0.00	0.00
44.25	0.83	0.31	2.65	0.00	0.00	0.00
44.30	0.83	0.31	2.65	0.00	0.00	0.00
44.35	0.83	0.31	2.65	0.00	0.00	0.00
44.40	0.83	0.31	2.65	0.00	0.00	0.00
44.45	0.83	0.31	2.65	0.00	0.00	0.00
44.50	0.83	0.31	2.66	0.00	0.00	0.00

44.55	0.83	0.31	2.66	0.00	0.00	0.00
44.60	0.83	0.31	2.66	0.00	0.00	0.00
44.65	0.83	0.31	2.66	0.00	0.00	0.00
44.70	0.83	0.31	2.66	0.00	0.00	0.00
44.75	0.83	0.31	2.66	0.00	0.00	0.00
44.80	0.83	0.31	2.66	0.00	0.00	0.00
44.85	0.83	0.31	2.66	0.00	0.00	0.00
44.90	0.83	0.31	2.66	0.00	0.00	0.00
44.95	0.83	0.31	2.67	0.00	0.00	0.00
45.00	0.83	0.31	2.67	0.00	0.00	0.00
45.05	0.83	0.31	2.67	0.00	0.00	0.00
45.10	0.83	0.31	2.67	0.00	0.00	0.00
45.15	0.83	0.31	2.67	0.00	0.00	0.00
45.20	0.83	0.31	2.67	0.00	0.00	0.00
45.25	0.83	0.31	2.67	0.00	0.00	0.00
45.30	0.83	0.31	2.68	0.00	0.00	0.00
45.35	0.83	0.31	2.68	0.00	0.00	0.00
45.40	0.83	0.31	2.68	0.00	0.00	0.00
45.45	0.83	0.31	2.68	0.00	0.00	0.00
45.50	0.83	0.31	2.68	0.00	0.00	0.00
45.55	0.83	0.31	2.68	0.00	0.00	0.00
45.60	0.83	0.31	2.68	0.00	0.00	0.00
45.65	0.83	0.31	2.69	0.00	0.00	0.00
45.70	0.83	0.31	2.69	0.00	0.00	0.00
45.75	0.83	0.31	2.69	0.00	0.00	0.00
45.80	0.83	0.31	2.69	0.00	0.00	0.00
45.85	0.83	0.31	2.69	0.00	0.00	0.00
45.90	0.83	0.31	2.69	0.00	0.00	0.00
45.95	0.83	0.31	2.69	0.00	0.00	0.00
46.00	0.83	0.31	2.70	0.00	0.00	0.00
46.05	0.83	0.31	2.70	0.00	0.00	0.00
46.10	0.83	0.31	2.70	0.00	0.00	0.00
46.15	0.83	0.31	2.70	0.00	0.00	0.00
46.20	0.83	0.31	2.70	0.00	0.00	0.00
46.25	0.83	0.31	2.70	0.00	0.00	0.00
46.30	0.83	0.31	2.70	0.00	0.00	0.00
46.35	0.83	0.31	2.71	0.00	0.00	0.00
46.40	0.83	0.31	2.71	0.00	0.00	0.00
46.45	0.83	0.31	2.71	0.00	0.00	0.00
46.50	0.83	0.31	2.71	0.00	0.00	0.00
46.55	0.83	0.31	2.71	0.00	0.00	0.00
46.60	0.83	0.31	2.71	0.00	0.00	0.00
46.65	0.83	0.31	2.72	0.00	0.00	0.00
46.70	0.83	0.31	2.72	0.00	0.00	0.00
46.75	0.83	0.31	2.72	0.00	0.00	0.00
46.80	0.83	0.31	2.72	0.00	0.00	0.00
46.85	0.83	0.31	2.72	0.00	0.00	0.00
46.90	0.83	0.31	2.72	0.00	0.00	0.00
46.95	0.83	0.30	2.72	0.00	0.00	0.00
47.00	0.83	0.30	2.73	0.00	0.00	0.00
47.05	0.83	0.30	2.73	0.00	0.00	0.00
47.10	0.83	0.30	2.73	0.00	0.00	0.00
47.15	0.83	0.30	2.73	0.00	0.00	0.00
47.20	0.83	0.30	2.73	0.00	0.00	0.00
47.25	0.83	0.30	2.73	0.00	0.00	0.00
47.30	0.83	0.30	2.73	0.00	0.00	0.00
47.35	0.83	0.30	2.74	0.00	0.00	0.00
47.40	0.83	0.30	2.74	0.00	0.00	0.00
47.45	0.83	0.30	2.74	0.00	0.00	0.00
47.50	0.83	0.30	2.74	0.00	0.00	0.00
47.55	0.83	0.30	2.74	0.00	0.00	0.00
47.60	0.83	0.30	2.74	0.00	0.00	0.00
47.65	0.83	0.30	2.75	0.00	0.00	0.00
47.70	0.83	0.30	2.75	0.00	0.00	0.00
47.75	0.83	0.30	2.75	0.00	0.00	0.00
47.80	0.83	0.30	2.75	0.00	0.00	0.00
47.85	0.83	0.30	2.75	0.00	0.00	0.00
47.90	0.83	0.30	2.75	0.00	0.00	0.00
47.95	0.83	0.30	2.75	0.00	0.00	0.00
48.00	0.83	0.30	2.76	0.00	0.00	0.00
48.05	0.83	0.30	2.76	0.00	0.00	0.00

48.10	0.83	0.30	2.76	0.00	0.00	0.00
48.15	0.83	0.30	2.76	0.00	0.00	0.00
48.20	0.83	0.30	2.76	0.00	0.00	0.00
48.25	0.83	0.30	2.76	0.00	0.00	0.00
48.30	0.83	0.30	2.77	0.00	0.00	0.00
48.35	0.83	0.30	2.77	0.00	0.00	0.00
48.40	0.83	0.30	2.77	0.00	0.00	0.00
48.45	0.83	0.30	2.77	0.00	0.00	0.00
48.50	0.83	0.30	2.77	0.00	0.00	0.00
48.55	0.83	0.30	2.77	0.00	0.00	0.00
48.60	0.83	0.30	2.77	0.00	0.00	0.00
48.65	0.83	0.30	2.78	0.00	0.00	0.00
48.70	0.83	0.30	2.78	0.00	0.00	0.00
48.75	0.83	0.30	2.78	0.00	0.00	0.00
48.80	0.83	0.30	2.78	0.00	0.00	0.00
48.85	0.83	0.30	2.78	0.00	0.00	0.00
48.90	0.83	0.30	2.78	0.00	0.00	0.00
48.95	0.83	0.30	2.79	0.00	0.00	0.00
49.00	0.83	0.30	2.79	0.00	0.00	0.00
49.05	0.83	0.30	2.79	0.00	0.00	0.00
49.10	0.83	0.30	2.79	0.00	0.00	0.00
49.15	0.83	0.30	2.79	0.00	0.00	0.00
49.20	0.83	0.30	2.79	0.00	0.00	0.00
49.25	0.83	0.30	2.79	0.00	0.00	0.00
49.30	0.83	0.30	2.80	0.00	0.00	0.00
49.35	0.83	0.30	2.80	0.00	0.00	0.00
49.40	0.83	0.30	2.80	0.00	0.00	0.00
49.45	0.83	0.30	2.80	0.00	0.00	0.00
49.50	0.83	0.30	2.80	0.00	0.00	0.00
49.55	0.83	0.30	2.80	0.00	0.00	0.00
49.60	0.83	0.30	2.81	0.00	0.00	0.00
49.65	0.83	0.30	2.81	0.00	0.00	0.00
49.70	0.83	0.30	2.81	0.00	0.00	0.00
49.75	0.83	0.30	2.81	0.00	0.00	0.00
49.80	0.83	0.30	2.81	0.00	0.00	0.00
49.85	0.83	0.30	2.81	0.00	0.00	0.00
49.90	0.83	0.30	2.81	0.00	0.00	0.00
49.95	0.83	0.29	2.82	0.00	0.00	0.00
50.00	0.83	0.29	2.82	0.00	0.00	0.00

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* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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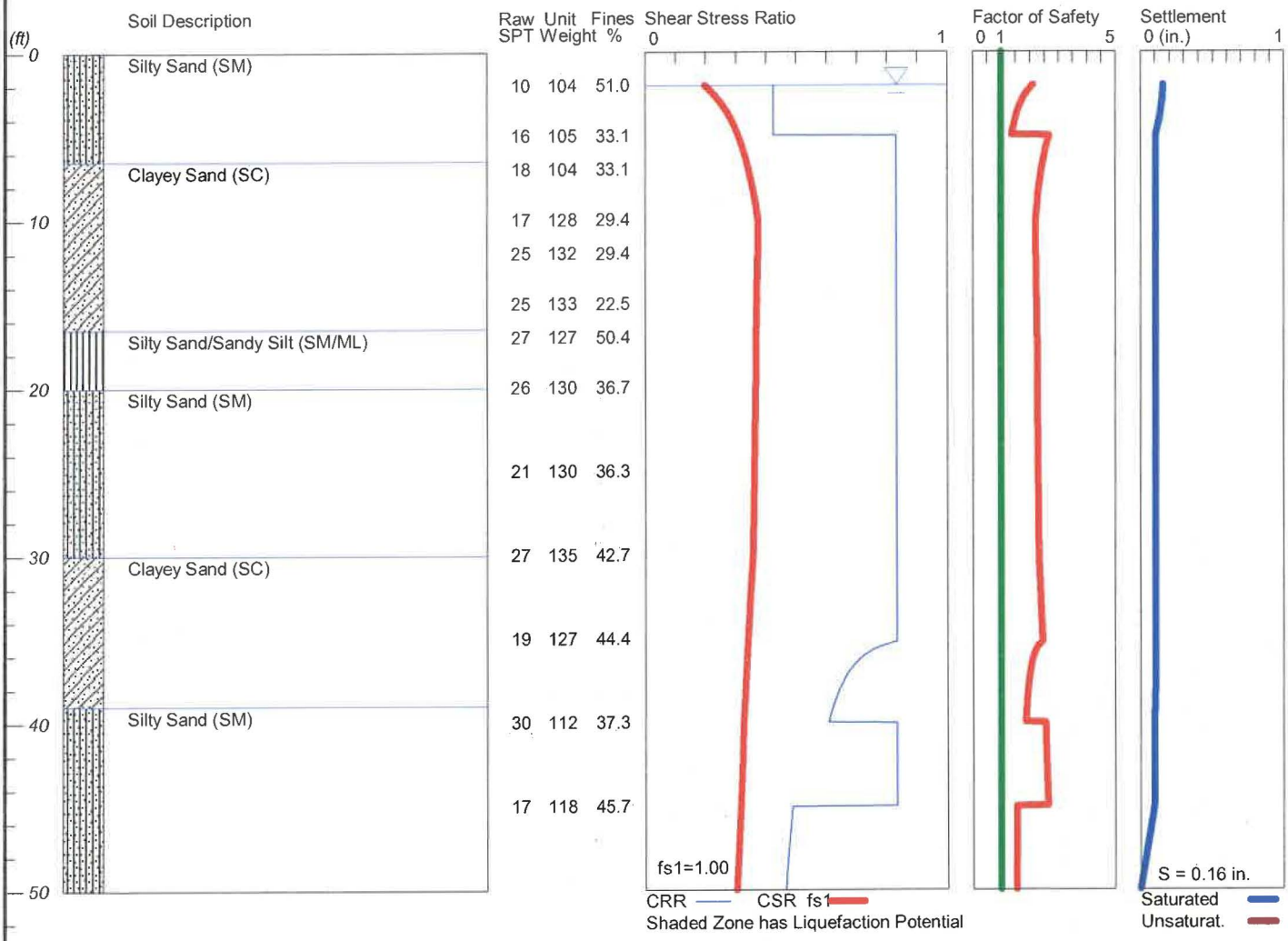
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat Settlement from saturated sands
S_dry Settlement from Unsaturated Sands
S_all Total Settlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B5 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



LiquefyPro CivilTech Software USA www.civiltech.com

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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B5\01222165 B5 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-22165

Surface Elev.=
Hole No.=B5
Depth of Hole= 50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B5
Depth of Hole=50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.25
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	10.00	104.00	51.00
5.00	16.00	105.00	33.10
7.00	18.00	104.00	33.10
10.00	17.00	128.00	29.40
12.00	25.00	132.00	29.40
15.00	25.00	133.00	22.50
17.00	27.00	127.00	50.40
20.00	26.00	130.00	36.70
25.00	21.00	130.00	36.30
30.00	27.00	135.00	42.70
35.00	19.00	127.00	44.40
40.00	30.00	112.00	37.30
45.00	17.00	118.00	45.70

Output Results:
Settlement of Saturated Sands=0.16 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.16 in.
Differential Settlement=0.078 to 0.102 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

2.00	0.42	0.20	2.13	0.16	0.00	0.16
2.05	0.42	0.20	2.10	0.16	0.00	0.16
2.10	0.42	0.20	2.07	0.16	0.00	0.16
2.15	0.42	0.21	2.04	0.16	0.00	0.16
2.20	0.42	0.21	2.02	0.16	0.00	0.16
2.25	0.42	0.21	1.99	0.16	0.00	0.16
2.30	0.42	0.22	1.97	0.16	0.00	0.16
2.35	0.42	0.22	1.94	0.16	0.00	0.16
2.40	0.42	0.22	1.92	0.15	0.00	0.15
2.45	0.42	0.22	1.90	0.15	0.00	0.15
2.50	0.42	0.23	1.88	0.15	0.00	0.15
2.55	0.42	0.23	1.86	0.15	0.00	0.15
2.60	0.42	0.23	1.84	0.15	0.00	0.15
2.65	0.42	0.23	1.82	0.15	0.00	0.15
2.70	0.42	0.23	1.80	0.15	0.00	0.15
2.75	0.42	0.24	1.79	0.15	0.00	0.15
2.80	0.42	0.24	1.77	0.15	0.00	0.15
2.85	0.42	0.24	1.75	0.15	0.00	0.15
2.90	0.42	0.24	1.74	0.15	0.00	0.15
2.95	0.42	0.25	1.72	0.15	0.00	0.15
3.00	0.42	0.25	1.71	0.15	0.00	0.15
3.05	0.42	0.25	1.70	0.15	0.00	0.15
3.10	0.42	0.25	1.68	0.15	0.00	0.15
3.15	0.42	0.25	1.67	0.15	0.00	0.15
3.20	0.42	0.26	1.66	0.15	0.00	0.15
3.25	0.42	0.26	1.65	0.15	0.00	0.15
3.30	0.42	0.26	1.63	0.15	0.00	0.15
3.35	0.42	0.26	1.62	0.14	0.00	0.14
3.40	0.42	0.26	1.61	0.14	0.00	0.14
3.45	0.42	0.26	1.60	0.14	0.00	0.14
3.50	0.42	0.27	1.59	0.14	0.00	0.14
3.55	0.42	0.27	1.58	0.14	0.00	0.14
3.60	0.42	0.27	1.57	0.14	0.00	0.14
3.65	0.42	0.27	1.56	0.14	0.00	0.14
3.70	0.42	0.27	1.55	0.14	0.00	0.14
3.75	0.42	0.27	1.54	0.14	0.00	0.14
3.80	0.42	0.28	1.53	0.14	0.00	0.14
3.85	0.42	0.28	1.52	0.13	0.00	0.13
3.90	0.42	0.28	1.52	0.13	0.00	0.13
3.95	0.42	0.28	1.51	0.13	0.00	0.13
4.00	0.42	0.28	1.50	0.13	0.00	0.13
4.05	0.42	0.28	1.49	0.13	0.00	0.13
4.10	0.42	0.29	1.48	0.13	0.00	0.13
4.15	0.42	0.29	1.48	0.13	0.00	0.13
4.20	0.42	0.29	1.47	0.13	0.00	0.13
4.25	0.42	0.29	1.46	0.13	0.00	0.13
4.30	0.42	0.29	1.46	0.12	0.00	0.12
4.35	0.42	0.29	1.45	0.12	0.00	0.12
4.40	0.42	0.29	1.44	0.12	0.00	0.12
4.45	0.42	0.29	1.44	0.12	0.00	0.12
4.50	0.42	0.30	1.43	0.12	0.00	0.12
4.55	0.42	0.30	1.42	0.12	0.00	0.12
4.60	0.42	0.30	1.42	0.12	0.00	0.12
4.65	0.42	0.30	1.41	0.12	0.00	0.12
4.70	0.42	0.30	1.41	0.11	0.00	0.11
4.75	0.42	0.30	1.40	0.11	0.00	0.11
4.80	0.42	0.30	1.40	0.11	0.00	0.11
4.85	0.42	0.30	1.39	0.11	0.00	0.11
4.90	0.42	0.31	1.39	0.11	0.00	0.11
4.95	0.42	0.31	1.38	0.11	0.00	0.11
5.00	0.83	0.31	2.70	0.11	0.00	0.11
5.05	0.83	0.31	2.69	0.11	0.00	0.11
5.10	0.83	0.31	2.68	0.11	0.00	0.11
5.15	0.83	0.31	2.67	0.11	0.00	0.11
5.20	0.83	0.31	2.66	0.11	0.00	0.11
5.25	0.83	0.31	2.65	0.11	0.00	0.11
5.30	0.83	0.31	2.64	0.11	0.00	0.11
5.35	0.83	0.32	2.63	0.11	0.00	0.11
5.40	0.83	0.32	2.62	0.11	0.00	0.11
5.45	0.83	0.32	2.62	0.11	0.00	0.11

5.50	0.83	0.32	2.61	0.11	0.00	0.11
5.55	0.83	0.32	2.60	0.11	0.00	0.11
5.60	0.83	0.32	2.59	0.11	0.00	0.11
5.65	0.83	0.32	2.59	0.11	0.00	0.11
5.70	0.83	0.32	2.58	0.11	0.00	0.11
5.75	0.83	0.32	2.57	0.11	0.00	0.11
5.80	0.83	0.32	2.56	0.11	0.00	0.11
5.85	0.83	0.32	2.56	0.11	0.00	0.11
5.90	0.83	0.33	2.55	0.11	0.00	0.11
5.95	0.83	0.33	2.54	0.11	0.00	0.11
6.00	0.83	0.33	2.54	0.11	0.00	0.11
6.05	0.83	0.33	2.53	0.11	0.00	0.11
6.10	0.83	0.33	2.52	0.11	0.00	0.11
6.15	0.83	0.33	2.52	0.11	0.00	0.11
6.20	0.83	0.33	2.51	0.11	0.00	0.11
6.25	0.83	0.33	2.50	0.11	0.00	0.11
6.30	0.83	0.33	2.50	0.11	0.00	0.11
6.35	0.83	0.33	2.49	0.11	0.00	0.11
6.40	0.83	0.33	2.49	0.11	0.00	0.11
6.45	0.83	0.33	2.48	0.11	0.00	0.11
6.50	0.83	0.34	2.48	0.11	0.00	0.11
6.55	0.83	0.34	2.47	0.11	0.00	0.11
6.60	0.83	0.34	2.46	0.11	0.00	0.11
6.65	0.83	0.34	2.46	0.11	0.00	0.11
6.70	0.83	0.34	2.45	0.11	0.00	0.11
6.75	0.83	0.34	2.45	0.11	0.00	0.11
6.80	0.83	0.34	2.44	0.11	0.00	0.11
6.85	0.83	0.34	2.44	0.11	0.00	0.11
6.90	0.83	0.34	2.43	0.11	0.00	0.11
6.95	0.83	0.34	2.43	0.11	0.00	0.11
7.00	0.83	0.34	2.42	0.11	0.00	0.11
7.05	0.83	0.34	2.42	0.11	0.00	0.11
7.10	0.83	0.34	2.41	0.11	0.00	0.11
7.15	0.83	0.34	2.41	0.11	0.00	0.11
7.20	0.83	0.35	2.40	0.11	0.00	0.11
7.25	0.83	0.35	2.40	0.11	0.00	0.11
7.30	0.83	0.35	2.40	0.11	0.00	0.11
7.35	0.83	0.35	2.39	0.11	0.00	0.11
7.40	0.83	0.35	2.39	0.11	0.00	0.11
7.45	0.83	0.35	2.38	0.11	0.00	0.11
7.50	0.83	0.35	2.38	0.11	0.00	0.11
7.55	0.83	0.35	2.37	0.11	0.00	0.11
7.60	0.83	0.35	2.37	0.11	0.00	0.11
7.65	0.83	0.35	2.36	0.11	0.00	0.11
7.70	0.83	0.35	2.36	0.11	0.00	0.11
7.75	0.83	0.35	2.36	0.11	0.00	0.11
7.80	0.83	0.35	2.35	0.11	0.00	0.11
7.85	0.83	0.35	2.35	0.11	0.00	0.11
7.90	0.83	0.35	2.35	0.11	0.00	0.11
7.95	0.83	0.35	2.34	0.11	0.00	0.11
8.00	0.83	0.36	2.34	0.11	0.00	0.11
8.05	0.83	0.36	2.33	0.11	0.00	0.11
8.10	0.83	0.36	2.33	0.11	0.00	0.11
8.15	0.83	0.36	2.33	0.11	0.00	0.11
8.20	0.83	0.36	2.32	0.11	0.00	0.11
8.25	0.83	0.36	2.32	0.11	0.00	0.11
8.30	0.83	0.36	2.32	0.11	0.00	0.11
8.35	0.83	0.36	2.31	0.11	0.00	0.11
8.40	0.83	0.36	2.31	0.11	0.00	0.11
8.45	0.83	0.36	2.31	0.11	0.00	0.11
8.50	0.83	0.36	2.30	0.11	0.00	0.11
8.55	0.83	0.36	2.30	0.11	0.00	0.11
8.60	0.83	0.36	2.30	0.11	0.00	0.11
8.65	0.83	0.36	2.29	0.11	0.00	0.11
8.70	0.83	0.36	2.29	0.11	0.00	0.11
8.75	0.83	0.36	2.29	0.11	0.00	0.11
8.80	0.83	0.36	2.28	0.11	0.00	0.11
8.85	0.83	0.36	2.28	0.11	0.00	0.11
8.90	0.83	0.36	2.28	0.11	0.00	0.11
8.95	0.83	0.37	2.27	0.11	0.00	0.11
9.00	0.83	0.37	2.27	0.11	0.00	0.11

9.05	0.83	0.37	2.27	0.11	0.00	0.11
9.10	0.83	0.37	2.27	0.11	0.00	0.11
9.15	0.83	0.37	2.26	0.11	0.00	0.11
9.20	0.83	0.37	2.26	0.11	0.00	0.11
9.25	0.83	0.37	2.26	0.11	0.00	0.11
9.30	0.83	0.37	2.26	0.11	0.00	0.11
9.35	0.83	0.37	2.25	0.11	0.00	0.11
9.40	0.83	0.37	2.25	0.11	0.00	0.11
9.45	0.83	0.37	2.25	0.11	0.00	0.11
9.50	0.83	0.37	2.24	0.11	0.00	0.11
9.55	0.83	0.37	2.24	0.11	0.00	0.11
9.60	0.83	0.37	2.24	0.11	0.00	0.11
9.65	0.83	0.37	2.24	0.11	0.00	0.11
9.70	0.83	0.37	2.23	0.11	0.00	0.11
9.75	0.83	0.37	2.23	0.11	0.00	0.11
9.80	0.83	0.37	2.23	0.11	0.00	0.11
9.85	0.83	0.37	2.23	0.11	0.00	0.11
9.90	0.83	0.37	2.22	0.11	0.00	0.11
9.95	0.83	0.37	2.22	0.11	0.00	0.11
10.00	0.83	0.37	2.22	0.11	0.00	0.11
10.05	0.83	0.37	2.22	0.11	0.00	0.11
10.10	0.83	0.37	2.22	0.11	0.00	0.11
10.15	0.83	0.37	2.22	0.11	0.00	0.11
10.20	0.83	0.37	2.22	0.11	0.00	0.11
10.25	0.83	0.37	2.22	0.11	0.00	0.11
10.30	0.83	0.37	2.22	0.11	0.00	0.11
10.35	0.83	0.37	2.22	0.11	0.00	0.11
10.40	0.83	0.37	2.22	0.11	0.00	0.11
10.45	0.83	0.37	2.22	0.11	0.00	0.11
10.50	0.83	0.37	2.22	0.11	0.00	0.11
10.55	0.83	0.37	2.22	0.11	0.00	0.11
10.60	0.83	0.37	2.22	0.11	0.00	0.11
10.65	0.83	0.37	2.22	0.11	0.00	0.11
10.70	0.83	0.37	2.22	0.11	0.00	0.11
10.75	0.83	0.37	2.22	0.11	0.00	0.11
10.80	0.83	0.37	2.22	0.11	0.00	0.11
10.85	0.83	0.37	2.22	0.11	0.00	0.11
10.90	0.83	0.37	2.22	0.11	0.00	0.11
10.95	0.83	0.37	2.22	0.11	0.00	0.11
11.00	0.83	0.37	2.22	0.11	0.00	0.11
11.05	0.83	0.37	2.22	0.11	0.00	0.11
11.10	0.83	0.37	2.22	0.11	0.00	0.11
11.15	0.83	0.37	2.22	0.11	0.00	0.11
11.20	0.83	0.37	2.22	0.11	0.00	0.11
11.25	0.83	0.37	2.22	0.11	0.00	0.11
11.30	0.83	0.37	2.22	0.11	0.00	0.11
11.35	0.83	0.37	2.22	0.11	0.00	0.11
11.40	0.83	0.37	2.22	0.11	0.00	0.11
11.45	0.83	0.37	2.22	0.11	0.00	0.11
11.50	0.83	0.37	2.22	0.11	0.00	0.11
11.55	0.83	0.37	2.22	0.11	0.00	0.11
11.60	0.83	0.37	2.22	0.11	0.00	0.11
11.65	0.83	0.37	2.22	0.11	0.00	0.11
11.70	0.83	0.37	2.22	0.11	0.00	0.11
11.75	0.83	0.37	2.22	0.11	0.00	0.11
11.80	0.83	0.37	2.22	0.11	0.00	0.11
11.85	0.83	0.37	2.22	0.11	0.00	0.11
11.90	0.83	0.37	2.22	0.11	0.00	0.11
11.95	0.83	0.37	2.22	0.11	0.00	0.11
12.00	0.83	0.37	2.22	0.11	0.00	0.11
12.05	0.83	0.37	2.22	0.11	0.00	0.11
12.10	0.83	0.37	2.22	0.11	0.00	0.11
12.15	0.83	0.37	2.23	0.11	0.00	0.11
12.20	0.83	0.37	2.23	0.11	0.00	0.11
12.25	0.83	0.37	2.23	0.11	0.00	0.11
12.30	0.83	0.37	2.23	0.11	0.00	0.11
12.35	0.83	0.37	2.23	0.11	0.00	0.11
12.40	0.83	0.37	2.23	0.11	0.00	0.11
12.45	0.83	0.37	2.23	0.11	0.00	0.11
12.50	0.83	0.37	2.23	0.11	0.00	0.11
12.55	0.83	0.37	2.23	0.11	0.00	0.11

12.60	0.83	0.37	2.23	0.11	0.00	0.11
12.65	0.83	0.37	2.23	0.11	0.00	0.11
12.70	0.83	0.37	2.23	0.11	0.00	0.11
12.75	0.83	0.37	2.23	0.11	0.00	0.11
12.80	0.83	0.37	2.23	0.11	0.00	0.11
12.85	0.83	0.37	2.23	0.11	0.00	0.11
12.90	0.83	0.37	2.23	0.11	0.00	0.11
12.95	0.83	0.37	2.23	0.11	0.00	0.11
13.00	0.83	0.37	2.23	0.11	0.00	0.11
13.05	0.83	0.37	2.23	0.11	0.00	0.11
13.10	0.83	0.37	2.23	0.11	0.00	0.11
13.15	0.83	0.37	2.23	0.11	0.00	0.11
13.20	0.83	0.37	2.23	0.11	0.00	0.11
13.25	0.83	0.37	2.23	0.11	0.00	0.11
13.30	0.83	0.37	2.23	0.11	0.00	0.11
13.35	0.83	0.37	2.24	0.11	0.00	0.11
13.40	0.83	0.37	2.24	0.11	0.00	0.11
13.45	0.83	0.37	2.24	0.11	0.00	0.11
13.50	0.83	0.37	2.24	0.11	0.00	0.11
13.55	0.83	0.37	2.24	0.11	0.00	0.11
13.60	0.83	0.37	2.24	0.11	0.00	0.11
13.65	0.83	0.37	2.24	0.11	0.00	0.11
13.70	0.83	0.37	2.24	0.11	0.00	0.11
13.75	0.83	0.37	2.24	0.11	0.00	0.11
13.80	0.83	0.37	2.24	0.11	0.00	0.11
13.85	0.83	0.37	2.24	0.11	0.00	0.11
13.90	0.83	0.37	2.24	0.11	0.00	0.11
13.95	0.83	0.37	2.24	0.11	0.00	0.11
14.00	0.83	0.37	2.24	0.11	0.00	0.11
14.05	0.83	0.37	2.24	0.11	0.00	0.11
14.10	0.83	0.37	2.24	0.11	0.00	0.11
14.15	0.83	0.37	2.24	0.11	0.00	0.11
14.20	0.83	0.37	2.24	0.11	0.00	0.11
14.25	0.83	0.37	2.24	0.11	0.00	0.11
14.30	0.83	0.37	2.24	0.11	0.00	0.11
14.35	0.83	0.37	2.24	0.11	0.00	0.11
14.40	0.83	0.37	2.24	0.11	0.00	0.11
14.45	0.83	0.37	2.24	0.11	0.00	0.11
14.50	0.83	0.37	2.24	0.11	0.00	0.11
14.55	0.83	0.37	2.24	0.11	0.00	0.11
14.60	0.83	0.37	2.25	0.11	0.00	0.11
14.65	0.83	0.37	2.25	0.11	0.00	0.11
14.70	0.83	0.37	2.25	0.11	0.00	0.11
14.75	0.83	0.37	2.25	0.11	0.00	0.11
14.80	0.83	0.37	2.25	0.11	0.00	0.11
14.85	0.83	0.37	2.25	0.11	0.00	0.11
14.90	0.83	0.37	2.25	0.11	0.00	0.11
14.95	0.83	0.37	2.25	0.11	0.00	0.11
15.00	0.83	0.37	2.25	0.11	0.00	0.11
15.05	0.83	0.37	2.25	0.11	0.00	0.11
15.10	0.83	0.37	2.25	0.11	0.00	0.11
15.15	0.83	0.37	2.25	0.11	0.00	0.11
15.20	0.83	0.37	2.25	0.11	0.00	0.11
15.25	0.83	0.37	2.25	0.11	0.00	0.11
15.30	0.83	0.37	2.25	0.11	0.00	0.11
15.35	0.83	0.37	2.25	0.11	0.00	0.11
15.40	0.83	0.37	2.25	0.11	0.00	0.11
15.45	0.83	0.37	2.25	0.11	0.00	0.11
15.50	0.83	0.37	2.25	0.11	0.00	0.11
15.55	0.83	0.37	2.25	0.11	0.00	0.11
15.60	0.83	0.37	2.25	0.11	0.00	0.11
15.65	0.83	0.37	2.25	0.11	0.00	0.11
15.70	0.83	0.37	2.25	0.11	0.00	0.11
15.75	0.83	0.37	2.25	0.11	0.00	0.11
15.80	0.83	0.37	2.25	0.11	0.00	0.11
15.85	0.83	0.37	2.26	0.11	0.00	0.11
15.90	0.83	0.37	2.26	0.11	0.00	0.11
15.95	0.83	0.37	2.26	0.11	0.00	0.11
16.00	0.83	0.37	2.26	0.11	0.00	0.11
16.05	0.83	0.37	2.26	0.11	0.00	0.11
16.10	0.83	0.37	2.26	0.11	0.00	0.11

16.15	0.83	0.37	2.26	0.11	0.00	0.11
16.20	0.83	0.37	2.26	0.11	0.00	0.11
16.25	0.83	0.37	2.26	0.11	0.00	0.11
16.30	0.83	0.37	2.26	0.11	0.00	0.11
16.35	0.83	0.37	2.26	0.11	0.00	0.11
16.40	0.83	0.37	2.26	0.11	0.00	0.11
16.45	0.83	0.37	2.26	0.11	0.00	0.11
16.50	0.83	0.37	2.26	0.11	0.00	0.11
16.55	0.83	0.37	2.26	0.11	0.00	0.11
16.60	0.83	0.37	2.26	0.11	0.00	0.11
16.65	0.83	0.37	2.26	0.11	0.00	0.11
16.70	0.83	0.37	2.26	0.11	0.00	0.11
16.75	0.83	0.37	2.26	0.11	0.00	0.11
16.80	0.83	0.37	2.26	0.11	0.00	0.11
16.85	0.83	0.37	2.26	0.11	0.00	0.11
16.90	0.83	0.37	2.26	0.11	0.00	0.11
16.95	0.83	0.37	2.26	0.11	0.00	0.11
17.00	0.83	0.37	2.26	0.11	0.00	0.11
17.05	0.83	0.37	2.26	0.11	0.00	0.11
17.10	0.83	0.37	2.26	0.11	0.00	0.11
17.15	0.83	0.37	2.26	0.11	0.00	0.11
17.20	0.83	0.37	2.27	0.11	0.00	0.11
17.25	0.83	0.37	2.27	0.11	0.00	0.11
17.30	0.83	0.37	2.27	0.11	0.00	0.11
17.35	0.83	0.37	2.27	0.11	0.00	0.11
17.40	0.83	0.37	2.27	0.11	0.00	0.11
17.45	0.83	0.37	2.27	0.11	0.00	0.11
17.50	0.83	0.37	2.27	0.11	0.00	0.11
17.55	0.83	0.37	2.27	0.11	0.00	0.11
17.60	0.83	0.37	2.27	0.11	0.00	0.11
17.65	0.83	0.37	2.27	0.11	0.00	0.11
17.70	0.83	0.37	2.27	0.11	0.00	0.11
17.75	0.83	0.37	2.27	0.11	0.00	0.11
17.80	0.83	0.37	2.27	0.11	0.00	0.11
17.85	0.83	0.37	2.27	0.11	0.00	0.11
17.90	0.83	0.37	2.27	0.11	0.00	0.11
17.95	0.83	0.37	2.27	0.11	0.00	0.11
18.00	0.83	0.37	2.27	0.11	0.00	0.11
18.05	0.83	0.37	2.27	0.11	0.00	0.11
18.10	0.83	0.37	2.27	0.11	0.00	0.11
18.15	0.83	0.37	2.27	0.11	0.00	0.11
18.20	0.83	0.37	2.27	0.11	0.00	0.11
18.25	0.83	0.37	2.27	0.11	0.00	0.11
18.30	0.83	0.37	2.27	0.11	0.00	0.11
18.35	0.83	0.37	2.27	0.11	0.00	0.11
18.40	0.83	0.37	2.27	0.11	0.00	0.11
18.45	0.83	0.37	2.27	0.11	0.00	0.11
18.50	0.83	0.37	2.27	0.11	0.00	0.11
18.55	0.83	0.37	2.27	0.11	0.00	0.11
18.60	0.83	0.37	2.27	0.11	0.00	0.11
18.65	0.83	0.37	2.27	0.11	0.00	0.11
18.70	0.83	0.37	2.27	0.11	0.00	0.11
18.75	0.83	0.37	2.27	0.11	0.00	0.11
18.80	0.83	0.37	2.27	0.11	0.00	0.11
18.85	0.83	0.37	2.27	0.11	0.00	0.11
18.90	0.83	0.37	2.27	0.11	0.00	0.11
18.95	0.83	0.37	2.27	0.11	0.00	0.11
19.00	0.83	0.37	2.27	0.11	0.00	0.11
19.05	0.83	0.37	2.27	0.11	0.00	0.11
19.10	0.83	0.37	2.27	0.11	0.00	0.11
19.15	0.83	0.37	2.27	0.11	0.00	0.11
19.20	0.83	0.37	2.27	0.11	0.00	0.11
19.25	0.83	0.37	2.27	0.11	0.00	0.11
19.30	0.83	0.37	2.27	0.11	0.00	0.11
19.35	0.83	0.37	2.27	0.11	0.00	0.11
19.40	0.83	0.37	2.27	0.11	0.00	0.11
19.45	0.83	0.37	2.27	0.11	0.00	0.11
19.50	0.83	0.37	2.27	0.11	0.00	0.11
19.55	0.83	0.37	2.27	0.11	0.00	0.11
19.60	0.83	0.37	2.27	0.11	0.00	0.11
19.65	0.83	0.37	2.27	0.11	0.00	0.11

19.70	0.83	0.37	2.27	0.11	0.00	0.11
19.75	0.83	0.37	2.27	0.11	0.00	0.11
19.80	0.83	0.37	2.27	0.11	0.00	0.11
19.85	0.83	0.37	2.27	0.11	0.00	0.11
19.90	0.83	0.37	2.27	0.11	0.00	0.11
19.95	0.83	0.37	2.27	0.11	0.00	0.11
20.00	0.83	0.37	2.27	0.11	0.00	0.11
20.05	0.83	0.37	2.27	0.11	0.00	0.11
20.10	0.83	0.37	2.27	0.11	0.00	0.11
20.15	0.83	0.37	2.27	0.11	0.00	0.11
20.20	0.83	0.37	2.27	0.11	0.00	0.11
20.25	0.83	0.37	2.27	0.11	0.00	0.11
20.30	0.83	0.37	2.27	0.11	0.00	0.11
20.35	0.83	0.37	2.27	0.11	0.00	0.11
20.40	0.83	0.37	2.27	0.11	0.00	0.11
20.45	0.83	0.37	2.27	0.11	0.00	0.11
20.50	0.83	0.37	2.27	0.11	0.00	0.11
20.55	0.83	0.37	2.27	0.11	0.00	0.11
20.60	0.83	0.37	2.27	0.11	0.00	0.11
20.65	0.83	0.37	2.27	0.11	0.00	0.11
20.70	0.83	0.37	2.28	0.11	0.00	0.11
20.75	0.83	0.37	2.28	0.11	0.00	0.11
20.80	0.83	0.37	2.28	0.11	0.00	0.11
20.85	0.83	0.36	2.28	0.11	0.00	0.11
20.90	0.83	0.36	2.28	0.11	0.00	0.11
20.95	0.83	0.36	2.28	0.11	0.00	0.11
21.00	0.83	0.36	2.28	0.11	0.00	0.11
21.05	0.83	0.36	2.28	0.11	0.00	0.11
21.10	0.83	0.36	2.28	0.11	0.00	0.11
21.15	0.83	0.36	2.28	0.11	0.00	0.11
21.20	0.83	0.36	2.28	0.11	0.00	0.11
21.25	0.83	0.36	2.28	0.11	0.00	0.11
21.30	0.83	0.36	2.28	0.11	0.00	0.11
21.35	0.83	0.36	2.28	0.11	0.00	0.11
21.40	0.83	0.36	2.28	0.11	0.00	0.11
21.45	0.83	0.36	2.28	0.11	0.00	0.11
21.50	0.83	0.36	2.28	0.11	0.00	0.11
21.55	0.83	0.36	2.28	0.11	0.00	0.11
21.60	0.83	0.36	2.28	0.11	0.00	0.11
21.65	0.83	0.36	2.28	0.11	0.00	0.11
21.70	0.83	0.36	2.28	0.11	0.00	0.11
21.75	0.83	0.36	2.28	0.11	0.00	0.11
21.80	0.83	0.36	2.28	0.11	0.00	0.11
21.85	0.83	0.36	2.28	0.11	0.00	0.11
21.90	0.83	0.36	2.28	0.11	0.00	0.11
21.95	0.83	0.36	2.28	0.11	0.00	0.11
22.00	0.83	0.36	2.28	0.11	0.00	0.11
22.05	0.83	0.36	2.28	0.11	0.00	0.11
22.10	0.83	0.36	2.28	0.11	0.00	0.11
22.15	0.83	0.36	2.28	0.11	0.00	0.11
22.20	0.83	0.36	2.28	0.11	0.00	0.11
22.25	0.83	0.36	2.28	0.11	0.00	0.11
22.30	0.83	0.36	2.28	0.11	0.00	0.11
22.35	0.83	0.36	2.28	0.11	0.00	0.11
22.40	0.83	0.36	2.28	0.11	0.00	0.11
22.45	0.83	0.36	2.28	0.11	0.00	0.11
22.50	0.83	0.36	2.29	0.11	0.00	0.11
22.55	0.83	0.36	2.29	0.11	0.00	0.11
22.60	0.83	0.36	2.29	0.11	0.00	0.11
22.65	0.83	0.36	2.29	0.11	0.00	0.11
22.70	0.83	0.36	2.29	0.11	0.00	0.11
22.75	0.83	0.36	2.29	0.11	0.00	0.11
22.80	0.83	0.36	2.29	0.11	0.00	0.11
22.85	0.83	0.36	2.29	0.11	0.00	0.11
22.90	0.83	0.36	2.29	0.11	0.00	0.11
22.95	0.83	0.36	2.29	0.11	0.00	0.11
23.00	0.83	0.36	2.29	0.11	0.00	0.11
23.05	0.83	0.36	2.29	0.11	0.00	0.11
23.10	0.83	0.36	2.29	0.11	0.00	0.11
23.15	0.83	0.36	2.29	0.11	0.00	0.11
23.20	0.83	0.36	2.29	0.11	0.00	0.11

23.25	0.83	0.36	2.29	0.11	0.00	0.11
23.30	0.83	0.36	2.29	0.11	0.00	0.11
23.35	0.83	0.36	2.29	0.11	0.00	0.11
23.40	0.83	0.36	2.29	0.11	0.00	0.11
23.45	0.83	0.36	2.29	0.11	0.00	0.11
23.50	0.83	0.36	2.29	0.11	0.00	0.11
23.55	0.83	0.36	2.29	0.11	0.00	0.11
23.60	0.83	0.36	2.29	0.11	0.00	0.11
23.65	0.83	0.36	2.29	0.11	0.00	0.11
23.70	0.83	0.36	2.29	0.11	0.00	0.11
23.75	0.83	0.36	2.29	0.11	0.00	0.11
23.80	0.83	0.36	2.29	0.11	0.00	0.11
23.85	0.83	0.36	2.29	0.11	0.00	0.11
23.90	0.83	0.36	2.29	0.11	0.00	0.11
23.95	0.83	0.36	2.29	0.11	0.00	0.11
24.00	0.83	0.36	2.29	0.11	0.00	0.11
24.05	0.83	0.36	2.29	0.11	0.00	0.11
24.10	0.83	0.36	2.29	0.11	0.00	0.11
24.15	0.83	0.36	2.29	0.11	0.00	0.11
24.20	0.83	0.36	2.29	0.11	0.00	0.11
24.25	0.83	0.36	2.30	0.11	0.00	0.11
24.30	0.83	0.36	2.30	0.11	0.00	0.11
24.35	0.83	0.36	2.30	0.11	0.00	0.11
24.40	0.83	0.36	2.30	0.11	0.00	0.11
24.45	0.83	0.36	2.30	0.11	0.00	0.11
24.50	0.83	0.36	2.30	0.11	0.00	0.11
24.55	0.83	0.36	2.30	0.11	0.00	0.11
24.60	0.83	0.36	2.30	0.11	0.00	0.11
24.65	0.83	0.36	2.30	0.11	0.00	0.11
24.70	0.83	0.36	2.30	0.11	0.00	0.11
24.75	0.83	0.36	2.30	0.11	0.00	0.11
24.80	0.83	0.36	2.30	0.11	0.00	0.11
24.85	0.83	0.36	2.30	0.11	0.00	0.11
24.90	0.83	0.36	2.30	0.11	0.00	0.11
24.95	0.83	0.36	2.30	0.11	0.00	0.11
25.00	0.83	0.36	2.30	0.11	0.00	0.11
25.05	0.83	0.36	2.30	0.11	0.00	0.11
25.10	0.83	0.36	2.30	0.11	0.00	0.11
25.15	0.83	0.36	2.30	0.11	0.00	0.11
25.20	0.83	0.36	2.30	0.11	0.00	0.11
25.25	0.83	0.36	2.30	0.11	0.00	0.11
25.30	0.83	0.36	2.30	0.11	0.00	0.11
25.35	0.83	0.36	2.30	0.11	0.00	0.11
25.40	0.83	0.36	2.30	0.11	0.00	0.11
25.45	0.83	0.36	2.30	0.11	0.00	0.11
25.50	0.83	0.36	2.30	0.11	0.00	0.11
25.55	0.83	0.36	2.30	0.11	0.00	0.11
25.60	0.83	0.36	2.30	0.11	0.00	0.11
25.65	0.83	0.36	2.30	0.11	0.00	0.11
25.70	0.83	0.36	2.30	0.11	0.00	0.11
25.75	0.83	0.36	2.30	0.11	0.00	0.11
25.80	0.83	0.36	2.30	0.11	0.00	0.11
25.85	0.83	0.36	2.30	0.11	0.00	0.11
25.90	0.83	0.36	2.30	0.11	0.00	0.11
25.95	0.83	0.36	2.30	0.11	0.00	0.11
26.00	0.83	0.36	2.31	0.11	0.00	0.11
26.05	0.83	0.36	2.31	0.11	0.00	0.11
26.10	0.83	0.36	2.31	0.11	0.00	0.11
26.15	0.83	0.36	2.31	0.11	0.00	0.11
26.20	0.83	0.36	2.31	0.11	0.00	0.11
26.25	0.83	0.36	2.31	0.11	0.00	0.11
26.30	0.83	0.36	2.31	0.11	0.00	0.11
26.35	0.83	0.36	2.31	0.11	0.00	0.11
26.40	0.83	0.36	2.31	0.11	0.00	0.11
26.45	0.83	0.36	2.31	0.11	0.00	0.11
26.50	0.83	0.36	2.31	0.11	0.00	0.11
26.55	0.83	0.36	2.31	0.11	0.00	0.11
26.60	0.83	0.36	2.31	0.11	0.00	0.11
26.65	0.83	0.36	2.31	0.11	0.00	0.11
26.70	0.83	0.36	2.31	0.11	0.00	0.11
26.75	0.83	0.36	2.31	0.11	0.00	0.11

26.80	0.83	0.36	2.31	0.11	0.00	0.11
26.85	0.83	0.36	2.31	0.11	0.00	0.11
26.90	0.83	0.36	2.31	0.11	0.00	0.11
26.95	0.83	0.36	2.31	0.11	0.00	0.11
27.00	0.83	0.36	2.31	0.11	0.00	0.11
27.05	0.83	0.36	2.31	0.11	0.00	0.11
27.10	0.83	0.36	2.31	0.11	0.00	0.11
27.15	0.83	0.36	2.31	0.11	0.00	0.11
27.20	0.83	0.36	2.31	0.11	0.00	0.11
27.25	0.83	0.36	2.31	0.11	0.00	0.11
27.30	0.83	0.36	2.31	0.11	0.00	0.11
27.35	0.83	0.36	2.31	0.11	0.00	0.11
27.40	0.83	0.36	2.31	0.11	0.00	0.11
27.45	0.83	0.36	2.31	0.11	0.00	0.11
27.50	0.83	0.36	2.31	0.11	0.00	0.11
27.55	0.83	0.36	2.31	0.11	0.00	0.11
27.60	0.83	0.36	2.31	0.11	0.00	0.11
27.65	0.83	0.36	2.31	0.11	0.00	0.11
27.70	0.83	0.36	2.31	0.11	0.00	0.11
27.75	0.83	0.36	2.32	0.11	0.00	0.11
27.80	0.83	0.36	2.32	0.11	0.00	0.11
27.85	0.83	0.36	2.32	0.11	0.00	0.11
27.90	0.83	0.36	2.32	0.11	0.00	0.11
27.95	0.83	0.36	2.32	0.11	0.00	0.11
28.00	0.83	0.36	2.32	0.11	0.00	0.11
28.05	0.83	0.36	2.32	0.11	0.00	0.11
28.10	0.83	0.36	2.32	0.11	0.00	0.11
28.15	0.83	0.36	2.32	0.11	0.00	0.11
28.20	0.83	0.36	2.32	0.11	0.00	0.11
28.25	0.83	0.36	2.32	0.11	0.00	0.11
28.30	0.83	0.36	2.32	0.11	0.00	0.11
28.35	0.83	0.36	2.32	0.11	0.00	0.11
28.40	0.83	0.36	2.32	0.11	0.00	0.11
28.45	0.83	0.36	2.32	0.11	0.00	0.11
28.50	0.83	0.36	2.32	0.11	0.00	0.11
28.55	0.83	0.36	2.32	0.11	0.00	0.11
28.60	0.83	0.36	2.32	0.11	0.00	0.11
28.65	0.83	0.36	2.32	0.11	0.00	0.11
28.70	0.83	0.36	2.32	0.11	0.00	0.11
28.75	0.83	0.36	2.32	0.11	0.00	0.11
28.80	0.83	0.36	2.32	0.11	0.00	0.11
28.85	0.83	0.36	2.32	0.11	0.00	0.11
28.90	0.83	0.36	2.32	0.11	0.00	0.11
28.95	0.83	0.36	2.32	0.11	0.00	0.11
29.00	0.83	0.36	2.32	0.11	0.00	0.11
29.05	0.83	0.36	2.32	0.11	0.00	0.11
29.10	0.83	0.36	2.32	0.11	0.00	0.11
29.15	0.83	0.36	2.32	0.11	0.00	0.11
29.20	0.83	0.36	2.32	0.11	0.00	0.11
29.25	0.83	0.36	2.32	0.11	0.00	0.11
29.30	0.83	0.36	2.32	0.11	0.00	0.11
29.35	0.83	0.36	2.32	0.11	0.00	0.11
29.40	0.83	0.36	2.32	0.11	0.00	0.11
29.45	0.83	0.36	2.32	0.11	0.00	0.11
29.50	0.83	0.36	2.33	0.11	0.00	0.11
29.55	0.83	0.36	2.33	0.11	0.00	0.11
29.60	0.83	0.36	2.33	0.11	0.00	0.11
29.65	0.83	0.36	2.33	0.11	0.00	0.11
29.70	0.83	0.36	2.33	0.11	0.00	0.11
29.75	0.83	0.36	2.33	0.11	0.00	0.11
29.80	0.83	0.36	2.33	0.11	0.00	0.11
29.85	0.83	0.36	2.33	0.11	0.00	0.11
29.90	0.83	0.36	2.33	0.11	0.00	0.11
29.95	0.83	0.36	2.33	0.11	0.00	0.11
30.00	0.83	0.36	2.33	0.11	0.00	0.11
30.05	0.83	0.36	2.33	0.11	0.00	0.11
30.10	0.83	0.36	2.33	0.11	0.00	0.11
30.15	0.83	0.36	2.33	0.11	0.00	0.11
30.20	0.83	0.36	2.33	0.11	0.00	0.11
30.25	0.83	0.36	2.33	0.11	0.00	0.11
30.30	0.83	0.36	2.34	0.11	0.00	0.11

30.35	0.83	0.36	2.34	0.11	0.00	0.11
30.40	0.83	0.36	2.34	0.11	0.00	0.11
30.45	0.83	0.36	2.34	0.11	0.00	0.11
30.50	0.83	0.35	2.34	0.11	0.00	0.11
30.55	0.83	0.35	2.34	0.11	0.00	0.11
30.60	0.83	0.35	2.34	0.11	0.00	0.11
30.65	0.83	0.35	2.34	0.11	0.00	0.11
30.70	0.83	0.35	2.34	0.11	0.00	0.11
30.75	0.83	0.35	2.35	0.11	0.00	0.11
30.80	0.83	0.35	2.35	0.11	0.00	0.11
30.85	0.83	0.35	2.35	0.11	0.00	0.11
30.90	0.83	0.35	2.35	0.11	0.00	0.11
30.95	0.83	0.35	2.35	0.11	0.00	0.11
31.00	0.83	0.35	2.35	0.11	0.00	0.11
31.05	0.83	0.35	2.35	0.11	0.00	0.11
31.10	0.83	0.35	2.35	0.11	0.00	0.11
31.15	0.83	0.35	2.36	0.11	0.00	0.11
31.20	0.83	0.35	2.36	0.11	0.00	0.11
31.25	0.83	0.35	2.36	0.11	0.00	0.11
31.30	0.83	0.35	2.36	0.11	0.00	0.11
31.35	0.83	0.35	2.36	0.11	0.00	0.11
31.40	0.83	0.35	2.36	0.11	0.00	0.11
31.45	0.83	0.35	2.36	0.11	0.00	0.11
31.50	0.83	0.35	2.36	0.11	0.00	0.11
31.55	0.83	0.35	2.36	0.11	0.00	0.11
31.60	0.83	0.35	2.37	0.11	0.00	0.11
31.65	0.83	0.35	2.37	0.11	0.00	0.11
31.70	0.83	0.35	2.37	0.11	0.00	0.11
31.75	0.83	0.35	2.37	0.11	0.00	0.11
31.80	0.83	0.35	2.37	0.11	0.00	0.11
31.85	0.83	0.35	2.37	0.11	0.00	0.11
31.90	0.83	0.35	2.37	0.11	0.00	0.11
31.95	0.83	0.35	2.37	0.11	0.00	0.11
32.00	0.83	0.35	2.38	0.11	0.00	0.11
32.05	0.83	0.35	2.38	0.11	0.00	0.11
32.10	0.83	0.35	2.38	0.11	0.00	0.11
32.15	0.83	0.35	2.38	0.11	0.00	0.11
32.20	0.83	0.35	2.38	0.11	0.00	0.11
32.25	0.83	0.35	2.38	0.11	0.00	0.11
32.30	0.83	0.35	2.38	0.11	0.00	0.11
32.35	0.83	0.35	2.38	0.11	0.00	0.11
32.40	0.83	0.35	2.38	0.11	0.00	0.11
32.45	0.83	0.35	2.39	0.11	0.00	0.11
32.50	0.83	0.35	2.39	0.11	0.00	0.11
32.55	0.83	0.35	2.39	0.11	0.00	0.11
32.60	0.83	0.35	2.39	0.11	0.00	0.11
32.65	0.83	0.35	2.39	0.11	0.00	0.11
32.70	0.83	0.35	2.39	0.11	0.00	0.11
32.75	0.83	0.35	2.39	0.11	0.00	0.11
32.80	0.83	0.35	2.39	0.11	0.00	0.11
32.85	0.83	0.35	2.40	0.11	0.00	0.11
32.90	0.83	0.35	2.40	0.11	0.00	0.11
32.95	0.83	0.35	2.40	0.11	0.00	0.11
33.00	0.83	0.35	2.40	0.11	0.00	0.11
33.05	0.83	0.35	2.40	0.11	0.00	0.11
33.10	0.83	0.35	2.40	0.11	0.00	0.11
33.15	0.83	0.35	2.40	0.11	0.00	0.11
33.20	0.83	0.35	2.40	0.11	0.00	0.11
33.25	0.83	0.35	2.41	0.11	0.00	0.11
33.30	0.83	0.35	2.41	0.11	0.00	0.11
33.35	0.83	0.35	2.41	0.11	0.00	0.11
33.40	0.83	0.34	2.41	0.11	0.00	0.11
33.45	0.83	0.34	2.41	0.11	0.00	0.11
33.50	0.83	0.34	2.41	0.11	0.00	0.11
33.55	0.83	0.34	2.41	0.11	0.00	0.11
33.60	0.83	0.34	2.41	0.11	0.00	0.11
33.65	0.83	0.34	2.41	0.11	0.00	0.11
33.70	0.83	0.34	2.42	0.11	0.00	0.11
33.75	0.83	0.34	2.42	0.11	0.00	0.11
33.80	0.83	0.34	2.42	0.11	0.00	0.11
33.85	0.83	0.34	2.42	0.11	0.00	0.11

33.90	0.83	0.34	2.42	0.11	0.00	0.11
33.95	0.83	0.34	2.42	0.11	0.00	0.11
34.00	0.83	0.34	2.42	0.11	0.00	0.11
34.05	0.83	0.34	2.42	0.11	0.00	0.11
34.10	0.83	0.34	2.43	0.11	0.00	0.11
34.15	0.83	0.34	2.43	0.11	0.00	0.11
34.20	0.83	0.34	2.43	0.11	0.00	0.11
34.25	0.83	0.34	2.43	0.11	0.00	0.11
34.30	0.83	0.34	2.43	0.11	0.00	0.11
34.35	0.83	0.34	2.43	0.11	0.00	0.11
34.40	0.83	0.34	2.43	0.11	0.00	0.11
34.45	0.83	0.34	2.43	0.11	0.00	0.11
34.50	0.83	0.34	2.44	0.11	0.00	0.11
34.55	0.83	0.34	2.44	0.11	0.00	0.11
34.60	0.83	0.34	2.44	0.11	0.00	0.11
34.65	0.83	0.34	2.44	0.11	0.00	0.11
34.70	0.83	0.34	2.44	0.11	0.00	0.11
34.75	0.83	0.34	2.44	0.11	0.00	0.11
34.80	0.83	0.34	2.44	0.11	0.00	0.11
34.85	0.83	0.34	2.44	0.11	0.00	0.11
34.90	0.83	0.34	2.45	0.11	0.00	0.11
34.95	0.83	0.34	2.45	0.11	0.00	0.11
35.00	0.83	0.34	2.45	0.11	0.00	0.11
35.05	0.83	0.34	2.45	0.11	0.00	0.11
35.10	0.83	0.34	2.45	0.11	0.00	0.11
35.15	0.83	0.34	2.45	0.11	0.00	0.11
35.20	0.83	0.34	2.45	0.11	0.00	0.11
35.25	0.82	0.34	2.43	0.11	0.00	0.11
35.30	0.81	0.34	2.39	0.11	0.00	0.11
35.35	0.80	0.34	2.37	0.11	0.00	0.11
35.40	0.79	0.34	2.34	0.11	0.00	0.11
35.45	0.78	0.34	2.32	0.11	0.00	0.11
35.50	0.78	0.34	2.30	0.11	0.00	0.11
35.55	0.77	0.34	2.28	0.11	0.00	0.11
35.60	0.76	0.34	2.26	0.11	0.00	0.11
35.65	0.76	0.34	2.24	0.11	0.00	0.11
35.70	0.75	0.34	2.23	0.11	0.00	0.11
35.75	0.75	0.34	2.21	0.11	0.00	0.11
35.80	0.74	0.34	2.20	0.11	0.00	0.11
35.85	0.74	0.34	2.19	0.11	0.00	0.11
35.90	0.73	0.34	2.18	0.11	0.00	0.11
35.95	0.73	0.34	2.16	0.11	0.00	0.11
36.00	0.72	0.34	2.15	0.11	0.00	0.11
36.05	0.72	0.34	2.14	0.11	0.00	0.11
36.10	0.72	0.34	2.13	0.11	0.00	0.11
36.15	0.71	0.34	2.13	0.11	0.00	0.11
36.20	0.71	0.34	2.12	0.11	0.00	0.11
36.25	0.71	0.34	2.11	0.11	0.00	0.11
36.30	0.70	0.34	2.10	0.11	0.00	0.11
36.35	0.70	0.34	2.09	0.11	0.00	0.11
36.40	0.70	0.34	2.09	0.11	0.00	0.11
36.45	0.70	0.34	2.08	0.11	0.00	0.11
36.50	0.69	0.34	2.07	0.11	0.00	0.11
36.55	0.69	0.33	2.07	0.11	0.00	0.11
36.60	0.69	0.33	2.06	0.11	0.00	0.11
36.65	0.69	0.33	2.05	0.11	0.00	0.11
36.70	0.68	0.33	2.05	0.11	0.00	0.11
36.75	0.68	0.33	2.04	0.11	0.00	0.11
36.80	0.68	0.33	2.04	0.11	0.00	0.11
36.85	0.68	0.33	2.03	0.11	0.00	0.11
36.90	0.68	0.33	2.03	0.11	0.00	0.11
36.95	0.67	0.33	2.02	0.11	0.00	0.11
37.00	0.67	0.33	2.02	0.11	0.00	0.11
37.05	0.67	0.33	2.01	0.11	0.00	0.11
37.10	0.67	0.33	2.01	0.11	0.00	0.11
37.15	0.67	0.33	2.00	0.11	0.00	0.11
37.20	0.67	0.33	2.00	0.11	0.00	0.11
37.25	0.66	0.33	1.99	0.11	0.00	0.11
37.30	0.66	0.33	1.99	0.11	0.00	0.11
37.35	0.66	0.33	1.99	0.11	0.00	0.11
37.40	0.66	0.33	1.98	0.11	0.00	0.11

37.45	0.66	0.33	1.98	0.11	0.00	0.11
37.50	0.66	0.33	1.98	0.11	0.00	0.11
37.55	0.65	0.33	1.97	0.11	0.00	0.11
37.60	0.65	0.33	1.97	0.11	0.00	0.11
37.65	0.65	0.33	1.97	0.10	0.00	0.10
37.70	0.65	0.33	1.96	0.10	0.00	0.10
37.75	0.65	0.33	1.96	0.10	0.00	0.10
37.80	0.65	0.33	1.96	0.10	0.00	0.10
37.85	0.65	0.33	1.95	0.10	0.00	0.10
37.90	0.65	0.33	1.95	0.10	0.00	0.10
37.95	0.64	0.33	1.95	0.10	0.00	0.10
38.00	0.64	0.33	1.94	0.10	0.00	0.10
38.05	0.64	0.33	1.94	0.10	0.00	0.10
38.10	0.64	0.33	1.94	0.10	0.00	0.10
38.15	0.64	0.33	1.94	0.10	0.00	0.10
38.20	0.64	0.33	1.93	0.10	0.00	0.10
38.25	0.64	0.33	1.93	0.10	0.00	0.10
38.30	0.64	0.33	1.93	0.10	0.00	0.10
38.35	0.63	0.33	1.93	0.10	0.00	0.10
38.40	0.63	0.33	1.92	0.10	0.00	0.10
38.45	0.63	0.33	1.92	0.10	0.00	0.10
38.50	0.63	0.33	1.92	0.10	0.00	0.10
38.55	0.63	0.33	1.92	0.10	0.00	0.10
38.60	0.63	0.33	1.91	0.10	0.00	0.10
38.65	0.63	0.33	1.91	0.10	0.00	0.10
38.70	0.63	0.33	1.91	0.10	0.00	0.10
38.75	0.63	0.33	1.91	0.10	0.00	0.10
38.80	0.63	0.33	1.90	0.10	0.00	0.10
38.85	0.62	0.33	1.90	0.10	0.00	0.10
38.90	0.62	0.33	1.90	0.10	0.00	0.10
38.95	0.62	0.33	1.90	0.10	0.00	0.10
39.00	0.62	0.33	1.90	0.10	0.00	0.10
39.05	0.62	0.33	1.89	0.10	0.00	0.10
39.10	0.62	0.33	1.89	0.10	0.00	0.10
39.15	0.62	0.33	1.89	0.10	0.00	0.10
39.20	0.62	0.33	1.89	0.10	0.00	0.10
39.25	0.62	0.33	1.89	0.10	0.00	0.10
39.30	0.62	0.33	1.89	0.10	0.00	0.10
39.35	0.62	0.33	1.88	0.10	0.00	0.10
39.40	0.61	0.33	1.88	0.10	0.00	0.10
39.45	0.61	0.33	1.88	0.10	0.00	0.10
39.50	0.61	0.33	1.88	0.10	0.00	0.10
39.55	0.61	0.33	1.88	0.10	0.00	0.10
39.60	0.61	0.33	1.87	0.10	0.00	0.10
39.65	0.61	0.33	1.87	0.10	0.00	0.10
39.70	0.61	0.33	1.87	0.10	0.00	0.10
39.75	0.61	0.33	1.87	0.10	0.00	0.10
39.80	0.61	0.33	1.87	0.10	0.00	0.10
39.85	0.61	0.33	1.87	0.10	0.00	0.10
39.90	0.61	0.33	1.86	0.10	0.00	0.10
39.95	0.61	0.33	1.86	0.10	0.00	0.10
40.00	0.60	0.32	1.86	0.10	0.00	0.10
40.05	0.83	0.32	2.56	0.10	0.00	0.10
40.10	0.83	0.32	2.56	0.10	0.00	0.10
40.15	0.83	0.32	2.56	0.10	0.00	0.10
40.20	0.83	0.32	2.56	0.10	0.00	0.10
40.25	0.83	0.32	2.56	0.10	0.00	0.10
40.30	0.83	0.32	2.56	0.10	0.00	0.10
40.35	0.83	0.32	2.56	0.10	0.00	0.10
40.40	0.83	0.32	2.56	0.10	0.00	0.10
40.45	0.83	0.32	2.56	0.10	0.00	0.10
40.50	0.83	0.32	2.56	0.10	0.00	0.10
40.55	0.83	0.32	2.57	0.10	0.00	0.10
40.60	0.83	0.32	2.57	0.10	0.00	0.10
40.65	0.83	0.32	2.57	0.10	0.00	0.10
40.70	0.83	0.32	2.57	0.10	0.00	0.10
40.75	0.83	0.32	2.57	0.10	0.00	0.10
40.80	0.83	0.32	2.57	0.10	0.00	0.10
40.85	0.83	0.32	2.57	0.10	0.00	0.10
40.90	0.83	0.32	2.57	0.10	0.00	0.10
40.95	0.83	0.32	2.57	0.10	0.00	0.10

41.00	0.83	0.32	2.57	0.10	0.00	0.10
41.05	0.83	0.32	2.57	0.10	0.00	0.10
41.10	0.83	0.32	2.57	0.10	0.00	0.10
41.15	0.83	0.32	2.58	0.10	0.00	0.10
41.20	0.83	0.32	2.58	0.10	0.00	0.10
41.25	0.83	0.32	2.58	0.10	0.00	0.10
41.30	0.83	0.32	2.58	0.10	0.00	0.10
41.35	0.83	0.32	2.58	0.10	0.00	0.10
41.40	0.83	0.32	2.58	0.10	0.00	0.10
41.45	0.83	0.32	2.58	0.10	0.00	0.10
41.50	0.83	0.32	2.58	0.10	0.00	0.10
41.55	0.83	0.32	2.58	0.10	0.00	0.10
41.60	0.83	0.32	2.58	0.10	0.00	0.10
41.65	0.83	0.32	2.58	0.10	0.00	0.10
41.70	0.83	0.32	2.58	0.10	0.00	0.10
41.75	0.83	0.32	2.59	0.10	0.00	0.10
41.80	0.83	0.32	2.59	0.10	0.00	0.10
41.85	0.83	0.32	2.59	0.10	0.00	0.10
41.90	0.83	0.32	2.59	0.10	0.00	0.10
41.95	0.83	0.32	2.59	0.10	0.00	0.10
42.00	0.83	0.32	2.59	0.10	0.00	0.10
42.05	0.83	0.32	2.59	0.10	0.00	0.10
42.10	0.83	0.32	2.59	0.10	0.00	0.10
42.15	0.83	0.32	2.59	0.10	0.00	0.10
42.20	0.83	0.32	2.59	0.10	0.00	0.10
42.25	0.83	0.32	2.59	0.10	0.00	0.10
42.30	0.83	0.32	2.60	0.10	0.00	0.10
42.35	0.83	0.32	2.60	0.10	0.00	0.10
42.40	0.83	0.32	2.60	0.10	0.00	0.10
42.45	0.83	0.32	2.60	0.10	0.00	0.10
42.50	0.83	0.32	2.60	0.10	0.00	0.10
42.55	0.83	0.32	2.60	0.10	0.00	0.10
42.60	0.83	0.32	2.60	0.10	0.00	0.10
42.65	0.83	0.32	2.60	0.10	0.00	0.10
42.70	0.83	0.32	2.60	0.10	0.00	0.10
42.75	0.83	0.32	2.60	0.10	0.00	0.10
42.80	0.83	0.32	2.60	0.10	0.00	0.10
42.85	0.83	0.32	2.60	0.10	0.00	0.10
42.90	0.83	0.32	2.61	0.10	0.00	0.10
42.95	0.83	0.32	2.61	0.10	0.00	0.10
43.00	0.83	0.32	2.61	0.10	0.00	0.10
43.05	0.83	0.32	2.61	0.10	0.00	0.10
43.10	0.83	0.32	2.61	0.10	0.00	0.10
43.15	0.83	0.32	2.61	0.10	0.00	0.10
43.20	0.83	0.32	2.61	0.10	0.00	0.10
43.25	0.83	0.32	2.61	0.10	0.00	0.10
43.30	0.83	0.32	2.61	0.10	0.00	0.10
43.35	0.83	0.32	2.61	0.10	0.00	0.10
43.40	0.83	0.32	2.61	0.10	0.00	0.10
43.45	0.83	0.32	2.62	0.10	0.00	0.10
43.50	0.83	0.32	2.62	0.10	0.00	0.10
43.55	0.83	0.32	2.62	0.10	0.00	0.10
43.60	0.83	0.32	2.62	0.10	0.00	0.10
43.65	0.83	0.32	2.62	0.10	0.00	0.10
43.70	0.83	0.32	2.62	0.10	0.00	0.10
43.75	0.83	0.32	2.62	0.10	0.00	0.10
43.80	0.83	0.32	2.62	0.10	0.00	0.10
43.85	0.83	0.32	2.62	0.10	0.00	0.10
43.90	0.83	0.32	2.62	0.10	0.00	0.10
43.95	0.83	0.32	2.62	0.10	0.00	0.10
44.00	0.83	0.32	2.63	0.10	0.00	0.10
44.05	0.83	0.32	2.63	0.10	0.00	0.10
44.10	0.83	0.32	2.63	0.10	0.00	0.10
44.15	0.83	0.32	2.63	0.10	0.00	0.10
44.20	0.83	0.32	2.63	0.10	0.00	0.10
44.25	0.83	0.32	2.63	0.10	0.00	0.10
44.30	0.83	0.32	2.63	0.10	0.00	0.10
44.35	0.83	0.32	2.63	0.10	0.00	0.10
44.40	0.83	0.32	2.63	0.10	0.00	0.10
44.45	0.83	0.32	2.63	0.10	0.00	0.10
44.50	0.83	0.32	2.64	0.10	0.00	0.10

44.55	0.83	0.32	2.64	0.10	0.00	0.10
44.60	0.83	0.32	2.64	0.10	0.00	0.10
44.65	0.83	0.31	2.64	0.10	0.00	0.10
44.70	0.83	0.31	2.64	0.10	0.00	0.10
44.75	0.83	0.31	2.64	0.10	0.00	0.10
44.80	0.83	0.31	2.64	0.10	0.00	0.10
44.85	0.83	0.31	2.64	0.10	0.00	0.10
44.90	0.83	0.31	2.64	0.10	0.00	0.10
44.95	0.83	0.31	2.64	0.10	0.00	0.10
45.00	0.83	0.31	2.64	0.10	0.00	0.10
45.05	0.49	0.31	1.55	0.10	0.00	0.10
45.10	0.49	0.31	1.55	0.10	0.00	0.10
45.15	0.49	0.31	1.55	0.09	0.00	0.09
45.20	0.48	0.31	1.55	0.09	0.00	0.09
45.25	0.48	0.31	1.55	0.09	0.00	0.09
45.30	0.48	0.31	1.55	0.09	0.00	0.09
45.35	0.48	0.31	1.55	0.09	0.00	0.09
45.40	0.48	0.31	1.55	0.09	0.00	0.09
45.45	0.48	0.31	1.54	0.09	0.00	0.09
45.50	0.48	0.31	1.54	0.09	0.00	0.09
45.55	0.48	0.31	1.54	0.09	0.00	0.09
45.60	0.48	0.31	1.54	0.09	0.00	0.09
45.65	0.48	0.31	1.54	0.08	0.00	0.08
45.70	0.48	0.31	1.54	0.08	0.00	0.08
45.75	0.48	0.31	1.54	0.08	0.00	0.08
45.80	0.48	0.31	1.54	0.08	0.00	0.08
45.85	0.48	0.31	1.54	0.08	0.00	0.08
45.90	0.48	0.31	1.54	0.08	0.00	0.08
45.95	0.48	0.31	1.54	0.08	0.00	0.08
46.00	0.48	0.31	1.54	0.08	0.00	0.08
46.05	0.48	0.31	1.54	0.08	0.00	0.08
46.10	0.48	0.31	1.54	0.08	0.00	0.08
46.15	0.48	0.31	1.54	0.08	0.00	0.08
46.20	0.48	0.31	1.54	0.07	0.00	0.07
46.25	0.48	0.31	1.54	0.07	0.00	0.07
46.30	0.48	0.31	1.54	0.07	0.00	0.07
46.35	0.48	0.31	1.54	0.07	0.00	0.07
46.40	0.48	0.31	1.54	0.07	0.00	0.07
46.45	0.48	0.31	1.54	0.07	0.00	0.07
46.50	0.48	0.31	1.54	0.07	0.00	0.07
46.55	0.48	0.31	1.54	0.07	0.00	0.07
46.60	0.48	0.31	1.54	0.07	0.00	0.07
46.65	0.48	0.31	1.54	0.07	0.00	0.07
46.70	0.48	0.31	1.54	0.06	0.00	0.06
46.75	0.48	0.31	1.54	0.06	0.00	0.06
46.80	0.48	0.31	1.54	0.06	0.00	0.06
46.85	0.48	0.31	1.54	0.06	0.00	0.06
46.90	0.48	0.31	1.54	0.06	0.00	0.06
46.95	0.48	0.31	1.54	0.06	0.00	0.06
47.00	0.48	0.31	1.54	0.06	0.00	0.06
47.05	0.48	0.31	1.54	0.06	0.00	0.06
47.10	0.48	0.31	1.54	0.06	0.00	0.06
47.15	0.48	0.31	1.54	0.06	0.00	0.06
47.20	0.47	0.31	1.54	0.06	0.00	0.06
47.25	0.47	0.31	1.54	0.05	0.00	0.05
47.30	0.47	0.31	1.54	0.05	0.00	0.05
47.35	0.47	0.31	1.54	0.05	0.00	0.05
47.40	0.47	0.31	1.54	0.05	0.00	0.05
47.45	0.47	0.31	1.54	0.05	0.00	0.05
47.50	0.47	0.31	1.54	0.05	0.00	0.05
47.55	0.47	0.31	1.54	0.05	0.00	0.05
47.60	0.47	0.31	1.54	0.05	0.00	0.05
47.65	0.47	0.31	1.54	0.05	0.00	0.05
47.70	0.47	0.31	1.54	0.05	0.00	0.05
47.75	0.47	0.31	1.54	0.04	0.00	0.04
47.80	0.47	0.31	1.54	0.04	0.00	0.04
47.85	0.47	0.31	1.54	0.04	0.00	0.04
47.90	0.47	0.31	1.54	0.04	0.00	0.04
47.95	0.47	0.31	1.54	0.04	0.00	0.04
48.00	0.47	0.31	1.54	0.04	0.00	0.04
48.05	0.47	0.31	1.54	0.04	0.00	0.04

48.10	0.47	0.31	1.54	0.04	0.00	0.04
48.15	0.47	0.31	1.54	0.04	0.00	0.04
48.20	0.47	0.31	1.54	0.04	0.00	0.04
48.25	0.47	0.31	1.54	0.03	0.00	0.03
48.30	0.47	0.31	1.54	0.03	0.00	0.03
48.35	0.47	0.31	1.54	0.03	0.00	0.03
48.40	0.47	0.31	1.54	0.03	0.00	0.03
48.45	0.47	0.30	1.54	0.03	0.00	0.03
48.50	0.47	0.30	1.54	0.03	0.00	0.03
48.55	0.47	0.30	1.54	0.03	0.00	0.03
48.60	0.47	0.30	1.54	0.03	0.00	0.03
48.65	0.47	0.30	1.54	0.03	0.00	0.03
48.70	0.47	0.30	1.54	0.03	0.00	0.03
48.75	0.47	0.30	1.54	0.02	0.00	0.02
48.80	0.47	0.30	1.54	0.02	0.00	0.02
48.85	0.47	0.30	1.54	0.02	0.00	0.02
48.90	0.47	0.30	1.54	0.02	0.00	0.02
48.95	0.47	0.30	1.54	0.02	0.00	0.02
49.00	0.47	0.30	1.54	0.02	0.00	0.02
49.05	0.47	0.30	1.54	0.02	0.00	0.02
49.10	0.47	0.30	1.54	0.02	0.00	0.02
49.15	0.47	0.30	1.54	0.02	0.00	0.02
49.20	0.47	0.30	1.54	0.02	0.00	0.02
49.25	0.47	0.30	1.54	0.01	0.00	0.01
49.30	0.47	0.30	1.54	0.01	0.00	0.01
49.35	0.47	0.30	1.54	0.01	0.00	0.01
49.40	0.47	0.30	1.54	0.01	0.00	0.01
49.45	0.46	0.30	1.54	0.01	0.00	0.01
49.50	0.46	0.30	1.54	0.01	0.00	0.01
49.55	0.46	0.30	1.54	0.01	0.00	0.01
49.60	0.46	0.30	1.54	0.01	0.00	0.01
49.65	0.46	0.30	1.54	0.01	0.00	0.01
49.70	0.46	0.30	1.54	0.01	0.00	0.01
49.75	0.46	0.30	1.54	0.00	0.00	0.00
49.80	0.46	0.30	1.54	0.00	0.00	0.00
49.85	0.46	0.30	1.54	0.00	0.00	0.00
49.90	0.46	0.30	1.54	0.00	0.00	0.00
49.95	0.46	0.30	1.54	0.00	0.00	0.00
50.00	0.46	0.30	1.54	0.00	0.00	0.00

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* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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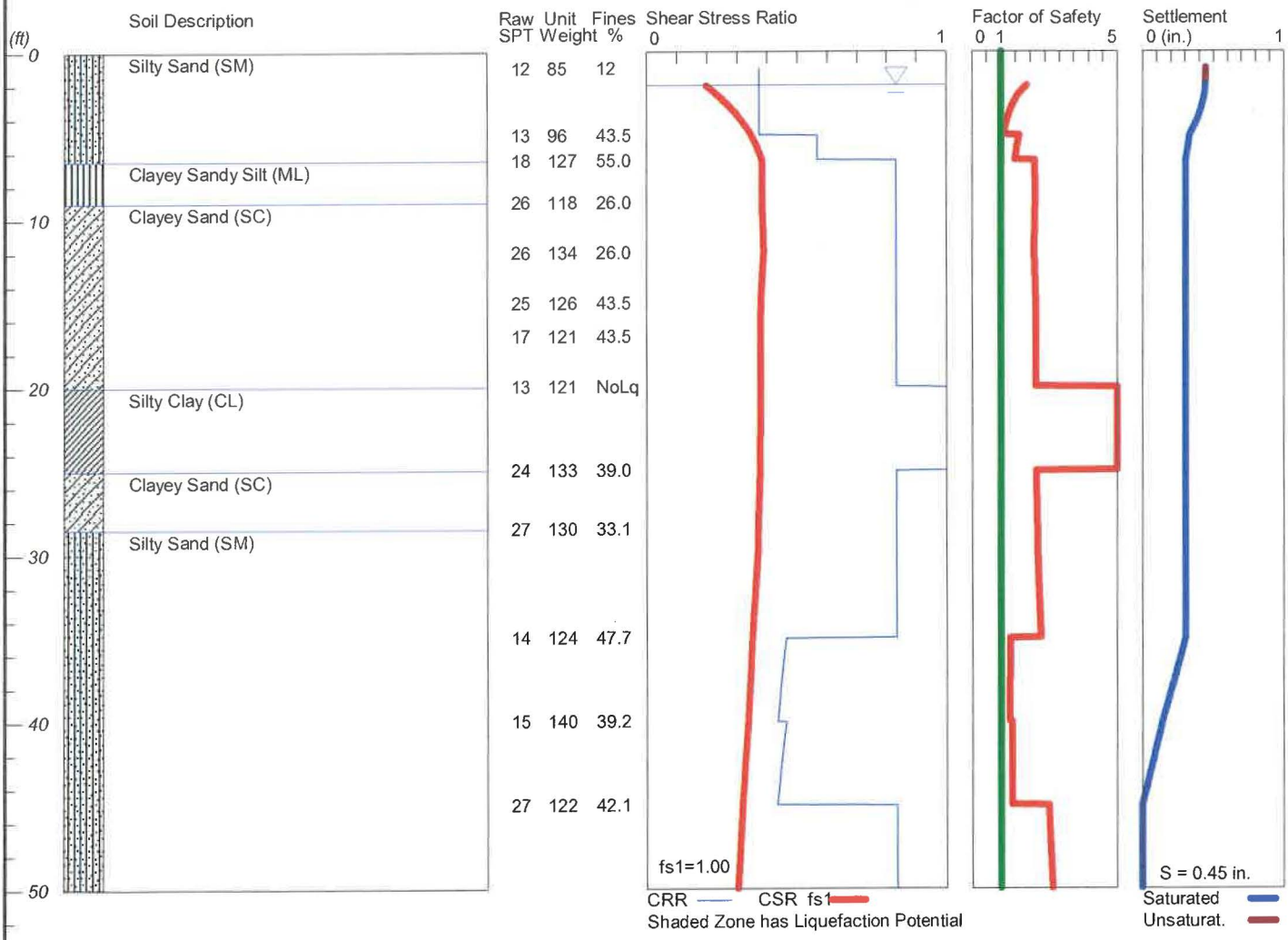
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat Settlement from saturated sands
S_dry Settlement from Unsaturated Sands
S_all Total Settlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B6 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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Krazan

012-22165

Plate A-1

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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\16S Triangle Development\B6\0122216S B6 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-2216S

Surface Elev.=
Hole No.=B6
Depth of Hole= S0.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B6
Depth of Hole=S0.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 2.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.2S
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
1.00	12.00	8S.00	12.00
S.00	13.00	96.00	43.50
6.50	18.00	127.00	SS.00
9.00	26.00	118.00	26.00
12.00	26.00	134.00	26.00
1S.00	25.00	126.00	43.S0
17.00	17.00	121.00	43.S0
20.00	13.00	121.00	NoLiq
2S.00	24.00	133.00	39.00
28.50	27.00	130.00	33.10
3S.00	14.00	124.00	47.70
40.00	1S.00	140.00	39.20
45.00	27.00	122.00	42.10

Output Results:
Settlement of Saturated Sands=0.44 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.4S in.
Differential Settlement=0.223 to 0.294 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

1.00	0.37	0.20	5.00	0.44	0.00	0.45
1.05	0.37	0.20	5.00	0.44	0.00	0.45
1.10	0.37	0.20	5.00	0.44	0.00	0.45
1.15	0.37	0.20	5.00	0.44	0.00	0.45
1.20	0.37	0.20	5.00	0.44	0.00	0.45
1.25	0.37	0.20	5.00	0.44	0.00	0.45
1.30	0.37	0.20	5.00	0.44	0.00	0.45
1.35	0.37	0.20	5.00	0.44	0.00	0.45
1.40	0.37	0.20	5.00	0.44	0.00	0.45
1.45	0.37	0.20	5.00	0.44	0.00	0.45
1.50	0.37	0.20	5.00	0.44	0.00	0.45
1.55	0.37	0.20	5.00	0.44	0.00	0.45
1.60	0.37	0.20	5.00	0.44	0.00	0.45
1.65	0.37	0.20	5.00	0.44	0.00	0.45
1.70	0.37	0.20	5.00	0.44	0.00	0.45
1.75	0.37	0.20	5.00	0.44	0.00	0.44
1.80	0.37	0.20	5.00	0.44	0.00	0.44
1.85	0.37	0.20	5.00	0.44	0.00	0.44
1.90	0.37	0.20	5.00	0.44	0.00	0.44
1.95	0.37	0.20	5.00	0.44	0.00	0.44
2.00	0.37	0.20	5.00	0.44	0.00	0.44
2.05	0.37	0.20	1.89	0.44	0.00	0.44
2.10	0.37	0.20	1.85	0.44	0.00	0.44
2.15	0.37	0.21	1.82	0.44	0.00	0.44
2.20	0.37	0.21	1.79	0.44	0.00	0.44
2.25	0.37	0.21	1.76	0.44	0.00	0.44
2.30	0.37	0.22	1.74	0.44	0.00	0.44
2.35	0.37	0.22	1.71	0.44	0.00	0.44
2.40	0.37	0.22	1.69	0.44	0.00	0.44
2.45	0.37	0.23	1.66	0.44	0.00	0.44
2.50	0.37	0.23	1.64	0.44	0.00	0.44
2.55	0.37	0.23	1.62	0.44	0.00	0.44
2.60	0.37	0.23	1.60	0.44	0.00	0.44
2.65	0.37	0.24	1.58	0.44	0.00	0.44
2.70	0.37	0.24	1.56	0.44	0.00	0.44
2.75	0.37	0.24	1.54	0.43	0.00	0.43
2.80	0.37	0.25	1.52	0.43	0.00	0.43
2.85	0.37	0.25	1.50	0.43	0.00	0.43
2.90	0.37	0.25	1.48	0.43	0.00	0.43
2.95	0.37	0.26	1.47	0.43	0.00	0.43
3.00	0.37	0.26	1.45	0.43	0.00	0.43
3.05	0.37	0.26	1.44	0.43	0.00	0.43
3.10	0.37	0.26	1.42	0.43	0.00	0.43
3.15	0.37	0.27	1.41	0.42	0.00	0.42
3.20	0.37	0.27	1.39	0.42	0.00	0.42
3.25	0.37	0.27	1.38	0.42	0.00	0.42
3.30	0.37	0.27	1.37	0.42	0.00	0.42
3.35	0.37	0.28	1.35	0.42	0.00	0.42
3.40	0.37	0.28	1.34	0.42	0.00	0.42
3.45	0.37	0.28	1.33	0.41	0.00	0.41
3.50	0.37	0.28	1.32	0.41	0.00	0.41
3.55	0.37	0.29	1.31	0.41	0.00	0.41
3.60	0.37	0.29	1.30	0.41	0.00	0.41
3.65	0.37	0.29	1.28	0.41	0.00	0.41
3.70	0.37	0.29	1.27	0.40	0.00	0.40
3.75	0.37	0.30	1.26	0.40	0.00	0.40
3.80	0.37	0.30	1.25	0.40	0.00	0.40
3.85	0.37	0.30	1.24	0.40	0.00	0.40
3.90	0.37	0.30	1.24	0.40	0.00	0.40
3.95	0.37	0.31	1.23	0.39	0.00	0.39
4.00	0.37	0.31	1.22	0.39	0.00	0.39
4.05	0.37	0.31	1.21	0.39	0.00	0.39
4.10	0.37	0.31	1.20	0.39	0.00	0.39
4.15	0.37	0.31	1.19	0.38	0.00	0.38
4.20	0.37	0.32	1.18	0.38	0.00	0.38
4.25	0.37	0.32	1.18	0.38	0.00	0.38
4.30	0.37	0.32	1.17	0.38	0.00	0.38
4.35	0.37	0.32	1.16	0.37	0.00	0.37
4.40	0.37	0.32	1.15	0.37	0.00	0.37
4.45	0.37	0.33	1.15	0.37	0.00	0.37

4.50	0.37	0.33	1.14	0.37	0.00	0.37
4.55	0.37	0.33	1.13	0.36	0.00	0.36
4.60	0.37	0.33	1.13	0.36	0.00	0.36
4.65	0.37	0.33	1.12	0.36	0.00	0.36
4.70	0.37	0.34	1.11	0.35	0.00	0.35
4.75	0.37	0.34	1.11	0.35	0.00	0.35
4.80	0.37	0.34	1.10	0.35	0.00	0.35
4.85	0.37	0.34	1.09	0.34	0.00	0.34
4.90	0.37	0.34	1.09	0.34	0.00	0.34
4.95	0.37	0.35	1.08	0.34	0.00	0.34
5.00	0.57	0.35	1.63	0.33	0.00	0.33
5.05	0.57	0.35	1.62	0.33	0.00	0.33
5.10	0.57	0.35	1.61	0.33	0.00	0.33
5.15	0.57	0.35	1.61	0.33	0.00	0.33
5.20	0.57	0.35	1.60	0.33	0.00	0.33
5.25	0.57	0.35	1.60	0.33	0.00	0.33
5.30	0.57	0.36	1.59	0.33	0.00	0.33
5.35	0.57	0.36	1.58	0.33	0.00	0.33
5.40	0.57	0.36	1.58	0.33	0.00	0.33
5.45	0.57	0.36	1.57	0.33	0.00	0.33
5.50	0.57	0.36	1.57	0.32	0.00	0.32
5.55	0.57	0.36	1.56	0.32	0.00	0.32
5.60	0.57	0.36	1.56	0.32	0.00	0.32
5.65	0.57	0.37	1.55	0.32	0.00	0.32
5.70	0.57	0.37	1.55	0.32	0.00	0.32
5.75	0.57	0.37	1.54	0.32	0.00	0.32
5.80	0.57	0.37	1.54	0.32	0.00	0.32
5.85	0.57	0.37	1.53	0.32	0.00	0.32
5.90	0.57	0.37	1.53	0.32	0.00	0.32
5.95	0.57	0.37	1.52	0.32	0.00	0.32
6.00	0.57	0.37	1.52	0.32	0.00	0.32
6.05	0.57	0.37	1.51	0.31	0.00	0.31
6.10	0.57	0.38	1.51	0.31	0.00	0.31
6.15	0.57	0.38	1.50	0.31	0.00	0.31
6.20	0.57	0.38	1.50	0.31	0.00	0.31
6.25	0.57	0.38	1.50	0.31	0.00	0.31
6.30	0.57	0.38	1.49	0.31	0.00	0.31
6.35	0.57	0.38	1.49	0.31	0.00	0.31
6.40	0.57	0.38	1.48	0.31	0.00	0.31
6.45	0.57	0.38	1.48	0.31	0.00	0.31
6.50	0.83	0.38	2.16	0.31	0.00	0.31
6.55	0.83	0.38	2.16	0.31	0.00	0.31
6.60	0.83	0.38	2.16	0.31	0.00	0.31
6.65	0.83	0.38	2.16	0.31	0.00	0.31
6.70	0.83	0.38	2.16	0.31	0.00	0.31
6.75	0.83	0.38	2.16	0.31	0.00	0.31
6.80	0.83	0.38	2.16	0.31	0.00	0.31
6.85	0.83	0.38	2.16	0.31	0.00	0.31
6.90	0.83	0.38	2.17	0.31	0.00	0.31
6.95	0.83	0.38	2.17	0.31	0.00	0.31
7.00	0.83	0.38	2.17	0.31	0.00	0.31
7.05	0.83	0.38	2.17	0.31	0.00	0.31
7.10	0.83	0.38	2.17	0.31	0.00	0.31
7.15	0.83	0.38	2.17	0.31	0.00	0.31
7.20	0.83	0.38	2.17	0.31	0.00	0.31
7.25	0.83	0.38	2.17	0.31	0.00	0.31
7.30	0.83	0.38	2.17	0.31	0.00	0.31
7.35	0.83	0.38	2.17	0.31	0.00	0.31
7.40	0.83	0.38	2.17	0.31	0.00	0.31
7.45	0.83	0.38	2.17	0.31	0.00	0.31
7.50	0.83	0.38	2.17	0.31	0.00	0.31
7.55	0.83	0.38	2.17	0.31	0.00	0.31
7.60	0.83	0.38	2.17	0.31	0.00	0.31
7.65	0.83	0.38	2.17	0.31	0.00	0.31
7.70	0.83	0.38	2.17	0.31	0.00	0.31
7.75	0.83	0.38	2.17	0.31	0.00	0.31
7.80	0.83	0.38	2.17	0.31	0.00	0.31
7.85	0.83	0.38	2.17	0.31	0.00	0.31
7.90	0.83	0.38	2.17	0.31	0.00	0.31
7.95	0.83	0.38	2.17	0.31	0.00	0.31
8.00	0.83	0.38	2.17	0.31	0.00	0.31

8.05	0.83	0.38	2.17	0.31	0.00	0.31
8.10	0.83	0.38	2.17	0.31	0.00	0.31
8.15	0.83	0.38	2.17	0.31	0.00	0.31
8.20	0.83	0.38	2.17	0.31	0.00	0.31
8.25	0.83	0.38	2.17	0.31	0.00	0.31
8.30	0.83	0.38	2.17	0.31	0.00	0.31
8.35	0.83	0.38	2.17	0.31	0.00	0.31
8.40	0.83	0.38	2.17	0.31	0.00	0.31
8.45	0.83	0.38	2.17	0.31	0.00	0.31
8.50	0.83	0.38	2.17	0.31	0.00	0.31
8.55	0.83	0.38	2.17	0.31	0.00	0.31
8.60	0.83	0.38	2.17	0.31	0.00	0.31
8.65	0.83	0.38	2.17	0.31	0.00	0.31
8.70	0.83	0.38	2.17	0.31	0.00	0.31
8.75	0.83	0.38	2.17	0.31	0.00	0.31
8.80	0.83	0.38	2.17	0.31	0.00	0.31
8.85	0.83	0.38	2.17	0.31	0.00	0.31
8.90	0.83	0.38	2.17	0.31	0.00	0.31
8.95	0.83	0.38	2.17	0.31	0.00	0.31
9.00	0.83	0.38	2.17	0.31	0.00	0.31
9.05	0.83	0.38	2.17	0.31	0.00	0.31
9.10	0.83	0.38	2.17	0.31	0.00	0.31
9.15	0.83	0.38	2.17	0.31	0.00	0.31
9.20	0.83	0.38	2.17	0.31	0.00	0.31
9.25	0.83	0.38	2.17	0.31	0.00	0.31
9.30	0.83	0.38	2.17	0.31	0.00	0.31
9.35	0.83	0.38	2.17	0.31	0.00	0.31
9.40	0.83	0.38	2.17	0.31	0.00	0.31
9.45	0.83	0.38	2.16	0.31	0.00	0.31
9.50	0.83	0.38	2.16	0.31	0.00	0.31
9.55	0.83	0.38	2.16	0.31	0.00	0.31
9.60	0.83	0.38	2.16	0.31	0.00	0.31
9.65	0.83	0.38	2.16	0.31	0.00	0.31
9.70	0.83	0.38	2.16	0.31	0.00	0.31
9.75	0.83	0.38	2.16	0.31	0.00	0.31
9.80	0.83	0.38	2.16	0.31	0.00	0.31
9.85	0.83	0.38	2.16	0.31	0.00	0.31
9.90	0.83	0.38	2.16	0.31	0.00	0.31
9.95	0.83	0.38	2.16	0.31	0.00	0.31
10.00	0.83	0.39	2.16	0.31	0.00	0.31
10.05	0.83	0.39	2.16	0.31	0.00	0.31
10.10	0.83	0.39	2.16	0.31	0.00	0.31
10.15	0.83	0.39	2.16	0.31	0.00	0.31
10.20	0.83	0.39	2.15	0.31	0.00	0.31
10.25	0.83	0.39	2.15	0.31	0.00	0.31
10.30	0.83	0.39	2.15	0.31	0.00	0.31
10.35	0.83	0.39	2.15	0.31	0.00	0.31
10.40	0.83	0.39	2.15	0.31	0.00	0.31
10.45	0.83	0.39	2.15	0.31	0.00	0.31
10.50	0.83	0.39	2.15	0.31	0.00	0.31
10.55	0.83	0.39	2.15	0.31	0.00	0.31
10.60	0.83	0.39	2.15	0.31	0.00	0.31
10.65	0.83	0.39	2.15	0.31	0.00	0.31
10.70	0.83	0.39	2.15	0.31	0.00	0.31
10.75	0.83	0.39	2.15	0.31	0.00	0.31
10.80	0.83	0.39	2.15	0.31	0.00	0.31
10.85	0.83	0.39	2.15	0.31	0.00	0.31
10.90	0.83	0.39	2.15	0.31	0.00	0.31
10.95	0.83	0.39	2.15	0.31	0.00	0.31
11.00	0.83	0.39	2.15	0.31	0.00	0.31
11.05	0.83	0.39	2.15	0.31	0.00	0.31
11.10	0.83	0.39	2.15	0.31	0.00	0.31
11.15	0.83	0.39	2.15	0.31	0.00	0.31
11.20	0.83	0.39	2.15	0.31	0.00	0.31
11.25	0.83	0.39	2.14	0.31	0.00	0.31
11.30	0.83	0.39	2.14	0.31	0.00	0.31
11.35	0.83	0.39	2.14	0.31	0.00	0.31
11.40	0.83	0.39	2.14	0.31	0.00	0.31
11.45	0.83	0.39	2.14	0.31	0.00	0.31
11.50	0.83	0.39	2.14	0.31	0.00	0.31
11.55	0.83	0.39	2.14	0.31	0.00	0.31

11.60	0.83	0.39	2.14	0.31	0.00	0.31
11.65	0.83	0.39	2.14	0.31	0.00	0.31
11.70	0.83	0.39	2.14	0.31	0.00	0.31
11.75	0.83	0.39	2.14	0.31	0.00	0.31
11.80	0.83	0.39	2.14	0.31	0.00	0.31
11.85	0.83	0.39	2.14	0.31	0.00	0.31
11.90	0.83	0.39	2.14	0.31	0.00	0.31
11.95	0.83	0.39	2.14	0.31	0.00	0.31
12.00	0.83	0.39	2.14	0.31	0.00	0.31
12.05	0.83	0.39	2.14	0.31	0.00	0.31
12.10	0.83	0.39	2.14	0.31	0.00	0.31
12.15	0.83	0.39	2.14	0.31	0.00	0.31
12.20	0.83	0.39	2.14	0.31	0.00	0.31
12.25	0.83	0.39	2.14	0.31	0.00	0.31
12.30	0.83	0.39	2.15	0.31	0.00	0.31
12.35	0.83	0.39	2.15	0.31	0.00	0.31
12.40	0.83	0.39	2.15	0.31	0.00	0.31
12.45	0.83	0.39	2.15	0.31	0.00	0.31
12.50	0.83	0.39	2.15	0.31	0.00	0.31
12.55	0.83	0.39	2.15	0.31	0.00	0.31
12.60	0.83	0.39	2.15	0.31	0.00	0.31
12.65	0.83	0.39	2.15	0.31	0.00	0.31
12.70	0.83	0.39	2.15	0.31	0.00	0.31
12.75	0.83	0.39	2.15	0.31	0.00	0.31
12.80	0.83	0.39	2.16	0.31	0.00	0.31
12.85	0.83	0.39	2.16	0.31	0.00	0.31
12.90	0.83	0.39	2.16	0.31	0.00	0.31
12.95	0.83	0.38	2.16	0.31	0.00	0.31
13.00	0.83	0.38	2.16	0.31	0.00	0.31
13.05	0.83	0.38	2.16	0.31	0.00	0.31
13.10	0.83	0.38	2.16	0.31	0.00	0.31
13.15	0.83	0.38	2.16	0.31	0.00	0.31
13.20	0.83	0.38	2.16	0.31	0.00	0.31
13.25	0.83	0.38	2.16	0.31	0.00	0.31
13.30	0.83	0.38	2.16	0.31	0.00	0.31
13.35	0.83	0.38	2.17	0.31	0.00	0.31
13.40	0.83	0.38	2.17	0.31	0.00	0.31
13.45	0.83	0.38	2.17	0.31	0.00	0.31
13.50	0.83	0.38	2.17	0.31	0.00	0.31
13.55	0.83	0.38	2.17	0.31	0.00	0.31
13.60	0.83	0.38	2.17	0.31	0.00	0.31
13.65	0.83	0.38	2.17	0.31	0.00	0.31
13.70	0.83	0.38	2.17	0.31	0.00	0.31
13.75	0.83	0.38	2.17	0.31	0.00	0.31
13.80	0.83	0.38	2.17	0.31	0.00	0.31
13.85	0.83	0.38	2.17	0.31	0.00	0.31
13.90	0.83	0.38	2.17	0.31	0.00	0.31
13.95	0.83	0.38	2.18	0.31	0.00	0.31
14.00	0.83	0.38	2.18	0.31	0.00	0.31
14.05	0.83	0.38	2.18	0.31	0.00	0.31
14.10	0.83	0.38	2.18	0.31	0.00	0.31
14.15	0.83	0.38	2.18	0.31	0.00	0.31
14.20	0.83	0.38	2.18	0.31	0.00	0.31
14.25	0.83	0.38	2.18	0.31	0.00	0.31
14.30	0.83	0.38	2.18	0.31	0.00	0.31
14.35	0.83	0.38	2.18	0.31	0.00	0.31
14.40	0.83	0.38	2.18	0.31	0.00	0.31
14.45	0.83	0.38	2.18	0.31	0.00	0.31
14.50	0.83	0.38	2.18	0.31	0.00	0.31
14.55	0.83	0.38	2.18	0.31	0.00	0.31
14.60	0.83	0.38	2.19	0.31	0.00	0.31
14.65	0.83	0.38	2.19	0.31	0.00	0.31
14.70	0.83	0.38	2.19	0.31	0.00	0.31
14.75	0.83	0.38	2.19	0.31	0.00	0.31
14.80	0.83	0.38	2.19	0.31	0.00	0.31
14.85	0.83	0.38	2.19	0.31	0.00	0.31
14.90	0.83	0.38	2.19	0.31	0.00	0.31
14.95	0.83	0.38	2.19	0.31	0.00	0.31
15.00	0.83	0.38	2.19	0.31	0.00	0.31
15.05	0.83	0.38	2.19	0.31	0.00	0.31
15.10	0.83	0.38	2.19	0.31	0.00	0.31

15.15	0.83	0.38	2.19	0.31	0.00	0.31
15.20	0.83	0.38	2.19	0.31	0.00	0.31
15.25	0.83	0.38	2.19	0.31	0.00	0.31
15.30	0.83	0.38	2.19	0.31	0.00	0.31
15.35	0.83	0.38	2.19	0.31	0.00	0.31
15.40	0.83	0.38	2.19	0.31	0.00	0.31
15.45	0.83	0.38	2.19	0.31	0.00	0.31
15.50	0.83	0.38	2.19	0.31	0.00	0.31
15.55	0.83	0.38	2.19	0.31	0.00	0.31
15.60	0.83	0.38	2.19	0.31	0.00	0.31
15.65	0.83	0.38	2.19	0.31	0.00	0.31
15.70	0.83	0.38	2.19	0.31	0.00	0.31
15.75	0.83	0.38	2.19	0.31	0.00	0.31
15.80	0.83	0.38	2.19	0.31	0.00	0.31
15.85	0.83	0.38	2.20	0.31	0.00	0.31
15.90	0.83	0.38	2.20	0.31	0.00	0.31
15.95	0.83	0.38	2.20	0.31	0.00	0.31
16.00	0.83	0.38	2.20	0.31	0.00	0.31
16.05	0.83	0.38	2.20	0.31	0.00	0.31
16.10	0.83	0.38	2.20	0.31	0.00	0.31
16.15	0.83	0.38	2.20	0.31	0.00	0.31
16.20	0.83	0.38	2.20	0.31	0.00	0.31
16.25	0.83	0.38	2.20	0.31	0.00	0.31
16.30	0.83	0.38	2.20	0.31	0.00	0.31
16.35	0.83	0.38	2.20	0.31	0.00	0.31
16.40	0.83	0.38	2.20	0.31	0.00	0.31
16.45	0.83	0.38	2.20	0.31	0.00	0.31
16.50	0.83	0.38	2.20	0.31	0.00	0.31
16.55	0.83	0.38	2.20	0.31	0.00	0.31
16.60	0.83	0.38	2.20	0.31	0.00	0.31
16.65	0.83	0.38	2.20	0.31	0.00	0.31
16.70	0.83	0.38	2.20	0.31	0.00	0.31
16.75	0.83	0.38	2.20	0.31	0.00	0.31
16.80	0.83	0.38	2.20	0.31	0.00	0.31
16.85	0.83	0.38	2.20	0.31	0.00	0.31
16.90	0.83	0.38	2.20	0.31	0.00	0.31
16.95	0.83	0.38	2.20	0.31	0.00	0.31
17.00	0.83	0.38	2.20	0.31	0.00	0.31
17.05	0.83	0.38	2.20	0.31	0.00	0.31
17.10	0.83	0.38	2.20	0.31	0.00	0.31
17.15	0.83	0.38	2.20	0.31	0.00	0.31
17.20	0.83	0.38	2.20	0.31	0.00	0.31
17.25	0.83	0.38	2.20	0.31	0.00	0.31
17.30	0.83	0.38	2.20	0.31	0.00	0.31
17.35	0.83	0.38	2.20	0.31	0.00	0.31
17.40	0.83	0.38	2.20	0.31	0.00	0.31
17.45	0.83	0.38	2.20	0.31	0.00	0.31
17.50	0.83	0.38	2.20	0.31	0.00	0.31
17.55	0.83	0.38	2.20	0.31	0.00	0.31
17.60	0.83	0.38	2.20	0.31	0.00	0.31
17.65	0.83	0.38	2.20	0.31	0.00	0.31
17.70	0.83	0.38	2.20	0.31	0.00	0.31
17.75	0.83	0.38	2.20	0.31	0.00	0.31
17.80	0.83	0.38	2.20	0.31	0.00	0.31
17.85	0.83	0.38	2.20	0.31	0.00	0.31
17.90	0.83	0.38	2.20	0.31	0.00	0.31
17.95	0.83	0.38	2.20	0.31	0.00	0.31
18.00	0.83	0.38	2.20	0.31	0.00	0.31
18.05	0.83	0.38	2.20	0.31	0.00	0.31
18.10	0.83	0.38	2.20	0.31	0.00	0.31
18.15	0.83	0.38	2.20	0.31	0.00	0.31
18.20	0.83	0.38	2.20	0.31	0.00	0.31
18.25	0.83	0.38	2.20	0.31	0.00	0.31
18.30	0.83	0.38	2.20	0.31	0.00	0.31
18.35	0.83	0.38	2.20	0.31	0.00	0.31
18.40	0.83	0.38	2.20	0.31	0.00	0.31
18.45	0.83	0.38	2.20	0.31	0.00	0.31
18.50	0.83	0.38	2.20	0.31	0.00	0.31
18.55	0.83	0.38	2.20	0.31	0.00	0.31
18.60	0.83	0.38	2.20	0.31	0.00	0.31
18.65	0.83	0.38	2.20	0.31	0.00	0.31

18.70	0.83	0.38	2.20	0.31	0.00	0.31
18.75	0.83	0.38	2.20	0.31	0.00	0.31
18.80	0.83	0.38	2.20	0.31	0.00	0.31
18.85	0.83	0.38	2.20	0.31	0.00	0.31
18.90	0.83	0.38	2.20	0.31	0.00	0.31
18.95	0.83	0.38	2.20	0.31	0.00	0.31
19.00	0.83	0.38	2.20	0.31	0.00	0.31
19.05	0.83	0.38	2.20	0.31	0.00	0.31
19.10	0.83	0.38	2.20	0.31	0.00	0.31
19.15	0.83	0.38	2.20	0.31	0.00	0.31
19.20	0.83	0.38	2.20	0.31	0.00	0.31
19.25	0.83	0.38	2.20	0.31	0.00	0.31
19.30	0.83	0.38	2.20	0.31	0.00	0.31
19.35	0.83	0.38	2.20	0.31	0.00	0.31
19.40	0.83	0.38	2.20	0.31	0.00	0.31
19.45	0.83	0.38	2.20	0.31	0.00	0.31
19.50	0.83	0.38	2.20	0.31	0.00	0.31
19.55	0.83	0.38	2.20	0.31	0.00	0.31
19.60	0.83	0.38	2.20	0.31	0.00	0.31
19.65	0.83	0.38	2.20	0.31	0.00	0.31
19.70	0.83	0.38	2.20	0.31	0.00	0.31
19.75	0.83	0.38	2.20	0.31	0.00	0.31
19.80	0.83	0.38	2.20	0.31	0.00	0.31
19.85	0.83	0.38	2.20	0.31	0.00	0.31
19.90	0.83	0.38	2.20	0.31	0.00	0.31
19.95	0.83	0.38	2.20	0.31	0.00	0.31
20.00	0.83	0.38	2.20	0.31	0.00	0.31
20.05	2.00	0.38	5.00	0.31	0.00	0.31
20.10	2.00	0.38	5.00	0.31	0.00	0.31
20.15	2.00	0.38	5.00	0.31	0.00	0.31
20.20	2.00	0.38	5.00	0.31	0.00	0.31
20.25	2.00	0.38	5.00	0.31	0.00	0.31
20.30	2.00	0.38	5.00	0.31	0.00	0.31
20.35	2.00	0.38	5.00	0.31	0.00	0.31
20.40	2.00	0.38	5.00	0.31	0.00	0.31
20.45	2.00	0.38	5.00	0.31	0.00	0.31
20.50	2.00	0.38	5.00	0.31	0.00	0.31
20.55	2.00	0.38	5.00	0.31	0.00	0.31
20.60	2.00	0.38	5.00	0.31	0.00	0.31
20.65	2.00	0.38	5.00	0.31	0.00	0.31
20.70	2.00	0.38	5.00	0.31	0.00	0.31
20.75	2.00	0.38	5.00	0.31	0.00	0.31
20.80	2.00	0.38	5.00	0.31	0.00	0.31
20.85	2.00	0.38	5.00	0.31	0.00	0.31
20.90	2.00	0.38	5.00	0.31	0.00	0.31
20.95	2.00	0.38	5.00	0.31	0.00	0.31
21.00	2.00	0.38	5.00	0.31	0.00	0.31
21.05	2.00	0.38	5.00	0.31	0.00	0.31
21.10	2.00	0.38	5.00	0.31	0.00	0.31
21.15	2.00	0.38	5.00	0.31	0.00	0.31
21.20	2.00	0.38	5.00	0.31	0.00	0.31
21.25	2.00	0.38	5.00	0.31	0.00	0.31
21.30	2.00	0.38	5.00	0.31	0.00	0.31
21.35	2.00	0.38	5.00	0.31	0.00	0.31
21.40	2.00	0.38	5.00	0.31	0.00	0.31
21.45	2.00	0.38	5.00	0.31	0.00	0.31
21.50	2.00	0.38	5.00	0.31	0.00	0.31
21.55	2.00	0.38	5.00	0.31	0.00	0.31
21.60	2.00	0.38	5.00	0.31	0.00	0.31
21.65	2.00	0.38	5.00	0.31	0.00	0.31
21.70	2.00	0.38	5.00	0.31	0.00	0.31
21.75	2.00	0.38	5.00	0.31	0.00	0.31
21.80	2.00	0.38	5.00	0.31	0.00	0.31
21.85	2.00	0.38	5.00	0.31	0.00	0.31
21.90	2.00	0.38	5.00	0.31	0.00	0.31
21.95	2.00	0.38	5.00	0.31	0.00	0.31
22.00	2.00	0.38	5.00	0.31	0.00	0.31
22.05	2.00	0.38	5.00	0.31	0.00	0.31
22.10	2.00	0.38	5.00	0.31	0.00	0.31
22.15	2.00	0.38	5.00	0.31	0.00	0.31
22.20	2.00	0.38	5.00	0.31	0.00	0.31

22.25	2.00	0.38	5.00	0.31	0.00	0.31
22.30	2.00	0.38	5.00	0.31	0.00	0.31
22.35	2.00	0.38	5.00	0.31	0.00	0.31
22.40	2.00	0.38	5.00	0.31	0.00	0.31
22.45	2.00	0.38	5.00	0.31	0.00	0.31
22.50	2.00	0.38	5.00	0.31	0.00	0.31
22.55	2.00	0.38	5.00	0.31	0.00	0.31
22.60	2.00	0.38	5.00	0.31	0.00	0.31
22.65	2.00	0.38	5.00	0.31	0.00	0.31
22.70	2.00	0.38	5.00	0.31	0.00	0.31
22.75	2.00	0.38	5.00	0.31	0.00	0.31
22.80	2.00	0.38	5.00	0.31	0.00	0.31
22.85	2.00	0.38	5.00	0.31	0.00	0.31
22.90	2.00	0.38	5.00	0.31	0.00	0.31
22.95	2.00	0.38	5.00	0.31	0.00	0.31
23.00	2.00	0.38	5.00	0.31	0.00	0.31
23.05	2.00	0.38	5.00	0.31	0.00	0.31
23.10	2.00	0.38	5.00	0.31	0.00	0.31
23.15	2.00	0.38	5.00	0.31	0.00	0.31
23.20	2.00	0.38	5.00	0.31	0.00	0.31
23.25	2.00	0.38	5.00	0.31	0.00	0.31
23.30	2.00	0.38	5.00	0.31	0.00	0.31
23.35	2.00	0.38	5.00	0.31	0.00	0.31
23.40	2.00	0.38	5.00	0.31	0.00	0.31
23.45	2.00	0.38	5.00	0.31	0.00	0.31
23.50	2.00	0.38	5.00	0.31	0.00	0.31
23.55	2.00	0.38	5.00	0.31	0.00	0.31
23.60	2.00	0.38	5.00	0.31	0.00	0.31
23.65	2.00	0.38	5.00	0.31	0.00	0.31
23.70	2.00	0.38	5.00	0.31	0.00	0.31
23.75	2.00	0.38	5.00	0.31	0.00	0.31
23.80	2.00	0.38	5.00	0.31	0.00	0.31
23.85	2.00	0.38	5.00	0.31	0.00	0.31
23.90	2.00	0.38	5.00	0.31	0.00	0.31
23.95	2.00	0.38	5.00	0.31	0.00	0.31
24.00	2.00	0.38	5.00	0.31	0.00	0.31
24.05	2.00	0.38	5.00	0.31	0.00	0.31
24.10	2.00	0.38	5.00	0.31	0.00	0.31
24.15	2.00	0.38	5.00	0.31	0.00	0.31
24.20	2.00	0.38	5.00	0.31	0.00	0.31
24.25	2.00	0.38	5.00	0.31	0.00	0.31
24.30	2.00	0.38	5.00	0.31	0.00	0.31
24.35	2.00	0.38	5.00	0.31	0.00	0.31
24.40	2.00	0.38	5.00	0.31	0.00	0.31
24.45	2.00	0.38	5.00	0.31	0.00	0.31
24.50	2.00	0.38	5.00	0.31	0.00	0.31
24.55	2.00	0.38	5.00	0.31	0.00	0.31
24.60	2.00	0.38	5.00	0.31	0.00	0.31
24.65	2.00	0.38	5.00	0.31	0.00	0.31
24.70	2.00	0.38	5.00	0.31	0.00	0.31
24.75	2.00	0.38	5.00	0.31	0.00	0.31
24.80	2.00	0.38	5.00	0.31	0.00	0.31
24.85	2.00	0.38	5.00	0.31	0.00	0.31
24.90	2.00	0.38	5.00	0.31	0.00	0.31
24.95	2.00	0.38	5.00	0.31	0.00	0.31
25.00	2.00	0.38	5.00	0.31	0.00	0.31
25.05	0.83	0.38	2.21	0.31	0.00	0.31
25.10	0.83	0.38	2.21	0.31	0.00	0.31
25.15	0.83	0.38	2.21	0.31	0.00	0.31
25.20	0.83	0.38	2.21	0.31	0.00	0.31
25.25	0.83	0.38	2.21	0.31	0.00	0.31
25.30	0.83	0.38	2.21	0.31	0.00	0.31
25.35	0.83	0.38	2.21	0.31	0.00	0.31
25.40	0.83	0.38	2.21	0.31	0.00	0.31
25.45	0.83	0.38	2.21	0.31	0.00	0.31
25.50	0.83	0.38	2.21	0.31	0.00	0.31
25.55	0.83	0.38	2.22	0.31	0.00	0.31
25.60	0.83	0.37	2.22	0.31	0.00	0.31
25.65	0.83	0.37	2.22	0.31	0.00	0.31
25.70	0.83	0.37	2.22	0.31	0.00	0.31
25.75	0.83	0.37	2.22	0.31	0.00	0.31

25.80	0.83	0.37	2.22	0.31	0.00	0.31
25.85	0.83	0.37	2.22	0.31	0.00	0.31
25.90	0.83	0.37	2.22	0.31	0.00	0.31
25.95	0.83	0.37	2.22	0.31	0.00	0.31
26.00	0.83	0.37	2.22	0.31	0.00	0.31
26.05	0.83	0.37	2.22	0.31	0.00	0.31
26.10	0.83	0.37	2.22	0.31	0.00	0.31
26.15	0.83	0.37	2.22	0.31	0.00	0.31
26.20	0.83	0.37	2.22	0.31	0.00	0.31
26.25	0.83	0.37	2.22	0.31	0.00	0.31
26.30	0.83	0.37	2.22	0.31	0.00	0.31
26.35	0.83	0.37	2.22	0.31	0.00	0.31
26.40	0.83	0.37	2.22	0.31	0.00	0.31
26.45	0.83	0.37	2.23	0.31	0.00	0.31
26.50	0.83	0.37	2.23	0.31	0.00	0.31
26.55	0.83	0.37	2.23	0.31	0.00	0.31
26.60	0.83	0.37	2.23	0.31	0.00	0.31
26.65	0.83	0.37	2.23	0.31	0.00	0.31
26.70	0.83	0.37	2.23	0.31	0.00	0.31
26.75	0.83	0.37	2.23	0.31	0.00	0.31
26.80	0.83	0.37	2.23	0.31	0.00	0.31
26.85	0.83	0.37	2.23	0.31	0.00	0.31
26.90	0.83	0.37	2.23	0.31	0.00	0.31
26.95	0.83	0.37	2.23	0.31	0.00	0.31
27.00	0.83	0.37	2.23	0.31	0.00	0.31
27.05	0.83	0.37	2.23	0.31	0.00	0.31
27.10	0.83	0.37	2.23	0.31	0.00	0.31
27.15	0.83	0.37	2.23	0.31	0.00	0.31
27.20	0.83	0.37	2.23	0.31	0.00	0.31
27.25	0.83	0.37	2.23	0.31	0.00	0.31
27.30	0.83	0.37	2.23	0.31	0.00	0.31
27.35	0.83	0.37	2.24	0.31	0.00	0.31
27.40	0.83	0.37	2.24	0.31	0.00	0.31
27.45	0.83	0.37	2.24	0.31	0.00	0.31
27.50	0.83	0.37	2.24	0.31	0.00	0.31
27.55	0.83	0.37	2.24	0.31	0.00	0.31
27.60	0.83	0.37	2.24	0.31	0.00	0.31
27.65	0.83	0.37	2.24	0.31	0.00	0.31
27.70	0.83	0.37	2.24	0.31	0.00	0.31
27.75	0.83	0.37	2.24	0.31	0.00	0.31
27.80	0.83	0.37	2.24	0.31	0.00	0.31
27.85	0.83	0.37	2.24	0.31	0.00	0.31
27.90	0.83	0.37	2.24	0.31	0.00	0.31
27.95	0.83	0.37	2.24	0.31	0.00	0.31
28.00	0.83	0.37	2.24	0.31	0.00	0.31
28.05	0.83	0.37	2.24	0.31	0.00	0.31
28.10	0.83	0.37	2.24	0.31	0.00	0.31
28.15	0.83	0.37	2.24	0.31	0.00	0.31
28.20	0.83	0.37	2.24	0.31	0.00	0.31
28.25	0.83	0.37	2.24	0.31	0.00	0.31
28.30	0.83	0.37	2.25	0.31	0.00	0.31
28.35	0.83	0.37	2.25	0.31	0.00	0.31
28.40	0.83	0.37	2.25	0.31	0.00	0.31
28.45	0.83	0.37	2.25	0.31	0.00	0.31
28.50	0.83	0.37	2.25	0.31	0.00	0.31
28.55	0.83	0.37	2.25	0.31	0.00	0.31
28.60	0.83	0.37	2.25	0.31	0.00	0.31
28.65	0.83	0.37	2.25	0.31	0.00	0.31
28.70	0.83	0.37	2.25	0.31	0.00	0.31
28.75	0.83	0.37	2.25	0.31	0.00	0.31
28.80	0.83	0.37	2.25	0.31	0.00	0.31
28.85	0.83	0.37	2.25	0.31	0.00	0.31
28.90	0.83	0.37	2.25	0.31	0.00	0.31
28.95	0.83	0.37	2.25	0.31	0.00	0.31
29.00	0.83	0.37	2.25	0.31	0.00	0.31
29.05	0.83	0.37	2.25	0.31	0.00	0.31
29.10	0.83	0.37	2.25	0.31	0.00	0.31
29.15	0.83	0.37	2.25	0.31	0.00	0.31
29.20	0.83	0.37	2.25	0.31	0.00	0.31
29.25	0.83	0.37	2.25	0.31	0.00	0.31
29.30	0.83	0.37	2.25	0.31	0.00	0.31

29.35	0.83	0.37	2.25	0.31	0.00	0.31
29.40	0.83	0.37	2.25	0.31	0.00	0.31
29.45	0.83	0.37	2.26	0.31	0.00	0.31
29.50	0.83	0.37	2.26	0.31	0.00	0.31
29.55	0.83	0.37	2.26	0.31	0.00	0.31
29.60	0.83	0.37	2.26	0.31	0.00	0.31
29.65	0.83	0.37	2.26	0.31	0.00	0.31
29.70	0.83	0.37	2.26	0.31	0.00	0.31
29.75	0.83	0.37	2.26	0.31	0.00	0.31
29.80	0.83	0.37	2.26	0.31	0.00	0.31
29.85	0.83	0.37	2.26	0.31	0.00	0.31
29.90	0.83	0.37	2.26	0.31	0.00	0.31
29.95	0.83	0.37	2.26	0.31	0.00	0.31
30.00	0.83	0.37	2.26	0.31	0.00	0.31
30.05	0.83	0.37	2.26	0.31	0.00	0.31
30.10	0.83	0.37	2.26	0.31	0.00	0.31
30.15	0.83	0.37	2.26	0.31	0.00	0.31
30.20	0.83	0.37	2.26	0.31	0.00	0.31
30.25	0.83	0.37	2.27	0.31	0.00	0.31
30.30	0.83	0.37	2.27	0.31	0.00	0.31
30.35	0.83	0.37	2.27	0.31	0.00	0.31
30.40	0.83	0.37	2.27	0.31	0.00	0.31
30.45	0.83	0.37	2.27	0.31	0.00	0.31
30.50	0.83	0.37	2.27	0.31	0.00	0.31
30.55	0.83	0.37	2.27	0.31	0.00	0.31
30.60	0.83	0.37	2.27	0.31	0.00	0.31
30.65	0.83	0.37	2.27	0.31	0.00	0.31
30.70	0.83	0.36	2.28	0.31	0.00	0.31
30.75	0.83	0.36	2.28	0.31	0.00	0.31
30.80	0.83	0.36	2.28	0.31	0.00	0.31
30.85	0.83	0.36	2.28	0.31	0.00	0.31
30.90	0.83	0.36	2.28	0.31	0.00	0.31
30.95	0.83	0.36	2.28	0.31	0.00	0.31
31.00	0.83	0.36	2.28	0.31	0.00	0.31
31.05	0.83	0.36	2.28	0.31	0.00	0.31
31.10	0.83	0.36	2.28	0.31	0.00	0.31
31.15	0.83	0.36	2.29	0.31	0.00	0.31
31.20	0.83	0.36	2.29	0.31	0.00	0.31
31.25	0.83	0.36	2.29	0.31	0.00	0.31
31.30	0.83	0.36	2.29	0.31	0.00	0.31
31.35	0.83	0.36	2.29	0.31	0.00	0.31
31.40	0.83	0.36	2.29	0.31	0.00	0.31
31.45	0.83	0.36	2.29	0.31	0.00	0.31
31.50	0.83	0.36	2.29	0.31	0.00	0.31
31.55	0.83	0.36	2.30	0.31	0.00	0.31
31.60	0.83	0.36	2.30	0.31	0.00	0.31
31.65	0.83	0.36	2.30	0.31	0.00	0.31
31.70	0.83	0.36	2.30	0.31	0.00	0.31
31.75	0.83	0.36	2.30	0.31	0.00	0.31
31.80	0.83	0.36	2.30	0.31	0.00	0.31
31.85	0.83	0.36	2.30	0.31	0.00	0.31
31.90	0.83	0.36	2.30	0.31	0.00	0.31
31.95	0.83	0.36	2.30	0.31	0.00	0.31
32.00	0.83	0.36	2.31	0.31	0.00	0.31
32.05	0.83	0.36	2.31	0.31	0.00	0.31
32.10	0.83	0.36	2.31	0.31	0.00	0.31
32.15	0.83	0.36	2.31	0.31	0.00	0.31
32.20	0.83	0.36	2.31	0.31	0.00	0.31
32.25	0.83	0.36	2.31	0.31	0.00	0.31
32.30	0.83	0.36	2.31	0.31	0.00	0.31
32.35	0.83	0.36	2.31	0.31	0.00	0.31
32.40	0.83	0.36	2.31	0.31	0.00	0.31
32.45	0.83	0.36	2.32	0.31	0.00	0.31
32.50	0.83	0.36	2.32	0.31	0.00	0.31
32.55	0.83	0.36	2.32	0.31	0.00	0.31
32.60	0.83	0.36	2.32	0.31	0.00	0.31
32.65	0.83	0.36	2.32	0.31	0.00	0.31
32.70	0.83	0.36	2.32	0.31	0.00	0.31
32.75	0.83	0.36	2.32	0.31	0.00	0.31
32.80	0.83	0.36	2.32	0.31	0.00	0.31
32.85	0.83	0.36	2.32	0.31	0.00	0.31

32.90	0.83	0.36	2.33	0.31	0.00	0.31
32.95	0.83	0.36	2.33	0.31	0.00	0.31
33.00	0.83	0.36	2.33	0.31	0.00	0.31
33.05	0.83	0.36	2.33	0.31	0.00	0.31
33.10	0.83	0.36	2.33	0.31	0.00	0.31
33.15	0.83	0.36	2.33	0.31	0.00	0.31
33.20	0.83	0.36	2.33	0.31	0.00	0.31
33.25	0.83	0.36	2.33	0.31	0.00	0.31
33.30	0.83	0.36	2.34	0.31	0.00	0.31
33.35	0.83	0.36	2.34	0.31	0.00	0.31
33.40	0.83	0.36	2.34	0.31	0.00	0.31
33.45	0.83	0.36	2.34	0.31	0.00	0.31
33.50	0.83	0.36	2.34	0.31	0.00	0.31
33.55	0.83	0.35	2.34	0.31	0.00	0.31
33.60	0.83	0.35	2.34	0.31	0.00	0.31
33.65	0.83	0.35	2.34	0.31	0.00	0.31
33.70	0.83	0.35	2.34	0.31	0.00	0.31
33.75	0.83	0.35	2.35	0.31	0.00	0.31
33.80	0.83	0.35	2.35	0.31	0.00	0.31
33.85	0.83	0.35	2.35	0.31	0.00	0.31
33.90	0.83	0.35	2.35	0.31	0.00	0.31
33.95	0.83	0.35	2.35	0.31	0.00	0.31
34.00	0.83	0.35	2.35	0.31	0.00	0.31
34.05	0.83	0.35	2.35	0.31	0.00	0.31
34.10	0.83	0.35	2.35	0.31	0.00	0.31
34.15	0.83	0.35	2.35	0.31	0.00	0.31
34.20	0.83	0.35	2.36	0.31	0.00	0.31
34.25	0.83	0.35	2.36	0.31	0.00	0.31
34.30	0.83	0.35	2.36	0.31	0.00	0.31
34.35	0.83	0.35	2.36	0.31	0.00	0.31
34.40	0.83	0.35	2.36	0.31	0.00	0.31
34.45	0.83	0.35	2.36	0.31	0.00	0.31
34.50	0.83	0.35	2.36	0.31	0.00	0.31
34.55	0.83	0.35	2.36	0.31	0.00	0.31
34.60	0.83	0.35	2.37	0.31	0.00	0.31
34.65	0.83	0.35	2.37	0.31	0.00	0.31
34.70	0.83	0.35	2.37	0.31	0.00	0.31
34.75	0.83	0.35	2.37	0.31	0.00	0.31
34.80	0.83	0.35	2.37	0.31	0.00	0.31
34.85	0.83	0.35	2.37	0.31	0.00	0.31
34.90	0.83	0.35	2.37	0.31	0.00	0.31
34.95	0.83	0.35	2.37	0.31	0.00	0.31
35.00	0.83	0.35	2.37	0.31	0.00	0.31
35.05	0.46	0.35	1.32	0.31	0.00	0.31
35.10	0.46	0.35	1.32	0.30	0.00	0.30
35.15	0.46	0.35	1.32	0.30	0.00	0.30
35.20	0.46	0.35	1.32	0.30	0.00	0.30
35.25	0.46	0.35	1.32	0.30	0.00	0.30
35.30	0.46	0.35	1.32	0.30	0.00	0.30
35.35	0.46	0.35	1.32	0.30	0.00	0.30
35.40	0.46	0.35	1.32	0.29	0.00	0.29
35.45	0.46	0.35	1.32	0.29	0.00	0.29
35.50	0.46	0.35	1.32	0.29	0.00	0.29
35.55	0.46	0.35	1.32	0.29	0.00	0.29
35.60	0.46	0.35	1.32	0.29	0.00	0.29
35.65	0.46	0.35	1.31	0.29	0.00	0.29
35.70	0.46	0.35	1.31	0.29	0.00	0.29
35.75	0.46	0.35	1.31	0.28	0.00	0.28
35.80	0.46	0.35	1.31	0.28	0.00	0.28
35.85	0.46	0.35	1.31	0.28	0.00	0.28
35.90	0.46	0.35	1.31	0.28	0.00	0.28
35.95	0.46	0.35	1.31	0.28	0.00	0.28
36.00	0.46	0.35	1.31	0.28	0.00	0.28
36.05	0.45	0.35	1.31	0.27	0.00	0.27
36.10	0.45	0.35	1.31	0.27	0.00	0.27
36.15	0.45	0.35	1.31	0.27	0.00	0.27
36.20	0.45	0.35	1.31	0.27	0.00	0.27
36.25	0.45	0.35	1.31	0.27	0.00	0.27
36.30	0.45	0.35	1.31	0.27	0.00	0.27
36.35	0.45	0.35	1.31	0.26	0.00	0.26
36.40	0.45	0.35	1.31	0.26	0.00	0.26

36.45	0.45	0.35	1.31	0.26	0.00	0.26
36.50	0.45	0.35	1.31	0.26	0.00	0.26
36.55	0.45	0.35	1.31	0.26	0.00	0.26
36.60	0.45	0.34	1.31	0.26	0.00	0.26
36.65	0.45	0.34	1.31	0.26	0.00	0.26
36.70	0.45	0.34	1.31	0.25	0.00	0.25
36.75	0.45	0.34	1.31	0.25	0.00	0.25
36.80	0.45	0.34	1.31	0.25	0.00	0.25
36.85	0.45	0.34	1.31	0.25	0.00	0.25
36.90	0.45	0.34	1.31	0.25	0.00	0.25
36.95	0.45	0.34	1.31	0.25	0.00	0.25
37.00	0.45	0.34	1.31	0.24	0.00	0.24
37.05	0.45	0.34	1.31	0.24	0.00	0.24
37.10	0.45	0.34	1.31	0.24	0.00	0.24
37.15	0.45	0.34	1.31	0.24	0.00	0.24
37.20	0.45	0.34	1.31	0.24	0.00	0.24
37.25	0.45	0.34	1.31	0.24	0.00	0.24
37.30	0.45	0.34	1.30	0.23	0.00	0.23
37.35	0.45	0.34	1.30	0.23	0.00	0.23
37.40	0.45	0.34	1.30	0.23	0.00	0.23
37.45	0.45	0.34	1.30	0.23	0.00	0.23
37.50	0.45	0.34	1.30	0.23	0.00	0.23
37.55	0.45	0.34	1.30	0.23	0.00	0.23
37.60	0.45	0.34	1.30	0.22	0.00	0.22
37.65	0.45	0.34	1.30	0.22	0.00	0.22
37.70	0.45	0.34	1.30	0.22	0.00	0.22
37.75	0.44	0.34	1.30	0.22	0.00	0.22
37.80	0.44	0.34	1.30	0.22	0.00	0.22
37.85	0.44	0.34	1.30	0.22	0.00	0.22
37.90	0.44	0.34	1.30	0.21	0.00	0.21
37.95	0.44	0.34	1.30	0.21	0.00	0.21
38.00	0.44	0.34	1.30	0.21	0.00	0.21
38.05	0.44	0.34	1.30	0.21	0.00	0.21
38.10	0.44	0.34	1.30	0.21	0.00	0.21
38.15	0.44	0.34	1.30	0.21	0.00	0.21
38.20	0.44	0.34	1.30	0.20	0.00	0.20
38.25	0.44	0.34	1.30	0.20	0.00	0.20
38.30	0.44	0.34	1.30	0.20	0.00	0.20
38.35	0.44	0.34	1.30	0.20	0.00	0.20
38.40	0.44	0.34	1.30	0.20	0.00	0.20
38.45	0.44	0.34	1.30	0.20	0.00	0.20
38.50	0.44	0.34	1.30	0.19	0.00	0.19
38.55	0.44	0.34	1.30	0.19	0.00	0.19
38.60	0.44	0.34	1.30	0.19	0.00	0.19
38.65	0.44	0.34	1.30	0.19	0.00	0.19
38.70	0.44	0.34	1.30	0.19	0.00	0.19
38.75	0.44	0.34	1.30	0.19	0.00	0.19
38.80	0.44	0.34	1.30	0.18	0.00	0.18
38.85	0.44	0.34	1.30	0.18	0.00	0.18
38.90	0.44	0.34	1.30	0.18	0.00	0.18
38.95	0.44	0.34	1.30	0.18	0.00	0.18
39.00	0.44	0.34	1.30	0.18	0.00	0.18
39.05	0.44	0.34	1.30	0.18	0.00	0.18
39.10	0.44	0.34	1.30	0.17	0.00	0.17
39.15	0.44	0.34	1.30	0.17	0.00	0.17
39.20	0.44	0.34	1.30	0.17	0.00	0.17
39.25	0.44	0.34	1.30	0.17	0.00	0.17
39.30	0.44	0.34	1.30	0.17	0.00	0.17
39.35	0.44	0.34	1.30	0.17	0.00	0.17
39.40	0.44	0.34	1.30	0.16	0.00	0.16
39.45	0.44	0.34	1.30	0.16	0.00	0.16
39.50	0.44	0.34	1.30	0.16	0.00	0.16
39.55	0.44	0.34	1.30	0.16	0.00	0.16
39.60	0.44	0.34	1.30	0.16	0.00	0.16
39.65	0.43	0.34	1.30	0.16	0.00	0.16
39.70	0.43	0.34	1.30	0.15	0.00	0.15
39.75	0.43	0.34	1.30	0.15	0.00	0.15
39.80	0.43	0.34	1.29	0.15	0.00	0.15
39.85	0.43	0.34	1.29	0.15	0.00	0.15
39.90	0.43	0.33	1.29	0.15	0.00	0.15
39.95	0.43	0.33	1.29	0.15	0.00	0.15

40.00	0.43	0.33	1.29	0.14	0.00	0.14
40.05	0.46	0.33	1.38	0.14	0.00	0.14
40.10	0.46	0.33	1.38	0.14	0.00	0.14
40.15	0.46	0.33	1.38	0.14	0.00	0.14
40.20	0.46	0.33	1.38	0.14	0.00	0.14
40.25	0.46	0.33	1.38	0.14	0.00	0.14
40.30	0.46	0.33	1.38	0.14	0.00	0.14
40.35	0.46	0.33	1.38	0.13	0.00	0.13
40.40	0.46	0.33	1.38	0.13	0.00	0.13
40.45	0.46	0.33	1.38	0.13	0.00	0.13
40.50	0.46	0.33	1.38	0.13	0.00	0.13
40.55	0.46	0.33	1.38	0.13	0.00	0.13
40.60	0.46	0.33	1.38	0.13	0.00	0.13
40.65	0.46	0.33	1.38	0.13	0.00	0.13
40.70	0.46	0.33	1.38	0.12	0.00	0.12
40.75	0.46	0.33	1.38	0.12	0.00	0.12
40.80	0.46	0.33	1.38	0.12	0.00	0.12
40.85	0.46	0.33	1.38	0.12	0.00	0.12
40.90	0.46	0.33	1.38	0.12	0.00	0.12
40.95	0.46	0.33	1.38	0.12	0.00	0.12
41.00	0.46	0.33	1.38	0.12	0.00	0.12
41.05	0.45	0.33	1.38	0.11	0.00	0.11
41.10	0.45	0.33	1.38	0.11	0.00	0.11
41.15	0.45	0.33	1.38	0.11	0.00	0.11
41.20	0.45	0.33	1.38	0.11	0.00	0.11
41.25	0.45	0.33	1.38	0.11	0.00	0.11
41.30	0.45	0.33	1.38	0.11	0.00	0.11
41.35	0.45	0.33	1.38	0.11	0.00	0.11
41.40	0.45	0.33	1.38	0.10	0.00	0.10
41.45	0.45	0.33	1.37	0.10	0.00	0.10
41.50	0.45	0.33	1.37	0.10	0.00	0.10
41.55	0.45	0.33	1.37	0.10	0.00	0.10
41.60	0.45	0.33	1.37	0.10	0.00	0.10
41.65	0.45	0.33	1.37	0.10	0.00	0.10
41.70	0.45	0.33	1.37	0.10	0.00	0.10
41.75	0.45	0.33	1.37	0.10	0.00	0.10
41.80	0.45	0.33	1.37	0.09	0.00	0.09
41.85	0.45	0.33	1.37	0.09	0.00	0.09
41.90	0.45	0.33	1.37	0.09	0.00	0.09
41.95	0.45	0.33	1.37	0.09	0.00	0.09
42.00	0.45	0.33	1.37	0.09	0.00	0.09
42.05	0.45	0.33	1.37	0.09	0.00	0.09
42.10	0.45	0.33	1.37	0.09	0.00	0.09
42.15	0.45	0.33	1.37	0.08	0.00	0.08
42.20	0.45	0.33	1.37	0.08	0.00	0.08
42.25	0.45	0.33	1.37	0.08	0.00	0.08
42.30	0.45	0.33	1.37	0.08	0.00	0.08
42.35	0.45	0.33	1.37	0.08	0.00	0.08
42.40	0.45	0.32	1.37	0.08	0.00	0.08
42.45	0.45	0.32	1.37	0.08	0.00	0.08
42.50	0.45	0.32	1.37	0.07	0.00	0.07
42.55	0.45	0.32	1.37	0.07	0.00	0.07
42.60	0.44	0.32	1.37	0.07	0.00	0.07
42.65	0.44	0.32	1.37	0.07	0.00	0.07
42.70	0.44	0.32	1.37	0.07	0.00	0.07
42.75	0.44	0.32	1.37	0.07	0.00	0.07
42.80	0.44	0.32	1.37	0.07	0.00	0.07
42.85	0.44	0.32	1.37	0.06	0.00	0.06
42.90	0.44	0.32	1.37	0.06	0.00	0.06
42.95	0.44	0.32	1.37	0.06	0.00	0.06
43.00	0.44	0.32	1.37	0.06	0.00	0.06
43.05	0.44	0.32	1.37	0.06	0.00	0.06
43.10	0.44	0.32	1.37	0.06	0.00	0.06
43.15	0.44	0.32	1.37	0.06	0.00	0.06
43.20	0.44	0.32	1.37	0.05	0.00	0.05
43.25	0.44	0.32	1.37	0.05	0.00	0.05
43.30	0.44	0.32	1.37	0.05	0.00	0.05
43.35	0.44	0.32	1.37	0.05	0.00	0.05
43.40	0.44	0.32	1.37	0.05	0.00	0.05
43.45	0.44	0.32	1.37	0.05	0.00	0.05
43.50	0.44	0.32	1.37	0.05	0.00	0.05

43.55	0.44	0.32	1.37	0.04	0.00	0.04
43.60	0.44	0.32	1.37	0.04	0.00	0.04
43.65	0.44	0.32	1.37	0.04	0.00	0.04
43.70	0.44	0.32	1.37	0.04	0.00	0.04
43.75	0.44	0.32	1.37	0.04	0.00	0.04
43.80	0.44	0.32	1.37	0.04	0.00	0.04
43.85	0.44	0.32	1.37	0.04	0.00	0.04
43.90	0.44	0.32	1.37	0.03	0.00	0.03
43.95	0.44	0.32	1.37	0.03	0.00	0.03
44.00	0.44	0.32	1.37	0.03	0.00	0.03
44.05	0.44	0.32	1.37	0.03	0.00	0.03
44.10	0.44	0.32	1.37	0.03	0.00	0.03
44.15	0.44	0.32	1.37	0.03	0.00	0.03
44.20	0.44	0.32	1.37	0.02	0.00	0.02
44.25	0.44	0.32	1.37	0.02	0.00	0.02
44.30	0.43	0.32	1.37	0.02	0.00	0.02
44.35	0.43	0.32	1.37	0.02	0.00	0.02
44.40	0.43	0.32	1.37	0.02	0.00	0.02
44.45	0.43	0.32	1.37	0.02	0.00	0.02
44.50	0.43	0.32	1.37	0.02	0.00	0.02
44.55	0.43	0.32	1.37	0.01	0.00	0.01
44.60	0.43	0.32	1.37	0.01	0.00	0.01
44.65	0.43	0.32	1.37	0.01	0.00	0.01
44.70	0.43	0.32	1.37	0.01	0.00	0.01
44.75	0.43	0.32	1.37	0.01	0.00	0.01
44.80	0.43	0.32	1.37	0.01	0.00	0.01
44.85	0.43	0.32	1.37	0.01	0.00	0.01
44.90	0.43	0.32	1.37	0.00	0.00	0.00
44.95	0.43	0.32	1.37	0.00	0.00	0.00
45.00	0.43	0.31	1.37	0.00	0.00	0.00
45.05	0.83	0.31	2.64	0.00	0.00	0.00
45.10	0.83	0.31	2.64	0.00	0.00	0.00
45.15	0.83	0.31	2.64	0.00	0.00	0.00
45.20	0.83	0.31	2.64	0.00	0.00	0.00
45.25	0.83	0.31	2.64	0.00	0.00	0.00
45.30	0.83	0.31	2.65	0.00	0.00	0.00
45.35	0.83	0.31	2.65	0.00	0.00	0.00
45.40	0.83	0.31	2.65	0.00	0.00	0.00
45.45	0.83	0.31	2.65	0.00	0.00	0.00
45.50	0.83	0.31	2.65	0.00	0.00	0.00
45.55	0.83	0.31	2.65	0.00	0.00	0.00
45.60	0.83	0.31	2.65	0.00	0.00	0.00
45.65	0.83	0.31	2.65	0.00	0.00	0.00
45.70	0.83	0.31	2.66	0.00	0.00	0.00
45.75	0.83	0.31	2.66	0.00	0.00	0.00
45.80	0.83	0.31	2.66	0.00	0.00	0.00
45.85	0.83	0.31	2.66	0.00	0.00	0.00
45.90	0.83	0.31	2.66	0.00	0.00	0.00
45.95	0.83	0.31	2.66	0.00	0.00	0.00
46.00	0.83	0.31	2.66	0.00	0.00	0.00
46.05	0.83	0.31	2.66	0.00	0.00	0.00
46.10	0.83	0.31	2.67	0.00	0.00	0.00
46.15	0.83	0.31	2.67	0.00	0.00	0.00
46.20	0.83	0.31	2.67	0.00	0.00	0.00
46.25	0.83	0.31	2.67	0.00	0.00	0.00
46.30	0.83	0.31	2.67	0.00	0.00	0.00
46.35	0.83	0.31	2.67	0.00	0.00	0.00
46.40	0.83	0.31	2.67	0.00	0.00	0.00
46.45	0.83	0.31	2.67	0.00	0.00	0.00
46.50	0.83	0.31	2.68	0.00	0.00	0.00
46.55	0.83	0.31	2.68	0.00	0.00	0.00
46.60	0.83	0.31	2.68	0.00	0.00	0.00
46.65	0.83	0.31	2.68	0.00	0.00	0.00
46.70	0.83	0.31	2.68	0.00	0.00	0.00
46.75	0.83	0.31	2.68	0.00	0.00	0.00
46.80	0.83	0.31	2.68	0.00	0.00	0.00
46.85	0.83	0.31	2.68	0.00	0.00	0.00
46.90	0.83	0.31	2.69	0.00	0.00	0.00
46.95	0.83	0.31	2.69	0.00	0.00	0.00
47.00	0.83	0.31	2.69	0.00	0.00	0.00
47.05	0.83	0.31	2.69	0.00	0.00	0.00

47.10	0.83	0.31	2.69	0.00	0.00	0.00
47.15	0.83	0.31	2.69	0.00	0.00	0.00
47.20	0.83	0.31	2.69	0.00	0.00	0.00
47.25	0.83	0.31	2.69	0.00	0.00	0.00
47.30	0.83	0.31	2.70	0.00	0.00	0.00
47.35	0.83	0.31	2.70	0.00	0.00	0.00
47.40	0.83	0.31	2.70	0.00	0.00	0.00
47.45	0.83	0.31	2.70	0.00	0.00	0.00
47.50	0.83	0.31	2.70	0.00	0.00	0.00
47.55	0.83	0.31	2.70	0.00	0.00	0.00
47.60	0.83	0.31	2.70	0.00	0.00	0.00
47.65	0.83	0.31	2.70	0.00	0.00	0.00
47.70	0.83	0.31	2.71	0.00	0.00	0.00
47.75	0.83	0.31	2.71	0.00	0.00	0.00
47.80	0.83	0.31	2.71	0.00	0.00	0.00
47.85	0.83	0.31	2.71	0.00	0.00	0.00
47.90	0.83	0.31	2.71	0.00	0.00	0.00
47.95	0.83	0.31	2.71	0.00	0.00	0.00
48.00	0.83	0.31	2.71	0.00	0.00	0.00
48.05	0.83	0.31	2.71	0.00	0.00	0.00
48.10	0.83	0.31	2.72	0.00	0.00	0.00
48.15	0.83	0.31	2.72	0.00	0.00	0.00
48.20	0.83	0.31	2.72	0.00	0.00	0.00
48.25	0.83	0.31	2.72	0.00	0.00	0.00
48.30	0.83	0.31	2.72	0.00	0.00	0.00
48.35	0.83	0.31	2.72	0.00	0.00	0.00
48.40	0.83	0.30	2.72	0.00	0.00	0.00
48.45	0.83	0.30	2.73	0.00	0.00	0.00
48.50	0.83	0.30	2.73	0.00	0.00	0.00
48.55	0.83	0.30	2.73	0.00	0.00	0.00
48.60	0.83	0.30	2.73	0.00	0.00	0.00
48.65	0.83	0.30	2.73	0.00	0.00	0.00
48.70	0.83	0.30	2.73	0.00	0.00	0.00
48.75	0.83	0.30	2.73	0.00	0.00	0.00
48.80	0.83	0.30	2.73	0.00	0.00	0.00
48.85	0.83	0.30	2.74	0.00	0.00	0.00
48.90	0.83	0.30	2.74	0.00	0.00	0.00
48.95	0.83	0.30	2.74	0.00	0.00	0.00
49.00	0.83	0.30	2.74	0.00	0.00	0.00
49.05	0.83	0.30	2.74	0.00	0.00	0.00
49.10	0.83	0.30	2.74	0.00	0.00	0.00
49.15	0.83	0.30	2.74	0.00	0.00	0.00
49.20	0.83	0.30	2.74	0.00	0.00	0.00
49.25	0.83	0.30	2.75	0.00	0.00	0.00
49.30	0.83	0.30	2.75	0.00	0.00	0.00
49.35	0.83	0.30	2.75	0.00	0.00	0.00
49.40	0.83	0.30	2.75	0.00	0.00	0.00
49.45	0.83	0.30	2.75	0.00	0.00	0.00
49.50	0.83	0.30	2.75	0.00	0.00	0.00
49.55	0.83	0.30	2.75	0.00	0.00	0.00
49.60	0.83	0.30	2.76	0.00	0.00	0.00
49.65	0.83	0.30	2.76	0.00	0.00	0.00
49.70	0.83	0.30	2.76	0.00	0.00	0.00
49.75	0.83	0.30	2.76	0.00	0.00	0.00
49.80	0.83	0.30	2.76	0.00	0.00	0.00
49.85	0.83	0.30	2.76	0.00	0.00	0.00
49.90	0.83	0.30	2.76	0.00	0.00	0.00
49.95	0.83	0.30	2.76	0.00	0.00	0.00
50.00	0.83	0.30	2.77	0.00	0.00	0.00

---

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

---

1 atm (atmosphere) = 1 tsf (ton/ft2)

CRRm	Cyclic resistance ratio from soils
CSRsf	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S.	Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat	Settlement from saturated sands
S_dry	Settlement from Unsaturated Sands

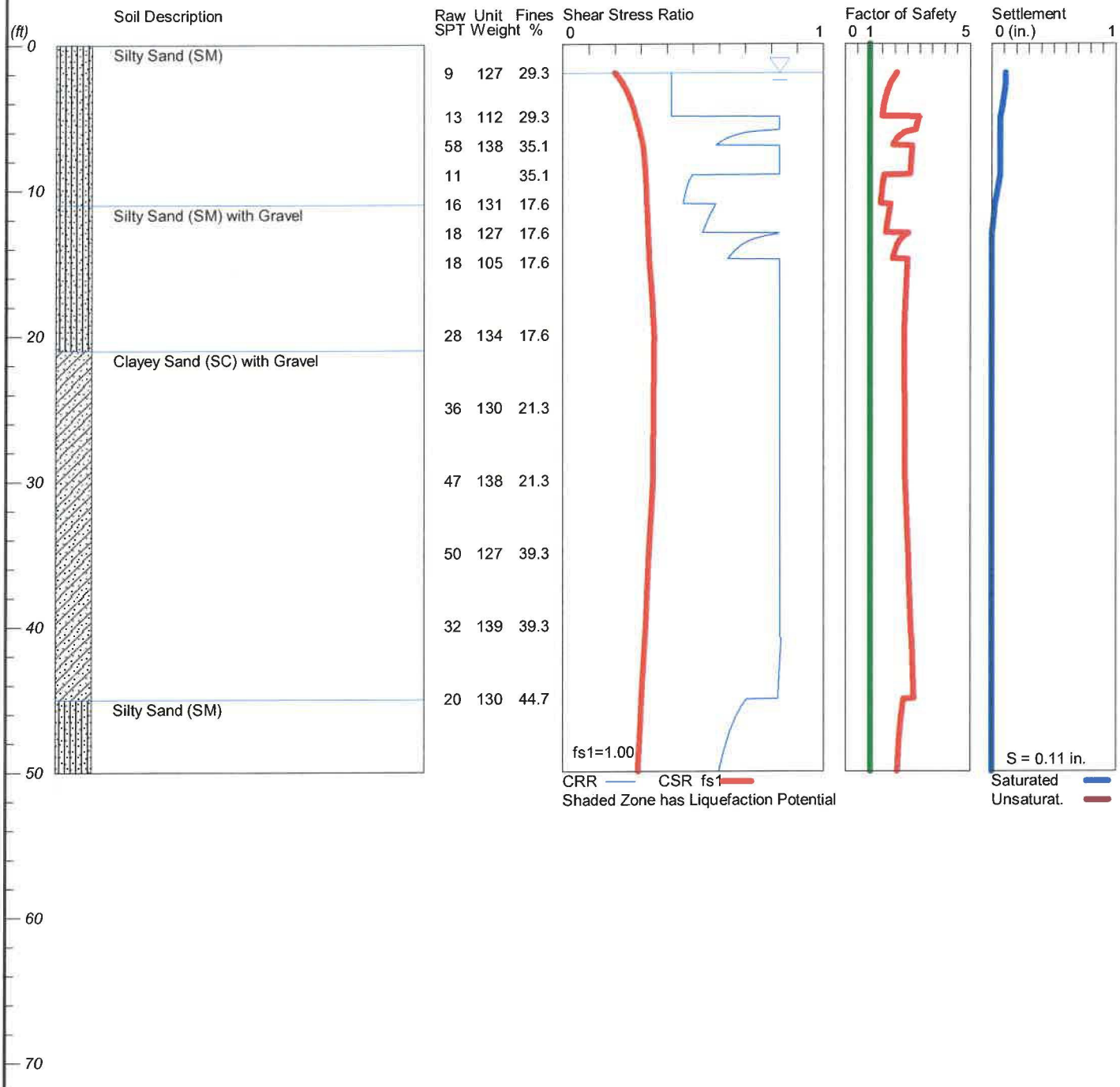
S_all	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B13 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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Krazan

012-22165

Plate A-1

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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B13\B13 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-22165

Surface Elev.=
Hole No.=B13
Depth of Hole= 50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 9.50 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B13
Depth of Hole=50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 9.50 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.4
7. Borehole Diameter, Cb= 1.05
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	9.00	127.00	29.30
5.00	13.00	112.00	29.30
7.00	58.00	138.00	35.10
9.00	11.00	138.00	35.10
11.00	16.00	131.00	17.60
13.00	18.00	127.00	17.60
15.00	18.00	105.00	17.60
20.00	28.00	134.00	17.60
25.00	36.00	130.00	21.30
30.00	47.00	138.00	21.30
35.00	50.00	127.00	39.30
40.00	32.00	139.00	39.30
45.00	20.00	130.00	44.70

Output Results:
Settlement of Saturated Sands=0.11 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.11 in.
Differential Settlement=0.056 to 0.073 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

2.00	0.41	0.20	2.08	0.11	0.00	0.11
2.05	0.41	0.20	2.06	0.11	0.00	0.11
2.10	0.41	0.20	2.04	0.11	0.00	0.11
2.15	0.41	0.21	2.01	0.11	0.00	0.11
2.20	0.41	0.21	1.99	0.11	0.00	0.11
2.25	0.41	0.21	1.97	0.11	0.00	0.11
2.30	0.41	0.21	1.95	0.11	0.00	0.11
2.35	0.41	0.21	1.93	0.11	0.00	0.11
2.40	0.41	0.22	1.92	0.11	0.00	0.11
2.45	0.41	0.22	1.90	0.11	0.00	0.11
2.50	0.41	0.22	1.88	0.11	0.00	0.11
2.55	0.41	0.22	1.87	0.11	0.00	0.11
2.60	0.41	0.22	1.85	0.11	0.00	0.11
2.65	0.41	0.23	1.84	0.11	0.00	0.11
2.70	0.41	0.23	1.82	0.11	0.00	0.11
2.75	0.41	0.23	1.81	0.11	0.00	0.11
2.80	0.41	0.23	1.79	0.11	0.00	0.11
2.85	0.41	0.23	1.78	0.11	0.00	0.11
2.90	0.41	0.23	1.77	0.11	0.00	0.11
2.95	0.41	0.24	1.76	0.11	0.00	0.11
3.00	0.41	0.24	1.75	0.11	0.00	0.11
3.05	0.41	0.24	1.74	0.11	0.00	0.11
3.10	0.41	0.24	1.73	0.10	0.00	0.10
3.15	0.41	0.24	1.71	0.10	0.00	0.10
3.20	0.41	0.24	1.70	0.10	0.00	0.10
3.25	0.41	0.24	1.70	0.10	0.00	0.10
3.30	0.41	0.25	1.69	0.10	0.00	0.10
3.35	0.41	0.25	1.68	0.10	0.00	0.10
3.40	0.41	0.25	1.67	0.10	0.00	0.10
3.45	0.41	0.25	1.66	0.10	0.00	0.10
3.50	0.41	0.25	1.65	0.10	0.00	0.10
3.55	0.41	0.25	1.64	0.10	0.00	0.10
3.60	0.41	0.25	1.63	0.10	0.00	0.10
3.65	0.41	0.25	1.63	0.10	0.00	0.10
3.70	0.41	0.26	1.62	0.10	0.00	0.10
3.75	0.41	0.26	1.61	0.09	0.00	0.09
3.80	0.41	0.26	1.61	0.09	0.00	0.09
3.85	0.41	0.26	1.60	0.09	0.00	0.09
3.90	0.41	0.26	1.59	0.09	0.00	0.09
3.95	0.41	0.26	1.59	0.09	0.00	0.09
4.00	0.41	0.26	1.58	0.09	0.00	0.09
4.05	0.41	0.26	1.57	0.09	0.00	0.09
4.10	0.41	0.26	1.57	0.09	0.00	0.09
4.15	0.41	0.27	1.56	0.09	0.00	0.09
4.20	0.41	0.27	1.56	0.09	0.00	0.09
4.25	0.41	0.27	1.55	0.08	0.00	0.08
4.30	0.41	0.27	1.54	0.08	0.00	0.08
4.35	0.41	0.27	1.54	0.08	0.00	0.08
4.40	0.41	0.27	1.53	0.08	0.00	0.08
4.45	0.41	0.27	1.53	0.08	0.00	0.08
4.50	0.41	0.27	1.52	0.08	0.00	0.08
4.55	0.41	0.27	1.52	0.08	0.00	0.08
4.60	0.41	0.27	1.51	0.08	0.00	0.08
4.65	0.41	0.27	1.51	0.08	0.00	0.08
4.70	0.41	0.27	1.51	0.07	0.00	0.07
4.75	0.41	0.28	1.50	0.07	0.00	0.07
4.80	0.41	0.28	1.50	0.07	0.00	0.07
4.85	0.41	0.28	1.49	0.07	0.00	0.07
4.90	0.41	0.28	1.49	0.07	0.00	0.07
4.95	0.41	0.28	1.48	0.07	0.00	0.07
5.00	0.83	0.28	2.97	0.07	0.00	0.07
5.05	0.83	0.28	2.96	0.07	0.00	0.07
5.10	0.83	0.28	2.95	0.07	0.00	0.07
5.15	0.83	0.28	2.94	0.07	0.00	0.07
5.20	0.83	0.28	2.93	0.07	0.00	0.07
5.25	0.83	0.28	2.93	0.07	0.00	0.07
5.30	0.83	0.28	2.92	0.07	0.00	0.07
5.35	0.83	0.29	2.91	0.07	0.00	0.07
5.40	0.83	0.29	2.90	0.07	0.00	0.07
5.45	0.83	0.29	2.89	0.07	0.00	0.07

5.50	0.83	0.29	2.88	0.07	0.00	0.07
5.55	0.83	0.29	2.88	0.07	0.00	0.07
5.60	0.83	0.29	2.87	0.07	0.00	0.07
5.65	0.83	0.29	2.86	0.07	0.00	0.07
5.70	0.83	0.29	2.85	0.07	0.00	0.07
5.75	0.83	0.29	2.85	0.07	0.00	0.07
5.80	0.83	0.29	2.84	0.07	0.00	0.07
5.85	0.83	0.29	2.83	0.07	0.00	0.07
5.90	0.83	0.29	2.82	0.07	0.00	0.07
5.95	0.78	0.29	2.65	0.07	0.00	0.07
6.00	0.75	0.30	2.53	0.07	0.00	0.07
6.05	0.72	0.30	2.44	0.07	0.00	0.07
6.10	0.70	0.30	2.37	0.07	0.00	0.07
6.15	0.69	0.30	2.32	0.07	0.00	0.07
6.20	0.68	0.30	2.27	0.07	0.00	0.07
6.25	0.67	0.30	2.23	0.07	0.00	0.07
6.30	0.66	0.30	2.20	0.07	0.00	0.07
6.35	0.65	0.30	2.16	0.07	0.00	0.07
6.40	0.64	0.30	2.13	0.07	0.00	0.07
6.45	0.64	0.30	2.11	0.07	0.00	0.07
6.50	0.63	0.30	2.08	0.07	0.00	0.07
6.55	0.62	0.30	2.06	0.07	0.00	0.07
6.60	0.62	0.30	2.04	0.07	0.00	0.07
6.65	0.61	0.30	2.02	0.07	0.00	0.07
6.70	0.61	0.30	2.00	0.07	0.00	0.07
6.75	0.60	0.31	1.98	0.07	0.00	0.07
6.80	0.60	0.31	1.96	0.07	0.00	0.07
6.85	0.60	0.31	1.95	0.07	0.00	0.07
6.90	0.59	0.31	1.93	0.07	0.00	0.07
6.95	0.59	0.31	1.91	0.07	0.00	0.07
7.00	0.83	0.31	2.69	0.07	0.00	0.07
7.05	0.83	0.31	2.69	0.07	0.00	0.07
7.10	0.83	0.31	2.69	0.07	0.00	0.07
7.15	0.83	0.31	2.69	0.07	0.00	0.07
7.20	0.83	0.31	2.68	0.07	0.00	0.07
7.25	0.83	0.31	2.68	0.07	0.00	0.07
7.30	0.83	0.31	2.68	0.07	0.00	0.07
7.35	0.83	0.31	2.68	0.07	0.00	0.07
7.40	0.83	0.31	2.67	0.07	0.00	0.07
7.45	0.83	0.31	2.67	0.07	0.00	0.07
7.50	0.83	0.31	2.67	0.07	0.00	0.07
7.55	0.83	0.31	2.67	0.07	0.00	0.07
7.60	0.83	0.31	2.67	0.07	0.00	0.07
7.65	0.83	0.31	2.66	0.07	0.00	0.07
7.70	0.83	0.31	2.66	0.07	0.00	0.07
7.75	0.83	0.31	2.66	0.07	0.00	0.07
7.80	0.83	0.31	2.66	0.07	0.00	0.07
7.85	0.83	0.31	2.65	0.07	0.00	0.07
7.90	0.83	0.31	2.65	0.07	0.00	0.07
7.95	0.83	0.31	2.65	0.07	0.00	0.07
8.00	0.83	0.31	2.65	0.07	0.00	0.07
8.05	0.83	0.31	2.65	0.07	0.00	0.07
8.10	0.83	0.31	2.65	0.07	0.00	0.07
8.15	0.83	0.31	2.64	0.07	0.00	0.07
8.20	0.83	0.31	2.64	0.07	0.00	0.07
8.25	0.83	0.31	2.64	0.07	0.00	0.07
8.30	0.83	0.31	2.64	0.07	0.00	0.07
8.35	0.83	0.32	2.64	0.07	0.00	0.07
8.40	0.83	0.32	2.63	0.07	0.00	0.07
8.45	0.83	0.32	2.63	0.07	0.00	0.07
8.50	0.83	0.32	2.63	0.07	0.00	0.07
8.55	0.83	0.32	2.63	0.07	0.00	0.07
8.60	0.83	0.32	2.63	0.07	0.00	0.07
8.65	0.83	0.32	2.63	0.07	0.00	0.07
8.70	0.83	0.32	2.62	0.07	0.00	0.07
8.75	0.83	0.32	2.62	0.07	0.00	0.07
8.80	0.83	0.32	2.62	0.07	0.00	0.07
8.85	0.83	0.32	2.62	0.07	0.00	0.07
8.90	0.83	0.32	2.62	0.07	0.00	0.07
8.95	0.83	0.32	2.62	0.07	0.00	0.07
9.00	0.50	0.32	1.57	0.07	0.00	0.07

9.05	0.50	0.32	1.56	0.07	0.00	0.07
9.10	0.49	0.32	1.55	0.07	0.00	0.07
9.15	0.49	0.32	1.55	0.06	0.00	0.06
9.20	0.49	0.32	1.54	0.06	0.00	0.06
9.25	0.49	0.32	1.54	0.06	0.00	0.06
9.30	0.49	0.32	1.53	0.06	0.00	0.06
9.35	0.49	0.32	1.52	0.06	0.00	0.06
9.40	0.48	0.32	1.52	0.06	0.00	0.06
9.45	0.48	0.32	1.51	0.06	0.00	0.06
9.50	0.48	0.32	1.51	0.06	0.00	0.06
9.55	0.48	0.32	1.50	0.06	0.00	0.06
9.60	0.48	0.32	1.50	0.06	0.00	0.06
9.65	0.48	0.32	1.50	0.05	0.00	0.05
9.70	0.48	0.32	1.49	0.05	0.00	0.05
9.75	0.48	0.32	1.49	0.05	0.00	0.05
9.80	0.48	0.32	1.49	0.05	0.00	0.05
9.85	0.48	0.32	1.49	0.05	0.00	0.05
9.90	0.47	0.32	1.48	0.05	0.00	0.05
9.95	0.47	0.32	1.48	0.05	0.00	0.05
10.00	0.47	0.32	1.48	0.05	0.00	0.05
10.05	0.47	0.32	1.47	0.05	0.00	0.05
10.10	0.47	0.32	1.47	0.04	0.00	0.04
10.15	0.47	0.32	1.47	0.04	0.00	0.04
10.20	0.47	0.32	1.47	0.04	0.00	0.04
10.25	0.47	0.32	1.46	0.04	0.00	0.04
10.30	0.47	0.32	1.46	0.04	0.00	0.04
10.35	0.47	0.32	1.46	0.04	0.00	0.04
10.40	0.47	0.32	1.45	0.04	0.00	0.04
10.45	0.47	0.32	1.45	0.04	0.00	0.04
10.50	0.47	0.32	1.45	0.04	0.00	0.04
10.55	0.47	0.32	1.45	0.03	0.00	0.03
10.60	0.46	0.32	1.44	0.03	0.00	0.03
10.65	0.46	0.32	1.44	0.03	0.00	0.03
10.70	0.46	0.32	1.44	0.03	0.00	0.03
10.75	0.46	0.32	1.44	0.03	0.00	0.03
10.80	0.46	0.32	1.43	0.03	0.00	0.03
10.85	0.46	0.32	1.43	0.03	0.00	0.03
10.90	0.46	0.32	1.43	0.03	0.00	0.03
10.95	0.46	0.32	1.43	0.02	0.00	0.02
11.00	0.59	0.32	1.82	0.02	0.00	0.02
11.05	0.59	0.32	1.81	0.02	0.00	0.02
11.10	0.58	0.32	1.80	0.02	0.00	0.02
11.15	0.58	0.32	1.80	0.02	0.00	0.02
11.20	0.58	0.32	1.79	0.02	0.00	0.02
11.25	0.58	0.32	1.79	0.02	0.00	0.02
11.30	0.58	0.32	1.78	0.02	0.00	0.02
11.35	0.58	0.32	1.78	0.02	0.00	0.02
11.40	0.57	0.32	1.77	0.02	0.00	0.02
11.45	0.57	0.32	1.77	0.02	0.00	0.02
11.50	0.57	0.32	1.76	0.02	0.00	0.02
11.55	0.57	0.32	1.76	0.02	0.00	0.02
11.60	0.57	0.32	1.75	0.02	0.00	0.02
11.65	0.57	0.32	1.75	0.02	0.00	0.02
11.70	0.57	0.33	1.74	0.02	0.00	0.02
11.75	0.56	0.33	1.74	0.02	0.00	0.02
11.80	0.56	0.33	1.73	0.02	0.00	0.02
11.85	0.56	0.33	1.73	0.02	0.00	0.02
11.90	0.56	0.33	1.72	0.02	0.00	0.02
11.95	0.56	0.33	1.72	0.01	0.00	0.01
12.00	0.56	0.33	1.71	0.01	0.00	0.01
12.05	0.56	0.33	1.71	0.01	0.00	0.01
12.10	0.56	0.33	1.70	0.01	0.00	0.01
12.15	0.55	0.33	1.70	0.01	0.00	0.01
12.20	0.55	0.33	1.70	0.01	0.00	0.01
12.25	0.55	0.33	1.69	0.01	0.00	0.01
12.30	0.55	0.33	1.69	0.01	0.00	0.01
12.35	0.55	0.33	1.68	0.01	0.00	0.01
12.40	0.55	0.33	1.68	0.01	0.00	0.01
12.45	0.55	0.33	1.68	0.01	0.00	0.01
12.50	0.55	0.33	1.67	0.01	0.00	0.01
12.55	0.55	0.33	1.67	0.01	0.00	0.01

12.60	0.54	0.33	1.66	0.01	0.00	0.01
12.65	0.54	0.33	1.66	0.01	0.00	0.01
12.70	0.54	0.33	1.66	0.01	0.00	0.01
12.75	0.54	0.33	1.65	0.00	0.00	0.00
12.80	0.54	0.33	1.65	0.00	0.00	0.00
12.85	0.54	0.33	1.64	0.00	0.00	0.00
12.90	0.54	0.33	1.64	0.00	0.00	0.00
12.95	0.54	0.33	1.64	0.00	0.00	0.00
13.00	0.83	0.33	2.53	0.00	0.00	0.00
13.05	0.82	0.33	2.51	0.00	0.00	0.00
13.10	0.81	0.33	2.45	0.00	0.00	0.00
13.15	0.79	0.33	2.40	0.00	0.00	0.00
13.20	0.78	0.33	2.36	0.00	0.00	0.00
13.25	0.76	0.33	2.32	0.00	0.00	0.00
13.30	0.75	0.33	2.29	0.00	0.00	0.00
13.35	0.74	0.33	2.26	0.00	0.00	0.00
13.40	0.73	0.33	2.23	0.00	0.00	0.00
13.45	0.73	0.33	2.21	0.00	0.00	0.00
13.50	0.72	0.33	2.19	0.00	0.00	0.00
13.55	0.71	0.33	2.17	0.00	0.00	0.00
13.60	0.71	0.33	2.15	0.00	0.00	0.00
13.65	0.70	0.33	2.13	0.00	0.00	0.00
13.70	0.70	0.33	2.11	0.00	0.00	0.00
13.75	0.69	0.33	2.10	0.00	0.00	0.00
13.80	0.69	0.33	2.09	0.00	0.00	0.00
13.85	0.68	0.33	2.07	0.00	0.00	0.00
13.90	0.68	0.33	2.06	0.00	0.00	0.00
13.95	0.68	0.33	2.05	0.00	0.00	0.00
14.00	0.67	0.33	2.04	0.00	0.00	0.00
14.05	0.67	0.33	2.03	0.00	0.00	0.00
14.10	0.67	0.33	2.01	0.00	0.00	0.00
14.15	0.66	0.33	2.00	0.00	0.00	0.00
14.20	0.66	0.33	2.00	0.00	0.00	0.00
14.25	0.66	0.33	1.99	0.00	0.00	0.00
14.30	0.65	0.33	1.98	0.00	0.00	0.00
14.35	0.65	0.33	1.97	0.00	0.00	0.00
14.40	0.65	0.33	1.96	0.00	0.00	0.00
14.45	0.65	0.33	1.95	0.00	0.00	0.00
14.50	0.64	0.33	1.94	0.00	0.00	0.00
14.55	0.64	0.33	1.94	0.00	0.00	0.00
14.60	0.64	0.33	1.93	0.00	0.00	0.00
14.65	0.64	0.33	1.92	0.00	0.00	0.00
14.70	0.64	0.33	1.92	0.00	0.00	0.00
14.75	0.63	0.33	1.91	0.00	0.00	0.00
14.80	0.83	0.33	2.50	0.00	0.00	0.00
14.85	0.83	0.33	2.50	0.00	0.00	0.00
14.90	0.83	0.33	2.50	0.00	0.00	0.00
14.95	0.83	0.33	2.50	0.00	0.00	0.00
15.00	0.83	0.33	2.50	0.00	0.00	0.00
15.05	0.83	0.33	2.50	0.00	0.00	0.00
15.10	0.83	0.33	2.49	0.00	0.00	0.00
15.15	0.83	0.33	2.49	0.00	0.00	0.00
15.20	0.83	0.33	2.49	0.00	0.00	0.00
15.25	0.83	0.33	2.49	0.00	0.00	0.00
15.30	0.83	0.33	2.49	0.00	0.00	0.00
15.35	0.83	0.33	2.49	0.00	0.00	0.00
15.40	0.83	0.33	2.48	0.00	0.00	0.00
15.45	0.83	0.33	2.48	0.00	0.00	0.00
15.50	0.83	0.33	2.48	0.00	0.00	0.00
15.55	0.83	0.34	2.48	0.00	0.00	0.00
15.60	0.83	0.34	2.48	0.00	0.00	0.00
15.65	0.83	0.34	2.48	0.00	0.00	0.00
15.70	0.83	0.34	2.47	0.00	0.00	0.00
15.75	0.83	0.34	2.47	0.00	0.00	0.00
15.80	0.83	0.34	2.47	0.00	0.00	0.00
15.85	0.83	0.34	2.47	0.00	0.00	0.00
15.90	0.83	0.34	2.47	0.00	0.00	0.00
15.95	0.83	0.34	2.47	0.00	0.00	0.00
16.00	0.83	0.34	2.47	0.00	0.00	0.00
16.05	0.83	0.34	2.46	0.00	0.00	0.00
16.10	0.83	0.34	2.46	0.00	0.00	0.00

16.15	0.83	0.34	2.46	0.00	0.00	0.00
16.20	0.83	0.34	2.46	0.00	0.00	0.00
16.25	0.83	0.34	2.46	0.00	0.00	0.00
16.30	0.83	0.34	2.46	0.00	0.00	0.00
16.35	0.83	0.34	2.45	0.00	0.00	0.00
16.40	0.83	0.34	2.45	0.00	0.00	0.00
16.45	0.83	0.34	2.45	0.00	0.00	0.00
16.50	0.83	0.34	2.45	0.00	0.00	0.00
16.55	0.83	0.34	2.45	0.00	0.00	0.00
16.60	0.83	0.34	2.45	0.00	0.00	0.00
16.65	0.83	0.34	2.45	0.00	0.00	0.00
16.70	0.83	0.34	2.44	0.00	0.00	0.00
16.75	0.83	0.34	2.44	0.00	0.00	0.00
16.80	0.83	0.34	2.44	0.00	0.00	0.00
16.85	0.83	0.34	2.44	0.00	0.00	0.00
16.90	0.83	0.34	2.44	0.00	0.00	0.00
16.95	0.83	0.34	2.44	0.00	0.00	0.00
17.00	0.83	0.34	2.44	0.00	0.00	0.00
17.05	0.83	0.34	2.43	0.00	0.00	0.00
17.10	0.83	0.34	2.43	0.00	0.00	0.00
17.15	0.83	0.34	2.43	0.00	0.00	0.00
17.20	0.83	0.34	2.43	0.00	0.00	0.00
17.25	0.83	0.34	2.43	0.00	0.00	0.00
17.30	0.83	0.34	2.43	0.00	0.00	0.00
17.35	0.83	0.34	2.43	0.00	0.00	0.00
17.40	0.83	0.34	2.43	0.00	0.00	0.00
17.45	0.83	0.34	2.42	0.00	0.00	0.00
17.50	0.83	0.34	2.42	0.00	0.00	0.00
17.55	0.83	0.34	2.42	0.00	0.00	0.00
17.60	0.83	0.34	2.42	0.00	0.00	0.00
17.65	0.83	0.34	2.42	0.00	0.00	0.00
17.70	0.83	0.34	2.42	0.00	0.00	0.00
17.75	0.83	0.34	2.42	0.00	0.00	0.00
17.80	0.83	0.34	2.42	0.00	0.00	0.00
17.85	0.83	0.34	2.41	0.00	0.00	0.00
17.90	0.83	0.34	2.41	0.00	0.00	0.00
17.95	0.83	0.34	2.41	0.00	0.00	0.00
18.00	0.83	0.34	2.41	0.00	0.00	0.00
18.05	0.83	0.34	2.41	0.00	0.00	0.00
18.10	0.83	0.35	2.41	0.00	0.00	0.00
18.15	0.83	0.35	2.41	0.00	0.00	0.00
18.20	0.83	0.35	2.41	0.00	0.00	0.00
18.25	0.83	0.35	2.40	0.00	0.00	0.00
18.30	0.83	0.35	2.40	0.00	0.00	0.00
18.35	0.83	0.35	2.40	0.00	0.00	0.00
18.40	0.83	0.35	2.40	0.00	0.00	0.00
18.45	0.83	0.35	2.40	0.00	0.00	0.00
18.50	0.83	0.35	2.40	0.00	0.00	0.00
18.55	0.83	0.35	2.40	0.00	0.00	0.00
18.60	0.83	0.35	2.40	0.00	0.00	0.00
18.65	0.83	0.35	2.39	0.00	0.00	0.00
18.70	0.83	0.35	2.39	0.00	0.00	0.00
18.75	0.83	0.35	2.39	0.00	0.00	0.00
18.80	0.83	0.35	2.39	0.00	0.00	0.00
18.85	0.83	0.35	2.39	0.00	0.00	0.00
18.90	0.83	0.35	2.39	0.00	0.00	0.00
18.95	0.83	0.35	2.39	0.00	0.00	0.00
19.00	0.83	0.35	2.39	0.00	0.00	0.00
19.05	0.83	0.35	2.39	0.00	0.00	0.00
19.10	0.83	0.35	2.38	0.00	0.00	0.00
19.15	0.83	0.35	2.38	0.00	0.00	0.00
19.20	0.83	0.35	2.38	0.00	0.00	0.00
19.25	0.83	0.35	2.38	0.00	0.00	0.00
19.30	0.83	0.35	2.38	0.00	0.00	0.00
19.35	0.83	0.35	2.38	0.00	0.00	0.00
19.40	0.83	0.35	2.38	0.00	0.00	0.00
19.45	0.83	0.35	2.38	0.00	0.00	0.00
19.50	0.83	0.35	2.38	0.00	0.00	0.00
19.55	0.83	0.35	2.38	0.00	0.00	0.00
19.60	0.83	0.35	2.37	0.00	0.00	0.00
19.65	0.83	0.35	2.37	0.00	0.00	0.00

19.70	0.83	0.35	2.37	0.00	0.00	0.00
19.75	0.83	0.35	2.37	0.00	0.00	0.00
19.80	0.83	0.35	2.37	0.00	0.00	0.00
19.85	0.83	0.35	2.37	0.00	0.00	0.00
19.90	0.83	0.35	2.37	0.00	0.00	0.00
19.95	0.83	0.35	2.37	0.00	0.00	0.00
20.00	0.83	0.35	2.37	0.00	0.00	0.00
20.05	0.83	0.35	2.37	0.00	0.00	0.00
20.10	0.83	0.35	2.37	0.00	0.00	0.00
20.15	0.83	0.35	2.37	0.00	0.00	0.00
20.20	0.83	0.35	2.37	0.00	0.00	0.00
20.25	0.83	0.35	2.37	0.00	0.00	0.00
20.30	0.83	0.35	2.37	0.00	0.00	0.00
20.35	0.83	0.35	2.37	0.00	0.00	0.00
20.40	0.83	0.35	2.37	0.00	0.00	0.00
20.45	0.83	0.35	2.37	0.00	0.00	0.00
20.50	0.83	0.35	2.37	0.00	0.00	0.00
20.55	0.83	0.35	2.37	0.00	0.00	0.00
20.60	0.83	0.35	2.37	0.00	0.00	0.00
20.65	0.83	0.35	2.37	0.00	0.00	0.00
20.70	0.83	0.35	2.37	0.00	0.00	0.00
20.75	0.83	0.35	2.37	0.00	0.00	0.00
20.80	0.83	0.35	2.37	0.00	0.00	0.00
20.85	0.83	0.35	2.37	0.00	0.00	0.00
20.90	0.83	0.35	2.37	0.00	0.00	0.00
20.95	0.83	0.35	2.37	0.00	0.00	0.00
21.00	0.83	0.35	2.37	0.00	0.00	0.00
21.05	0.83	0.35	2.37	0.00	0.00	0.00
21.10	0.83	0.35	2.37	0.00	0.00	0.00
21.15	0.83	0.35	2.37	0.00	0.00	0.00
21.20	0.83	0.35	2.37	0.00	0.00	0.00
21.25	0.83	0.35	2.37	0.00	0.00	0.00
21.30	0.83	0.35	2.37	0.00	0.00	0.00
21.35	0.83	0.35	2.37	0.00	0.00	0.00
21.40	0.83	0.35	2.37	0.00	0.00	0.00
21.45	0.83	0.35	2.37	0.00	0.00	0.00
21.50	0.83	0.35	2.37	0.00	0.00	0.00
21.55	0.83	0.35	2.37	0.00	0.00	0.00
21.60	0.83	0.35	2.37	0.00	0.00	0.00
21.65	0.83	0.35	2.37	0.00	0.00	0.00
21.70	0.83	0.35	2.37	0.00	0.00	0.00
21.75	0.83	0.35	2.37	0.00	0.00	0.00
21.80	0.83	0.35	2.37	0.00	0.00	0.00
21.85	0.83	0.35	2.37	0.00	0.00	0.00
21.90	0.83	0.35	2.37	0.00	0.00	0.00
21.95	0.83	0.35	2.37	0.00	0.00	0.00
22.00	0.83	0.35	2.37	0.00	0.00	0.00
22.05	0.83	0.35	2.37	0.00	0.00	0.00
22.10	0.83	0.35	2.37	0.00	0.00	0.00
22.15	0.83	0.35	2.37	0.00	0.00	0.00
22.20	0.83	0.35	2.37	0.00	0.00	0.00
22.25	0.83	0.35	2.37	0.00	0.00	0.00
22.30	0.83	0.35	2.37	0.00	0.00	0.00
22.35	0.83	0.35	2.38	0.00	0.00	0.00
22.40	0.83	0.35	2.38	0.00	0.00	0.00
22.45	0.83	0.35	2.38	0.00	0.00	0.00
22.50	0.83	0.35	2.38	0.00	0.00	0.00
22.55	0.83	0.35	2.38	0.00	0.00	0.00
22.60	0.83	0.35	2.38	0.00	0.00	0.00
22.65	0.83	0.35	2.38	0.00	0.00	0.00
22.70	0.83	0.35	2.38	0.00	0.00	0.00
22.75	0.83	0.35	2.38	0.00	0.00	0.00
22.80	0.83	0.35	2.38	0.00	0.00	0.00
22.85	0.83	0.35	2.38	0.00	0.00	0.00
22.90	0.83	0.35	2.38	0.00	0.00	0.00
22.95	0.83	0.35	2.38	0.00	0.00	0.00
23.00	0.83	0.35	2.38	0.00	0.00	0.00
23.05	0.83	0.35	2.38	0.00	0.00	0.00
23.10	0.83	0.35	2.38	0.00	0.00	0.00
23.15	0.83	0.35	2.38	0.00	0.00	0.00
23.20	0.83	0.35	2.38	0.00	0.00	0.00

23.25	0.83	0.35	2.38	0.00	0.00	0.00
23.30	0.83	0.35	2.38	0.00	0.00	0.00
23.35	0.83	0.35	2.38	0.00	0.00	0.00
23.40	0.83	0.35	2.38	0.00	0.00	0.00
23.45	0.83	0.35	2.38	0.00	0.00	0.00
23.50	0.83	0.35	2.38	0.00	0.00	0.00
23.55	0.83	0.35	2.38	0.00	0.00	0.00
23.60	0.83	0.35	2.38	0.00	0.00	0.00
23.65	0.83	0.35	2.38	0.00	0.00	0.00
23.70	0.83	0.35	2.38	0.00	0.00	0.00
23.75	0.83	0.35	2.38	0.00	0.00	0.00
23.80	0.83	0.35	2.38	0.00	0.00	0.00
23.85	0.83	0.35	2.38	0.00	0.00	0.00
23.90	0.83	0.35	2.38	0.00	0.00	0.00
23.95	0.83	0.35	2.38	0.00	0.00	0.00
24.00	0.83	0.35	2.38	0.00	0.00	0.00
24.05	0.83	0.35	2.38	0.00	0.00	0.00
24.10	0.83	0.35	2.38	0.00	0.00	0.00
24.15	0.83	0.35	2.38	0.00	0.00	0.00
24.20	0.83	0.35	2.38	0.00	0.00	0.00
24.25	0.83	0.35	2.38	0.00	0.00	0.00
24.30	0.83	0.35	2.38	0.00	0.00	0.00
24.35	0.83	0.35	2.38	0.00	0.00	0.00
24.40	0.83	0.35	2.38	0.00	0.00	0.00
24.45	0.83	0.35	2.38	0.00	0.00	0.00
24.50	0.83	0.35	2.39	0.00	0.00	0.00
24.55	0.83	0.35	2.39	0.00	0.00	0.00
24.60	0.83	0.35	2.39	0.00	0.00	0.00
24.65	0.83	0.35	2.39	0.00	0.00	0.00
24.70	0.83	0.35	2.39	0.00	0.00	0.00
24.75	0.83	0.35	2.39	0.00	0.00	0.00
24.80	0.83	0.35	2.39	0.00	0.00	0.00
24.85	0.83	0.35	2.39	0.00	0.00	0.00
24.90	0.83	0.35	2.39	0.00	0.00	0.00
24.95	0.83	0.35	2.39	0.00	0.00	0.00
25.00	0.83	0.35	2.39	0.00	0.00	0.00
25.05	0.83	0.35	2.39	0.00	0.00	0.00
25.10	0.83	0.35	2.39	0.00	0.00	0.00
25.15	0.83	0.35	2.39	0.00	0.00	0.00
25.20	0.83	0.35	2.39	0.00	0.00	0.00
25.25	0.83	0.35	2.39	0.00	0.00	0.00
25.30	0.83	0.35	2.39	0.00	0.00	0.00
25.35	0.83	0.35	2.39	0.00	0.00	0.00
25.40	0.83	0.35	2.39	0.00	0.00	0.00
25.45	0.83	0.35	2.39	0.00	0.00	0.00
25.50	0.83	0.35	2.39	0.00	0.00	0.00
25.55	0.83	0.35	2.39	0.00	0.00	0.00
25.60	0.83	0.35	2.39	0.00	0.00	0.00
25.65	0.83	0.35	2.39	0.00	0.00	0.00
25.70	0.83	0.35	2.39	0.00	0.00	0.00
25.75	0.83	0.35	2.39	0.00	0.00	0.00
25.80	0.83	0.35	2.39	0.00	0.00	0.00
25.85	0.83	0.35	2.39	0.00	0.00	0.00
25.90	0.83	0.35	2.39	0.00	0.00	0.00
25.95	0.83	0.35	2.39	0.00	0.00	0.00
26.00	0.83	0.35	2.39	0.00	0.00	0.00
26.05	0.83	0.35	2.39	0.00	0.00	0.00
26.10	0.83	0.35	2.39	0.00	0.00	0.00
26.15	0.83	0.35	2.39	0.00	0.00	0.00
26.20	0.83	0.35	2.39	0.00	0.00	0.00
26.25	0.83	0.35	2.39	0.00	0.00	0.00
26.30	0.83	0.35	2.39	0.00	0.00	0.00
26.35	0.83	0.35	2.39	0.00	0.00	0.00
26.40	0.83	0.35	2.39	0.00	0.00	0.00
26.45	0.83	0.35	2.39	0.00	0.00	0.00
26.50	0.83	0.35	2.39	0.00	0.00	0.00
26.55	0.83	0.35	2.39	0.00	0.00	0.00
26.60	0.83	0.35	2.39	0.00	0.00	0.00
26.65	0.83	0.35	2.39	0.00	0.00	0.00
26.70	0.83	0.35	2.39	0.00	0.00	0.00
26.75	0.83	0.35	2.39	0.00	0.00	0.00

26.80	0.83	0.35	2.39	0.00	0.00	0.00
26.85	0.83	0.35	2.39	0.00	0.00	0.00
26.90	0.83	0.35	2.39	0.00	0.00	0.00
26.95	0.83	0.35	2.39	0.00	0.00	0.00
27.00	0.83	0.35	2.39	0.00	0.00	0.00
27.05	0.83	0.35	2.39	0.00	0.00	0.00
27.10	0.83	0.35	2.39	0.00	0.00	0.00
27.15	0.83	0.35	2.39	0.00	0.00	0.00
27.20	0.83	0.35	2.39	0.00	0.00	0.00
27.25	0.83	0.35	2.39	0.00	0.00	0.00
27.30	0.83	0.35	2.39	0.00	0.00	0.00
27.35	0.83	0.35	2.39	0.00	0.00	0.00
27.40	0.83	0.35	2.39	0.00	0.00	0.00
27.45	0.83	0.35	2.39	0.00	0.00	0.00
27.50	0.83	0.35	2.39	0.00	0.00	0.00
27.55	0.83	0.35	2.39	0.00	0.00	0.00
27.60	0.83	0.35	2.39	0.00	0.00	0.00
27.65	0.83	0.35	2.39	0.00	0.00	0.00
27.70	0.83	0.35	2.39	0.00	0.00	0.00
27.75	0.83	0.35	2.39	0.00	0.00	0.00
27.80	0.83	0.35	2.39	0.00	0.00	0.00
27.85	0.83	0.35	2.40	0.00	0.00	0.00
27.90	0.83	0.35	2.40	0.00	0.00	0.00
27.95	0.83	0.35	2.40	0.00	0.00	0.00
28.00	0.83	0.35	2.40	0.00	0.00	0.00
28.05	0.83	0.35	2.40	0.00	0.00	0.00
28.10	0.83	0.35	2.40	0.00	0.00	0.00
28.15	0.83	0.35	2.40	0.00	0.00	0.00
28.20	0.83	0.35	2.40	0.00	0.00	0.00
28.25	0.83	0.35	2.40	0.00	0.00	0.00
28.30	0.83	0.35	2.40	0.00	0.00	0.00
28.35	0.83	0.35	2.40	0.00	0.00	0.00
28.40	0.83	0.35	2.40	0.00	0.00	0.00
28.45	0.83	0.35	2.40	0.00	0.00	0.00
28.50	0.83	0.35	2.40	0.00	0.00	0.00
28.55	0.83	0.35	2.40	0.00	0.00	0.00
28.60	0.83	0.35	2.40	0.00	0.00	0.00
28.65	0.83	0.35	2.40	0.00	0.00	0.00
28.70	0.83	0.35	2.40	0.00	0.00	0.00
28.75	0.83	0.35	2.40	0.00	0.00	0.00
28.80	0.83	0.35	2.40	0.00	0.00	0.00
28.85	0.83	0.35	2.40	0.00	0.00	0.00
28.90	0.83	0.35	2.40	0.00	0.00	0.00
28.95	0.83	0.35	2.40	0.00	0.00	0.00
29.00	0.83	0.35	2.40	0.00	0.00	0.00
29.05	0.83	0.35	2.40	0.00	0.00	0.00
29.10	0.83	0.35	2.40	0.00	0.00	0.00
29.15	0.83	0.35	2.40	0.00	0.00	0.00
29.20	0.83	0.35	2.40	0.00	0.00	0.00
29.25	0.83	0.35	2.40	0.00	0.00	0.00
29.30	0.83	0.35	2.40	0.00	0.00	0.00
29.35	0.83	0.35	2.40	0.00	0.00	0.00
29.40	0.83	0.35	2.40	0.00	0.00	0.00
29.45	0.83	0.35	2.40	0.00	0.00	0.00
29.50	0.83	0.35	2.40	0.00	0.00	0.00
29.55	0.83	0.35	2.40	0.00	0.00	0.00
29.60	0.83	0.35	2.40	0.00	0.00	0.00
29.65	0.83	0.35	2.40	0.00	0.00	0.00
29.70	0.83	0.35	2.40	0.00	0.00	0.00
29.75	0.83	0.35	2.40	0.00	0.00	0.00
29.80	0.83	0.35	2.40	0.00	0.00	0.00
29.85	0.83	0.35	2.40	0.00	0.00	0.00
29.90	0.83	0.35	2.40	0.00	0.00	0.00
29.95	0.83	0.35	2.40	0.00	0.00	0.00
30.00	0.83	0.35	2.40	0.00	0.00	0.00
30.05	0.83	0.35	2.40	0.00	0.00	0.00
30.10	0.83	0.35	2.40	0.00	0.00	0.00
30.15	0.83	0.35	2.41	0.00	0.00	0.00
30.20	0.83	0.35	2.41	0.00	0.00	0.00
30.25	0.83	0.34	2.41	0.00	0.00	0.00
30.30	0.83	0.34	2.41	0.00	0.00	0.00

30.35	0.83	0.34	2.41	0.00	0.00	0.00
30.40	0.83	0.34	2.41	0.00	0.00	0.00
30.45	0.83	0.34	2.41	0.00	0.00	0.00
30.50	0.83	0.34	2.41	0.00	0.00	0.00
30.55	0.83	0.34	2.41	0.00	0.00	0.00
30.60	0.83	0.34	2.42	0.00	0.00	0.00
30.65	0.83	0.34	2.42	0.00	0.00	0.00
30.70	0.83	0.34	2.42	0.00	0.00	0.00
30.75	0.83	0.34	2.42	0.00	0.00	0.00
30.80	0.83	0.34	2.42	0.00	0.00	0.00
30.85	0.83	0.34	2.42	0.00	0.00	0.00
30.90	0.83	0.34	2.42	0.00	0.00	0.00
30.95	0.83	0.34	2.42	0.00	0.00	0.00
31.00	0.83	0.34	2.43	0.00	0.00	0.00
31.05	0.83	0.34	2.43	0.00	0.00	0.00
31.10	0.83	0.34	2.43	0.00	0.00	0.00
31.15	0.83	0.34	2.43	0.00	0.00	0.00
31.20	0.83	0.34	2.43	0.00	0.00	0.00
31.25	0.83	0.34	2.43	0.00	0.00	0.00
31.30	0.83	0.34	2.43	0.00	0.00	0.00
31.35	0.83	0.34	2.43	0.00	0.00	0.00
31.40	0.83	0.34	2.43	0.00	0.00	0.00
31.45	0.83	0.34	2.44	0.00	0.00	0.00
31.50	0.83	0.34	2.44	0.00	0.00	0.00
31.55	0.83	0.34	2.44	0.00	0.00	0.00
31.60	0.83	0.34	2.44	0.00	0.00	0.00
31.65	0.83	0.34	2.44	0.00	0.00	0.00
31.70	0.83	0.34	2.44	0.00	0.00	0.00
31.75	0.83	0.34	2.44	0.00	0.00	0.00
31.80	0.83	0.34	2.44	0.00	0.00	0.00
31.85	0.83	0.34	2.45	0.00	0.00	0.00
31.90	0.83	0.34	2.45	0.00	0.00	0.00
31.95	0.83	0.34	2.45	0.00	0.00	0.00
32.00	0.83	0.34	2.45	0.00	0.00	0.00
32.05	0.83	0.34	2.45	0.00	0.00	0.00
32.10	0.83	0.34	2.45	0.00	0.00	0.00
32.15	0.83	0.34	2.45	0.00	0.00	0.00
32.20	0.83	0.34	2.45	0.00	0.00	0.00
32.25	0.83	0.34	2.45	0.00	0.00	0.00
32.30	0.83	0.34	2.46	0.00	0.00	0.00
32.35	0.83	0.34	2.46	0.00	0.00	0.00
32.40	0.83	0.34	2.46	0.00	0.00	0.00
32.45	0.83	0.34	2.46	0.00	0.00	0.00
32.50	0.83	0.34	2.46	0.00	0.00	0.00
32.55	0.83	0.34	2.46	0.00	0.00	0.00
32.60	0.83	0.34	2.46	0.00	0.00	0.00
32.65	0.83	0.34	2.46	0.00	0.00	0.00
32.70	0.83	0.34	2.47	0.00	0.00	0.00
32.75	0.83	0.34	2.47	0.00	0.00	0.00
32.80	0.83	0.34	2.47	0.00	0.00	0.00
32.85	0.83	0.34	2.47	0.00	0.00	0.00
32.90	0.83	0.34	2.47	0.00	0.00	0.00
32.95	0.83	0.34	2.47	0.00	0.00	0.00
33.00	0.83	0.34	2.47	0.00	0.00	0.00
33.05	0.83	0.34	2.47	0.00	0.00	0.00
33.10	0.83	0.34	2.47	0.00	0.00	0.00
33.15	0.83	0.34	2.48	0.00	0.00	0.00
33.20	0.83	0.34	2.48	0.00	0.00	0.00
33.25	0.83	0.34	2.48	0.00	0.00	0.00
33.30	0.83	0.34	2.48	0.00	0.00	0.00
33.35	0.83	0.33	2.48	0.00	0.00	0.00
33.40	0.83	0.33	2.48	0.00	0.00	0.00
33.45	0.83	0.33	2.48	0.00	0.00	0.00
33.50	0.83	0.33	2.48	0.00	0.00	0.00
33.55	0.83	0.33	2.49	0.00	0.00	0.00
33.60	0.83	0.33	2.49	0.00	0.00	0.00
33.65	0.83	0.33	2.49	0.00	0.00	0.00
33.70	0.83	0.33	2.49	0.00	0.00	0.00
33.75	0.83	0.33	2.49	0.00	0.00	0.00
33.80	0.83	0.33	2.49	0.00	0.00	0.00
33.85	0.83	0.33	2.49	0.00	0.00	0.00

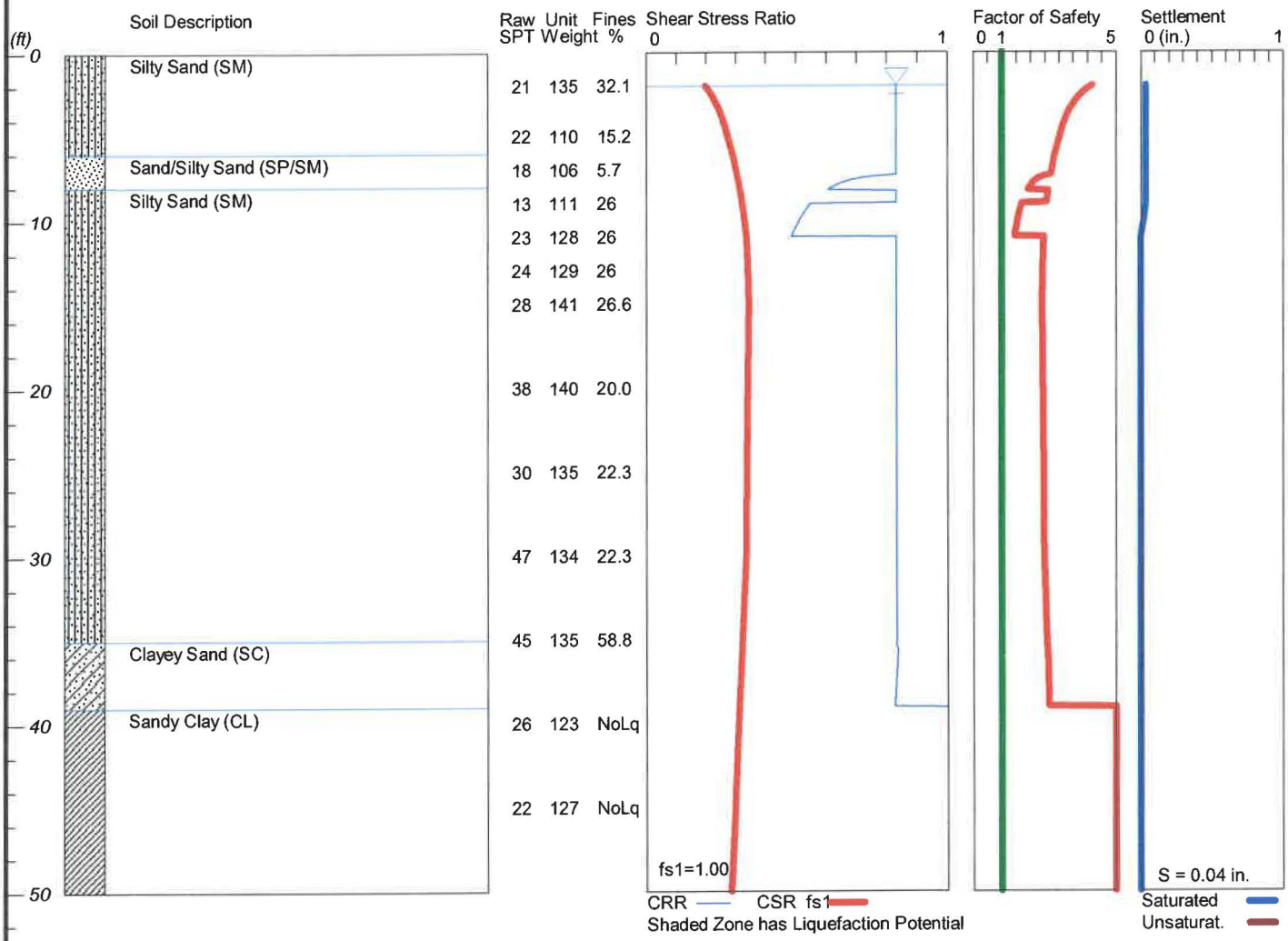
33.90	0.83	0.33	2.49	0.00	0.00	0.00
33.95	0.83	0.33	2.49	0.00	0.00	0.00
34.00	0.83	0.33	2.50	0.00	0.00	0.00
34.05	0.83	0.33	2.50	0.00	0.00	0.00
34.10	0.83	0.33	2.50	0.00	0.00	0.00
34.15	0.83	0.33	2.50	0.00	0.00	0.00
34.20	0.83	0.33	2.50	0.00	0.00	0.00
34.25	0.83	0.33	2.50	0.00	0.00	0.00
34.30	0.83	0.33	2.50	0.00	0.00	0.00
34.35	0.83	0.33	2.50	0.00	0.00	0.00
34.40	0.83	0.33	2.51	0.00	0.00	0.00
34.45	0.83	0.33	2.51	0.00	0.00	0.00
34.50	0.83	0.33	2.51	0.00	0.00	0.00
34.55	0.83	0.33	2.51	0.00	0.00	0.00
34.60	0.83	0.33	2.51	0.00	0.00	0.00
34.65	0.83	0.33	2.51	0.00	0.00	0.00
34.70	0.83	0.33	2.51	0.00	0.00	0.00
34.75	0.83	0.33	2.51	0.00	0.00	0.00
34.80	0.83	0.33	2.52	0.00	0.00	0.00
34.85	0.83	0.33	2.52	0.00	0.00	0.00
34.90	0.83	0.33	2.52	0.00	0.00	0.00
34.95	0.83	0.33	2.52	0.00	0.00	0.00
35.00	0.83	0.33	2.52	0.00	0.00	0.00
35.05	0.83	0.33	2.52	0.00	0.00	0.00
35.10	0.83	0.33	2.52	0.00	0.00	0.00
35.15	0.83	0.33	2.52	0.00	0.00	0.00
35.20	0.83	0.33	2.52	0.00	0.00	0.00
35.25	0.83	0.33	2.53	0.00	0.00	0.00
35.30	0.83	0.33	2.53	0.00	0.00	0.00
35.35	0.83	0.33	2.53	0.00	0.00	0.00
35.40	0.83	0.33	2.53	0.00	0.00	0.00
35.45	0.83	0.33	2.53	0.00	0.00	0.00
35.50	0.83	0.33	2.53	0.00	0.00	0.00
35.55	0.83	0.33	2.53	0.00	0.00	0.00
35.60	0.83	0.33	2.53	0.00	0.00	0.00
35.65	0.83	0.33	2.53	0.00	0.00	0.00
35.70	0.83	0.33	2.53	0.00	0.00	0.00
35.75	0.83	0.33	2.54	0.00	0.00	0.00
35.80	0.83	0.33	2.54	0.00	0.00	0.00
35.85	0.83	0.33	2.54	0.00	0.00	0.00
35.90	0.83	0.33	2.54	0.00	0.00	0.00
35.95	0.83	0.33	2.54	0.00	0.00	0.00
36.00	0.83	0.33	2.54	0.00	0.00	0.00
36.05	0.83	0.33	2.54	0.00	0.00	0.00
36.10	0.83	0.33	2.54	0.00	0.00	0.00
36.15	0.83	0.33	2.54	0.00	0.00	0.00
36.20	0.83	0.33	2.54	0.00	0.00	0.00
36.25	0.83	0.33	2.54	0.00	0.00	0.00
36.30	0.83	0.33	2.55	0.00	0.00	0.00
36.35	0.83	0.33	2.55	0.00	0.00	0.00
36.40	0.83	0.33	2.55	0.00	0.00	0.00
36.45	0.83	0.33	2.55	0.00	0.00	0.00
36.50	0.83	0.33	2.55	0.00	0.00	0.00
36.55	0.83	0.33	2.55	0.00	0.00	0.00
36.60	0.83	0.33	2.55	0.00	0.00	0.00
36.65	0.83	0.33	2.55	0.00	0.00	0.00
36.70	0.83	0.33	2.55	0.00	0.00	0.00
36.75	0.83	0.33	2.55	0.00	0.00	0.00
36.80	0.83	0.33	2.56	0.00	0.00	0.00
36.85	0.83	0.32	2.56	0.00	0.00	0.00
36.90	0.83	0.32	2.56	0.00	0.00	0.00
36.95	0.83	0.32	2.56	0.00	0.00	0.00
37.00	0.83	0.32	2.56	0.00	0.00	0.00
37.05	0.83	0.32	2.56	0.00	0.00	0.00
37.10	0.83	0.32	2.56	0.00	0.00	0.00
37.15	0.83	0.32	2.56	0.00	0.00	0.00
37.20	0.83	0.32	2.56	0.00	0.00	0.00
37.25	0.83	0.32	2.57	0.00	0.00	0.00
37.30	0.83	0.32	2.57	0.00	0.00	0.00
37.35	0.83	0.32	2.57	0.00	0.00	0.00
37.40	0.83	0.32	2.57	0.00	0.00	0.00

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B14 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B14\B14 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-22165

Surface Elev.=
Hole No.=B14
Depth of Hole= 50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 13.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B14
Depth of Hole=50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 13.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.4
7. Borehole Diameter, Cb= 1.05
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	21.00	135.00	32.10
5.00	22.00	110.00	15.20
7.00	18.00	106.00	5.70
9.00	13.00	111.00	26.00
11.00	23.00	128.00	26.00
13.00	24.00	129.00	26.00
15.00	28.00	141.00	26.60
20.00	38.00	140.00	20.00
25.00	30.00	135.00	22.30
30.00	47.00	134.00	22.30
35.00	45.00	135.00	58.80
40.00	26.00	123.00	NoLiq
45.00	22.00	127.00	NoLiq

Output Results:
Settlement of Saturated Sands=0.04 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.04 in.
Differential Settlement=0.018 to 0.024 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

2.00	0.83	0.20	4.18	0.04	0.00	0.04
2.05	0.83	0.20	4.14	0.04	0.00	0.04
2.10	0.83	0.20	4.09	0.04	0.00	0.04
2.15	0.83	0.21	4.05	0.04	0.00	0.04
2.20	0.83	0.21	4.01	0.04	0.00	0.04
2.25	0.83	0.21	3.97	0.04	0.00	0.04
2.30	0.83	0.21	3.93	0.04	0.00	0.04
2.35	0.83	0.21	3.90	0.04	0.00	0.04
2.40	0.83	0.21	3.86	0.04	0.00	0.04
2.45	0.83	0.22	3.83	0.04	0.00	0.04
2.50	0.83	0.22	3.80	0.04	0.00	0.04
2.55	0.83	0.22	3.77	0.04	0.00	0.04
2.60	0.83	0.22	3.74	0.04	0.00	0.04
2.65	0.83	0.22	3.71	0.04	0.00	0.04
2.70	0.83	0.23	3.69	0.04	0.00	0.04
2.75	0.83	0.23	3.66	0.04	0.00	0.04
2.80	0.83	0.23	3.64	0.04	0.00	0.04
2.85	0.83	0.23	3.61	0.04	0.00	0.04
2.90	0.83	0.23	3.59	0.04	0.00	0.04
2.95	0.83	0.23	3.57	0.04	0.00	0.04
3.00	0.83	0.23	3.55	0.04	0.00	0.04
3.05	0.83	0.24	3.53	0.04	0.00	0.04
3.10	0.83	0.24	3.51	0.04	0.00	0.04
3.15	0.83	0.24	3.49	0.04	0.00	0.04
3.20	0.83	0.24	3.47	0.04	0.00	0.04
3.25	0.83	0.24	3.45	0.04	0.00	0.04
3.30	0.83	0.24	3.43	0.04	0.00	0.04
3.35	0.83	0.24	3.41	0.04	0.00	0.04
3.40	0.83	0.24	3.40	0.04	0.00	0.04
3.45	0.83	0.25	3.38	0.04	0.00	0.04
3.50	0.83	0.25	3.37	0.04	0.00	0.04
3.55	0.83	0.25	3.35	0.04	0.00	0.04
3.60	0.83	0.25	3.34	0.04	0.00	0.04
3.65	0.83	0.25	3.32	0.04	0.00	0.04
3.70	0.83	0.25	3.31	0.04	0.00	0.04
3.75	0.83	0.25	3.29	0.04	0.00	0.04
3.80	0.83	0.25	3.28	0.04	0.00	0.04
3.85	0.83	0.25	3.27	0.04	0.00	0.04
3.90	0.83	0.26	3.26	0.04	0.00	0.04
3.95	0.83	0.26	3.24	0.04	0.00	0.04
4.00	0.83	0.26	3.23	0.04	0.00	0.04
4.05	0.83	0.26	3.22	0.04	0.00	0.04
4.10	0.83	0.26	3.21	0.04	0.00	0.04
4.15	0.83	0.26	3.20	0.04	0.00	0.04
4.20	0.83	0.26	3.19	0.04	0.00	0.04
4.25	0.83	0.26	3.18	0.04	0.00	0.04
4.30	0.83	0.26	3.17	0.04	0.00	0.04
4.35	0.83	0.26	3.16	0.04	0.00	0.04
4.40	0.83	0.26	3.15	0.04	0.00	0.04
4.45	0.83	0.26	3.14	0.04	0.00	0.04
4.50	0.83	0.27	3.13	0.04	0.00	0.04
4.55	0.83	0.27	3.12	0.04	0.00	0.04
4.60	0.83	0.27	3.11	0.04	0.00	0.04
4.65	0.83	0.27	3.10	0.04	0.00	0.04
4.70	0.83	0.27	3.09	0.04	0.00	0.04
4.75	0.83	0.27	3.08	0.04	0.00	0.04
4.80	0.83	0.27	3.07	0.04	0.00	0.04
4.85	0.83	0.27	3.07	0.04	0.00	0.04
4.90	0.83	0.27	3.06	0.04	0.00	0.04
4.95	0.83	0.27	3.05	0.04	0.00	0.04
5.00	0.83	0.27	3.04	0.04	0.00	0.04
5.05	0.83	0.27	3.03	0.04	0.00	0.04
5.10	0.83	0.27	3.03	0.04	0.00	0.04
5.15	0.83	0.28	3.02	0.04	0.00	0.04
5.20	0.83	0.28	3.01	0.04	0.00	0.04
5.25	0.83	0.28	3.00	0.04	0.00	0.04
5.30	0.83	0.28	2.99	0.04	0.00	0.04
5.35	0.83	0.28	2.98	0.04	0.00	0.04
5.40	0.83	0.28	2.97	0.04	0.00	0.04
5.45	0.83	0.28	2.96	0.04	0.00	0.04

5.50	0.83	0.28	2.96	0.04	0.00	0.04
5.55	0.83	0.28	2.95	0.04	0.00	0.04
5.60	0.83	0.28	2.94	0.04	0.00	0.04
5.65	0.83	0.28	2.93	0.04	0.00	0.04
5.70	0.83	0.28	2.92	0.04	0.00	0.04
5.75	0.83	0.28	2.92	0.04	0.00	0.04
5.80	0.83	0.29	2.91	0.04	0.00	0.04
5.85	0.83	0.29	2.90	0.04	0.00	0.04
5.90	0.83	0.29	2.89	0.04	0.00	0.04
5.95	0.83	0.29	2.89	0.04	0.00	0.04
6.00	0.83	0.29	2.88	0.04	0.00	0.04
6.05	0.83	0.29	2.87	0.04	0.00	0.04
6.10	0.83	0.29	2.87	0.04	0.00	0.04
6.15	0.83	0.29	2.86	0.04	0.00	0.04
6.20	0.83	0.29	2.85	0.04	0.00	0.04
6.25	0.83	0.29	2.85	0.04	0.00	0.04
6.30	0.83	0.29	2.84	0.04	0.00	0.04
6.35	0.83	0.29	2.83	0.04	0.00	0.04
6.40	0.83	0.29	2.83	0.04	0.00	0.04
6.45	0.83	0.29	2.82	0.04	0.00	0.04
6.50	0.83	0.30	2.81	0.04	0.00	0.04
6.55	0.83	0.30	2.81	0.04	0.00	0.04
6.60	0.83	0.30	2.80	0.04	0.00	0.04
6.65	0.83	0.30	2.80	0.04	0.00	0.04
6.70	0.83	0.30	2.79	0.04	0.00	0.04
6.75	0.83	0.30	2.78	0.04	0.00	0.04
6.80	0.83	0.30	2.78	0.04	0.00	0.04
6.85	0.83	0.30	2.77	0.04	0.00	0.04
6.90	0.83	0.30	2.77	0.04	0.00	0.04
6.95	0.83	0.30	2.76	0.04	0.00	0.04
7.00	0.83	0.30	2.76	0.04	0.00	0.04
7.05	0.83	0.30	2.75	0.04	0.00	0.04
7.10	0.83	0.30	2.75	0.04	0.00	0.04
7.15	0.83	0.30	2.74	0.04	0.00	0.04
7.20	0.83	0.30	2.73	0.04	0.00	0.04
7.25	0.83	0.30	2.73	0.04	0.00	0.04
7.30	0.83	0.30	2.72	0.04	0.00	0.04
7.35	0.79	0.31	2.60	0.04	0.00	0.04
7.40	0.76	0.31	2.47	0.04	0.00	0.04
7.45	0.73	0.31	2.38	0.04	0.00	0.04
7.50	0.71	0.31	2.32	0.04	0.00	0.04
7.55	0.70	0.31	2.26	0.04	0.00	0.04
7.60	0.68	0.31	2.22	0.04	0.00	0.04
7.65	0.67	0.31	2.18	0.04	0.00	0.04
7.70	0.66	0.31	2.15	0.04	0.00	0.04
7.75	0.66	0.31	2.11	0.04	0.00	0.04
7.80	0.65	0.31	2.09	0.04	0.00	0.04
7.85	0.64	0.31	2.06	0.04	0.00	0.04
7.90	0.64	0.31	2.04	0.04	0.00	0.04
7.95	0.63	0.31	2.02	0.04	0.00	0.04
8.00	0.62	0.31	2.00	0.04	0.00	0.04
8.05	0.62	0.31	1.98	0.04	0.00	0.04
8.10	0.61	0.31	1.96	0.04	0.00	0.04
8.15	0.61	0.31	1.94	0.04	0.00	0.04
8.20	0.61	0.31	1.92	0.04	0.00	0.04
8.25	0.83	0.32	2.63	0.04	0.00	0.04
8.30	0.83	0.32	2.63	0.04	0.00	0.04
8.35	0.83	0.32	2.63	0.04	0.00	0.04
8.40	0.83	0.32	2.62	0.04	0.00	0.04
8.45	0.83	0.32	2.62	0.04	0.00	0.04
8.50	0.83	0.32	2.61	0.04	0.00	0.04
8.55	0.83	0.32	2.61	0.04	0.00	0.04
8.60	0.83	0.32	2.60	0.04	0.00	0.04
8.65	0.83	0.32	2.60	0.04	0.00	0.04
8.70	0.83	0.32	2.60	0.04	0.00	0.04
8.75	0.83	0.32	2.59	0.04	0.00	0.04
8.80	0.83	0.32	2.59	0.04	0.00	0.04
8.85	0.83	0.32	2.59	0.04	0.00	0.04
8.90	0.83	0.32	2.58	0.04	0.00	0.04
8.95	0.83	0.32	2.58	0.04	0.00	0.04
9.00	0.55	0.32	1.70	0.04	0.00	0.04

9.05	0.55	0.32	1.69	0.04	0.00	0.04
9.10	0.54	0.32	1.68	0.03	0.00	0.03
9.15	0.54	0.32	1.68	0.03	0.00	0.03
9.20	0.54	0.32	1.67	0.03	0.00	0.03
9.25	0.54	0.32	1.66	0.03	0.00	0.03
9.30	0.54	0.33	1.65	0.03	0.00	0.03
9.35	0.53	0.33	1.64	0.03	0.00	0.03
9.40	0.53	0.33	1.64	0.03	0.00	0.03
9.45	0.53	0.33	1.63	0.03	0.00	0.03
9.50	0.53	0.33	1.62	0.03	0.00	0.03
9.55	0.53	0.33	1.61	0.03	0.00	0.03
9.60	0.53	0.33	1.61	0.03	0.00	0.03
9.65	0.52	0.33	1.60	0.03	0.00	0.03
9.70	0.52	0.33	1.59	0.03	0.00	0.03
9.75	0.52	0.33	1.58	0.03	0.00	0.03
9.80	0.52	0.33	1.58	0.02	0.00	0.02
9.85	0.52	0.33	1.57	0.02	0.00	0.02
9.90	0.52	0.33	1.56	0.02	0.00	0.02
9.95	0.51	0.33	1.56	0.02	0.00	0.02
10.00	0.51	0.33	1.55	0.02	0.00	0.02
10.05	0.51	0.33	1.54	0.02	0.00	0.02
10.10	0.51	0.33	1.54	0.02	0.00	0.02
10.15	0.51	0.33	1.53	0.02	0.00	0.02
10.20	0.51	0.33	1.53	0.02	0.00	0.02
10.25	0.50	0.33	1.52	0.02	0.00	0.02
10.30	0.50	0.33	1.51	0.02	0.00	0.02
10.35	0.50	0.33	1.51	0.01	0.00	0.01
10.40	0.50	0.33	1.50	0.01	0.00	0.01
10.45	0.50	0.33	1.50	0.01	0.00	0.01
10.50	0.50	0.33	1.49	0.01	0.00	0.01
10.55	0.50	0.33	1.49	0.01	0.00	0.01
10.60	0.49	0.33	1.48	0.01	0.00	0.01
10.65	0.49	0.33	1.47	0.01	0.00	0.01
10.70	0.49	0.33	1.47	0.01	0.00	0.01
10.75	0.49	0.34	1.46	0.01	0.00	0.01
10.80	0.49	0.34	1.46	0.00	0.00	0.00
10.85	0.49	0.34	1.45	0.00	0.00	0.00
10.90	0.49	0.34	1.45	0.00	0.00	0.00
10.95	0.49	0.34	1.44	0.00	0.00	0.00
11.00	0.83	0.34	2.47	0.00	0.00	0.00
11.05	0.83	0.34	2.47	0.00	0.00	0.00
11.10	0.83	0.34	2.46	0.00	0.00	0.00
11.15	0.83	0.34	2.46	0.00	0.00	0.00
11.20	0.83	0.34	2.46	0.00	0.00	0.00
11.25	0.83	0.34	2.46	0.00	0.00	0.00
11.30	0.83	0.34	2.46	0.00	0.00	0.00
11.35	0.83	0.34	2.46	0.00	0.00	0.00
11.40	0.83	0.34	2.46	0.00	0.00	0.00
11.45	0.83	0.34	2.46	0.00	0.00	0.00
11.50	0.83	0.34	2.46	0.00	0.00	0.00
11.55	0.83	0.34	2.46	0.00	0.00	0.00
11.60	0.83	0.34	2.46	0.00	0.00	0.00
11.65	0.83	0.34	2.45	0.00	0.00	0.00
11.70	0.83	0.34	2.45	0.00	0.00	0.00
11.75	0.83	0.34	2.45	0.00	0.00	0.00
11.80	0.83	0.34	2.45	0.00	0.00	0.00
11.85	0.83	0.34	2.45	0.00	0.00	0.00
11.90	0.83	0.34	2.45	0.00	0.00	0.00
11.95	0.83	0.34	2.45	0.00	0.00	0.00
12.00	0.83	0.34	2.45	0.00	0.00	0.00
12.05	0.83	0.34	2.45	0.00	0.00	0.00
12.10	0.83	0.34	2.45	0.00	0.00	0.00
12.15	0.83	0.34	2.45	0.00	0.00	0.00
12.20	0.83	0.34	2.45	0.00	0.00	0.00
12.25	0.83	0.34	2.44	0.00	0.00	0.00
12.30	0.83	0.34	2.44	0.00	0.00	0.00
12.35	0.83	0.34	2.44	0.00	0.00	0.00
12.40	0.83	0.34	2.44	0.00	0.00	0.00
12.45	0.83	0.34	2.44	0.00	0.00	0.00
12.50	0.83	0.34	2.44	0.00	0.00	0.00
12.55	0.83	0.34	2.44	0.00	0.00	0.00

12.60	0.83	0.34	2.44	0.00	0.00	0.00
12.65	0.83	0.34	2.44	0.00	0.00	0.00
12.70	0.83	0.34	2.44	0.00	0.00	0.00
12.75	0.83	0.34	2.44	0.00	0.00	0.00
12.80	0.83	0.34	2.44	0.00	0.00	0.00
12.85	0.83	0.34	2.44	0.00	0.00	0.00
12.90	0.83	0.34	2.44	0.00	0.00	0.00
12.95	0.83	0.34	2.43	0.00	0.00	0.00
13.00	0.83	0.34	2.43	0.00	0.00	0.00
13.05	0.83	0.34	2.43	0.00	0.00	0.00
13.10	0.83	0.34	2.43	0.00	0.00	0.00
13.15	0.83	0.34	2.43	0.00	0.00	0.00
13.20	0.83	0.34	2.43	0.00	0.00	0.00
13.25	0.83	0.34	2.43	0.00	0.00	0.00
13.30	0.83	0.34	2.43	0.00	0.00	0.00
13.35	0.83	0.34	2.43	0.00	0.00	0.00
13.40	0.83	0.34	2.43	0.00	0.00	0.00
13.45	0.83	0.34	2.43	0.00	0.00	0.00
13.50	0.83	0.34	2.43	0.00	0.00	0.00
13.55	0.83	0.34	2.43	0.00	0.00	0.00
13.60	0.83	0.34	2.43	0.00	0.00	0.00
13.65	0.83	0.34	2.43	0.00	0.00	0.00
13.70	0.83	0.34	2.43	0.00	0.00	0.00
13.75	0.83	0.34	2.43	0.00	0.00	0.00
13.80	0.83	0.34	2.43	0.00	0.00	0.00
13.85	0.83	0.34	2.42	0.00	0.00	0.00
13.90	0.83	0.34	2.42	0.00	0.00	0.00
13.95	0.83	0.34	2.42	0.00	0.00	0.00
14.00	0.83	0.34	2.42	0.00	0.00	0.00
14.05	0.83	0.34	2.42	0.00	0.00	0.00
14.10	0.83	0.34	2.42	0.00	0.00	0.00
14.15	0.83	0.34	2.42	0.00	0.00	0.00
14.20	0.83	0.34	2.42	0.00	0.00	0.00
14.25	0.83	0.34	2.42	0.00	0.00	0.00
14.30	0.83	0.34	2.42	0.00	0.00	0.00
14.35	0.83	0.34	2.42	0.00	0.00	0.00
14.40	0.83	0.34	2.42	0.00	0.00	0.00
14.45	0.83	0.34	2.42	0.00	0.00	0.00
14.50	0.83	0.34	2.42	0.00	0.00	0.00
14.55	0.83	0.34	2.42	0.00	0.00	0.00
14.60	0.83	0.34	2.42	0.00	0.00	0.00
14.65	0.83	0.34	2.42	0.00	0.00	0.00
14.70	0.83	0.34	2.42	0.00	0.00	0.00
14.75	0.83	0.34	2.42	0.00	0.00	0.00
14.80	0.83	0.34	2.42	0.00	0.00	0.00
14.85	0.83	0.34	2.42	0.00	0.00	0.00
14.90	0.83	0.34	2.42	0.00	0.00	0.00
14.95	0.83	0.34	2.42	0.00	0.00	0.00
15.00	0.83	0.34	2.42	0.00	0.00	0.00
15.05	0.83	0.34	2.42	0.00	0.00	0.00
15.10	0.83	0.34	2.42	0.00	0.00	0.00
15.15	0.83	0.34	2.42	0.00	0.00	0.00
15.20	0.83	0.34	2.42	0.00	0.00	0.00
15.25	0.83	0.34	2.42	0.00	0.00	0.00
15.30	0.83	0.34	2.42	0.00	0.00	0.00
15.35	0.83	0.34	2.42	0.00	0.00	0.00
15.40	0.83	0.34	2.42	0.00	0.00	0.00
15.45	0.83	0.34	2.42	0.00	0.00	0.00
15.50	0.83	0.34	2.42	0.00	0.00	0.00
15.55	0.83	0.34	2.42	0.00	0.00	0.00
15.60	0.83	0.34	2.42	0.00	0.00	0.00
15.65	0.83	0.34	2.42	0.00	0.00	0.00
15.70	0.83	0.34	2.42	0.00	0.00	0.00
15.75	0.83	0.34	2.42	0.00	0.00	0.00
15.80	0.83	0.34	2.42	0.00	0.00	0.00
15.85	0.83	0.34	2.42	0.00	0.00	0.00
15.90	0.83	0.34	2.42	0.00	0.00	0.00
15.95	0.83	0.34	2.42	0.00	0.00	0.00
16.00	0.83	0.34	2.42	0.00	0.00	0.00
16.05	0.83	0.34	2.42	0.00	0.00	0.00
16.10	0.83	0.34	2.42	0.00	0.00	0.00

16.15	0.83	0.34	2.42	0.00	0.00	0.00
16.20	0.83	0.34	2.42	0.00	0.00	0.00
16.25	0.83	0.34	2.42	0.00	0.00	0.00
16.30	0.83	0.34	2.42	0.00	0.00	0.00
16.35	0.83	0.34	2.42	0.00	0.00	0.00
16.40	0.83	0.34	2.42	0.00	0.00	0.00
16.45	0.83	0.34	2.42	0.00	0.00	0.00
16.50	0.83	0.34	2.42	0.00	0.00	0.00
16.55	0.83	0.34	2.42	0.00	0.00	0.00
16.60	0.83	0.34	2.42	0.00	0.00	0.00
16.65	0.83	0.34	2.42	0.00	0.00	0.00
16.70	0.83	0.34	2.42	0.00	0.00	0.00
16.75	0.83	0.34	2.42	0.00	0.00	0.00
16.80	0.83	0.34	2.42	0.00	0.00	0.00
16.85	0.83	0.34	2.42	0.00	0.00	0.00
16.90	0.83	0.34	2.42	0.00	0.00	0.00
16.95	0.83	0.34	2.43	0.00	0.00	0.00
17.00	0.83	0.34	2.43	0.00	0.00	0.00
17.05	0.83	0.34	2.43	0.00	0.00	0.00
17.10	0.83	0.34	2.43	0.00	0.00	0.00
17.15	0.83	0.34	2.43	0.00	0.00	0.00
17.20	0.83	0.34	2.43	0.00	0.00	0.00
17.25	0.83	0.34	2.43	0.00	0.00	0.00
17.30	0.83	0.34	2.43	0.00	0.00	0.00
17.35	0.83	0.34	2.43	0.00	0.00	0.00
17.40	0.83	0.34	2.43	0.00	0.00	0.00
17.45	0.83	0.34	2.43	0.00	0.00	0.00
17.50	0.83	0.34	2.43	0.00	0.00	0.00
17.55	0.83	0.34	2.43	0.00	0.00	0.00
17.60	0.83	0.34	2.43	0.00	0.00	0.00
17.65	0.83	0.34	2.43	0.00	0.00	0.00
17.70	0.83	0.34	2.43	0.00	0.00	0.00
17.75	0.83	0.34	2.43	0.00	0.00	0.00
17.80	0.83	0.34	2.43	0.00	0.00	0.00
17.85	0.83	0.34	2.43	0.00	0.00	0.00
17.90	0.83	0.34	2.43	0.00	0.00	0.00
17.95	0.83	0.34	2.43	0.00	0.00	0.00
18.00	0.83	0.34	2.43	0.00	0.00	0.00
18.05	0.83	0.34	2.43	0.00	0.00	0.00
18.10	0.83	0.34	2.43	0.00	0.00	0.00
18.15	0.83	0.34	2.43	0.00	0.00	0.00
18.20	0.83	0.34	2.43	0.00	0.00	0.00
18.25	0.83	0.34	2.43	0.00	0.00	0.00
18.30	0.83	0.34	2.43	0.00	0.00	0.00
18.35	0.83	0.34	2.43	0.00	0.00	0.00
18.40	0.83	0.34	2.43	0.00	0.00	0.00
18.45	0.83	0.34	2.43	0.00	0.00	0.00
18.50	0.83	0.34	2.43	0.00	0.00	0.00
18.55	0.83	0.34	2.43	0.00	0.00	0.00
18.60	0.83	0.34	2.43	0.00	0.00	0.00
18.65	0.83	0.34	2.43	0.00	0.00	0.00
18.70	0.83	0.34	2.43	0.00	0.00	0.00
18.75	0.83	0.34	2.43	0.00	0.00	0.00
18.80	0.83	0.34	2.44	0.00	0.00	0.00
18.85	0.83	0.34	2.44	0.00	0.00	0.00
18.90	0.83	0.34	2.44	0.00	0.00	0.00
18.95	0.83	0.34	2.44	0.00	0.00	0.00
19.00	0.83	0.34	2.44	0.00	0.00	0.00
19.05	0.83	0.34	2.44	0.00	0.00	0.00
19.10	0.83	0.34	2.44	0.00	0.00	0.00
19.15	0.83	0.34	2.44	0.00	0.00	0.00
19.20	0.83	0.34	2.44	0.00	0.00	0.00
19.25	0.83	0.34	2.44	0.00	0.00	0.00
19.30	0.83	0.34	2.44	0.00	0.00	0.00
19.35	0.83	0.34	2.44	0.00	0.00	0.00
19.40	0.83	0.34	2.44	0.00	0.00	0.00
19.45	0.83	0.34	2.44	0.00	0.00	0.00
19.50	0.83	0.34	2.44	0.00	0.00	0.00
19.55	0.83	0.34	2.44	0.00	0.00	0.00
19.60	0.83	0.34	2.44	0.00	0.00	0.00
19.65	0.83	0.34	2.44	0.00	0.00	0.00

19.70	0.83	0.34	2.44	0.00	0.00	0.00
19.75	0.83	0.34	2.44	0.00	0.00	0.00
19.80	0.83	0.34	2.44	0.00	0.00	0.00
19.85	0.83	0.34	2.44	0.00	0.00	0.00
19.90	0.83	0.34	2.44	0.00	0.00	0.00
19.95	0.83	0.34	2.44	0.00	0.00	0.00
20.00	0.83	0.34	2.44	0.00	0.00	0.00
20.05	0.83	0.34	2.44	0.00	0.00	0.00
20.10	0.83	0.34	2.44	0.00	0.00	0.00
20.15	0.83	0.34	2.44	0.00	0.00	0.00
20.20	0.83	0.34	2.44	0.00	0.00	0.00
20.25	0.83	0.34	2.44	0.00	0.00	0.00
20.30	0.83	0.34	2.44	0.00	0.00	0.00
20.35	0.83	0.34	2.44	0.00	0.00	0.00
20.40	0.83	0.34	2.44	0.00	0.00	0.00
20.45	0.83	0.34	2.44	0.00	0.00	0.00
20.50	0.83	0.34	2.44	0.00	0.00	0.00
20.55	0.83	0.34	2.44	0.00	0.00	0.00
20.60	0.83	0.34	2.44	0.00	0.00	0.00
20.65	0.83	0.34	2.44	0.00	0.00	0.00
20.70	0.83	0.34	2.45	0.00	0.00	0.00
20.75	0.83	0.34	2.45	0.00	0.00	0.00
20.80	0.83	0.34	2.45	0.00	0.00	0.00
20.85	0.83	0.34	2.45	0.00	0.00	0.00
20.90	0.83	0.34	2.45	0.00	0.00	0.00
20.95	0.83	0.34	2.45	0.00	0.00	0.00
21.00	0.83	0.34	2.45	0.00	0.00	0.00
21.05	0.83	0.34	2.45	0.00	0.00	0.00
21.10	0.83	0.34	2.45	0.00	0.00	0.00
21.15	0.83	0.34	2.45	0.00	0.00	0.00
21.20	0.83	0.34	2.45	0.00	0.00	0.00
21.25	0.83	0.34	2.45	0.00	0.00	0.00
21.30	0.83	0.34	2.45	0.00	0.00	0.00
21.35	0.83	0.34	2.45	0.00	0.00	0.00
21.40	0.83	0.34	2.45	0.00	0.00	0.00
21.45	0.83	0.34	2.45	0.00	0.00	0.00
21.50	0.83	0.34	2.45	0.00	0.00	0.00
21.55	0.83	0.34	2.45	0.00	0.00	0.00
21.60	0.83	0.34	2.45	0.00	0.00	0.00
21.65	0.83	0.34	2.45	0.00	0.00	0.00
21.70	0.83	0.34	2.45	0.00	0.00	0.00
21.75	0.83	0.34	2.45	0.00	0.00	0.00
21.80	0.83	0.34	2.45	0.00	0.00	0.00
21.85	0.83	0.34	2.45	0.00	0.00	0.00
21.90	0.83	0.34	2.45	0.00	0.00	0.00
21.95	0.83	0.34	2.45	0.00	0.00	0.00
22.00	0.83	0.34	2.45	0.00	0.00	0.00
22.05	0.83	0.34	2.45	0.00	0.00	0.00
22.10	0.83	0.34	2.45	0.00	0.00	0.00
22.15	0.83	0.34	2.45	0.00	0.00	0.00
22.20	0.83	0.34	2.45	0.00	0.00	0.00
22.25	0.83	0.34	2.45	0.00	0.00	0.00
22.30	0.83	0.34	2.45	0.00	0.00	0.00
22.35	0.83	0.34	2.45	0.00	0.00	0.00
22.40	0.83	0.34	2.45	0.00	0.00	0.00
22.45	0.83	0.34	2.45	0.00	0.00	0.00
22.50	0.83	0.34	2.45	0.00	0.00	0.00
22.55	0.83	0.34	2.45	0.00	0.00	0.00
22.60	0.83	0.34	2.45	0.00	0.00	0.00
22.65	0.83	0.34	2.45	0.00	0.00	0.00
22.70	0.83	0.34	2.46	0.00	0.00	0.00
22.75	0.83	0.34	2.46	0.00	0.00	0.00
22.80	0.83	0.34	2.46	0.00	0.00	0.00
22.85	0.83	0.34	2.46	0.00	0.00	0.00
22.90	0.83	0.34	2.46	0.00	0.00	0.00
22.95	0.83	0.34	2.46	0.00	0.00	0.00
23.00	0.83	0.34	2.46	0.00	0.00	0.00
23.05	0.83	0.34	2.46	0.00	0.00	0.00
23.10	0.83	0.34	2.46	0.00	0.00	0.00
23.15	0.83	0.34	2.46	0.00	0.00	0.00
23.20	0.83	0.34	2.46	0.00	0.00	0.00

23.25	0.83	0.34	2.46	0.00	0.00	0.00
23.30	0.83	0.34	2.46	0.00	0.00	0.00
23.35	0.83	0.34	2.46	0.00	0.00	0.00
23.40	0.83	0.34	2.46	0.00	0.00	0.00
23.45	0.83	0.34	2.46	0.00	0.00	0.00
23.50	0.83	0.34	2.46	0.00	0.00	0.00
23.55	0.83	0.34	2.46	0.00	0.00	0.00
23.60	0.83	0.34	2.46	0.00	0.00	0.00
23.65	0.83	0.34	2.46	0.00	0.00	0.00
23.70	0.83	0.34	2.46	0.00	0.00	0.00
23.75	0.83	0.34	2.46	0.00	0.00	0.00
23.80	0.83	0.34	2.46	0.00	0.00	0.00
23.85	0.83	0.34	2.46	0.00	0.00	0.00
23.90	0.83	0.34	2.46	0.00	0.00	0.00
23.95	0.83	0.34	2.46	0.00	0.00	0.00
24.00	0.83	0.34	2.46	0.00	0.00	0.00
24.05	0.83	0.34	2.46	0.00	0.00	0.00
24.10	0.83	0.34	2.46	0.00	0.00	0.00
24.15	0.83	0.34	2.46	0.00	0.00	0.00
24.20	0.83	0.34	2.46	0.00	0.00	0.00
24.25	0.83	0.34	2.46	0.00	0.00	0.00
24.30	0.83	0.34	2.46	0.00	0.00	0.00
24.35	0.83	0.34	2.46	0.00	0.00	0.00
24.40	0.83	0.34	2.46	0.00	0.00	0.00
24.45	0.83	0.34	2.46	0.00	0.00	0.00
24.50	0.83	0.34	2.46	0.00	0.00	0.00
24.55	0.83	0.34	2.46	0.00	0.00	0.00
24.60	0.83	0.34	2.47	0.00	0.00	0.00
24.65	0.83	0.34	2.47	0.00	0.00	0.00
24.70	0.83	0.34	2.47	0.00	0.00	0.00
24.75	0.83	0.34	2.47	0.00	0.00	0.00
24.80	0.83	0.34	2.47	0.00	0.00	0.00
24.85	0.83	0.34	2.47	0.00	0.00	0.00
24.90	0.83	0.34	2.47	0.00	0.00	0.00
24.95	0.83	0.34	2.47	0.00	0.00	0.00
25.00	0.83	0.34	2.47	0.00	0.00	0.00
25.05	0.83	0.34	2.47	0.00	0.00	0.00
25.10	0.83	0.34	2.47	0.00	0.00	0.00
25.15	0.83	0.34	2.47	0.00	0.00	0.00
25.20	0.83	0.34	2.47	0.00	0.00	0.00
25.25	0.83	0.34	2.47	0.00	0.00	0.00
25.30	0.83	0.34	2.47	0.00	0.00	0.00
25.35	0.83	0.34	2.47	0.00	0.00	0.00
25.40	0.83	0.34	2.47	0.00	0.00	0.00
25.45	0.83	0.34	2.47	0.00	0.00	0.00
25.50	0.83	0.34	2.47	0.00	0.00	0.00
25.55	0.83	0.34	2.47	0.00	0.00	0.00
25.60	0.83	0.34	2.47	0.00	0.00	0.00
25.65	0.83	0.34	2.47	0.00	0.00	0.00
25.70	0.83	0.34	2.47	0.00	0.00	0.00
25.75	0.83	0.34	2.47	0.00	0.00	0.00
25.80	0.83	0.34	2.47	0.00	0.00	0.00
25.85	0.83	0.34	2.47	0.00	0.00	0.00
25.90	0.83	0.34	2.47	0.00	0.00	0.00
25.95	0.83	0.34	2.47	0.00	0.00	0.00
26.00	0.83	0.34	2.47	0.00	0.00	0.00
26.05	0.83	0.34	2.47	0.00	0.00	0.00
26.10	0.83	0.34	2.47	0.00	0.00	0.00
26.15	0.83	0.34	2.47	0.00	0.00	0.00
26.20	0.83	0.34	2.47	0.00	0.00	0.00
26.25	0.83	0.34	2.47	0.00	0.00	0.00
26.30	0.83	0.34	2.47	0.00	0.00	0.00
26.35	0.83	0.34	2.47	0.00	0.00	0.00
26.40	0.83	0.34	2.47	0.00	0.00	0.00
26.45	0.83	0.34	2.47	0.00	0.00	0.00
26.50	0.83	0.34	2.47	0.00	0.00	0.00
26.55	0.83	0.34	2.47	0.00	0.00	0.00
26.60	0.83	0.34	2.47	0.00	0.00	0.00
26.65	0.83	0.34	2.47	0.00	0.00	0.00
26.70	0.83	0.34	2.47	0.00	0.00	0.00
26.75	0.83	0.34	2.47	0.00	0.00	0.00

26.80	0.83	0.34	2.47	0.00	0.00	0.00
26.85	0.83	0.34	2.47	0.00	0.00	0.00
26.90	0.83	0.34	2.47	0.00	0.00	0.00
26.95	0.83	0.34	2.47	0.00	0.00	0.00
27.00	0.83	0.34	2.47	0.00	0.00	0.00
27.05	0.83	0.34	2.47	0.00	0.00	0.00
27.10	0.83	0.34	2.47	0.00	0.00	0.00
27.15	0.83	0.34	2.47	0.00	0.00	0.00
27.20	0.83	0.34	2.47	0.00	0.00	0.00
27.25	0.83	0.34	2.47	0.00	0.00	0.00
27.30	0.83	0.34	2.47	0.00	0.00	0.00
27.35	0.83	0.34	2.47	0.00	0.00	0.00
27.40	0.83	0.34	2.47	0.00	0.00	0.00
27.45	0.83	0.34	2.47	0.00	0.00	0.00
27.50	0.83	0.34	2.47	0.00	0.00	0.00
27.55	0.83	0.34	2.47	0.00	0.00	0.00
27.60	0.83	0.34	2.47	0.00	0.00	0.00
27.65	0.83	0.34	2.47	0.00	0.00	0.00
27.70	0.83	0.34	2.47	0.00	0.00	0.00
27.75	0.83	0.34	2.48	0.00	0.00	0.00
27.80	0.83	0.34	2.48	0.00	0.00	0.00
27.85	0.83	0.34	2.48	0.00	0.00	0.00
27.90	0.83	0.34	2.48	0.00	0.00	0.00
27.95	0.83	0.34	2.48	0.00	0.00	0.00
28.00	0.83	0.34	2.48	0.00	0.00	0.00
28.05	0.83	0.34	2.48	0.00	0.00	0.00
28.10	0.83	0.34	2.48	0.00	0.00	0.00
28.15	0.83	0.34	2.48	0.00	0.00	0.00
28.20	0.83	0.34	2.48	0.00	0.00	0.00
28.25	0.83	0.34	2.48	0.00	0.00	0.00
28.30	0.83	0.34	2.48	0.00	0.00	0.00
28.35	0.83	0.34	2.48	0.00	0.00	0.00
28.40	0.83	0.34	2.48	0.00	0.00	0.00
28.45	0.83	0.34	2.48	0.00	0.00	0.00
28.50	0.83	0.34	2.48	0.00	0.00	0.00
28.55	0.83	0.34	2.48	0.00	0.00	0.00
28.60	0.83	0.34	2.48	0.00	0.00	0.00
28.65	0.83	0.34	2.48	0.00	0.00	0.00
28.70	0.83	0.34	2.48	0.00	0.00	0.00
28.75	0.83	0.34	2.48	0.00	0.00	0.00
28.80	0.83	0.34	2.48	0.00	0.00	0.00
28.85	0.83	0.34	2.48	0.00	0.00	0.00
28.90	0.83	0.34	2.48	0.00	0.00	0.00
28.95	0.83	0.34	2.48	0.00	0.00	0.00
29.00	0.83	0.34	2.48	0.00	0.00	0.00
29.05	0.83	0.34	2.48	0.00	0.00	0.00
29.10	0.83	0.34	2.48	0.00	0.00	0.00
29.15	0.83	0.34	2.48	0.00	0.00	0.00
29.20	0.83	0.33	2.48	0.00	0.00	0.00
29.25	0.83	0.33	2.48	0.00	0.00	0.00
29.30	0.83	0.33	2.48	0.00	0.00	0.00
29.35	0.83	0.33	2.48	0.00	0.00	0.00
29.40	0.83	0.33	2.48	0.00	0.00	0.00
29.45	0.83	0.33	2.48	0.00	0.00	0.00
29.50	0.83	0.33	2.48	0.00	0.00	0.00
29.55	0.83	0.33	2.48	0.00	0.00	0.00
29.60	0.83	0.33	2.48	0.00	0.00	0.00
29.65	0.83	0.33	2.48	0.00	0.00	0.00
29.70	0.83	0.33	2.48	0.00	0.00	0.00
29.75	0.83	0.33	2.48	0.00	0.00	0.00
29.80	0.83	0.33	2.48	0.00	0.00	0.00
29.85	0.83	0.33	2.48	0.00	0.00	0.00
29.90	0.83	0.33	2.48	0.00	0.00	0.00
29.95	0.83	0.33	2.48	0.00	0.00	0.00
30.00	0.83	0.33	2.48	0.00	0.00	0.00
30.05	0.83	0.33	2.48	0.00	0.00	0.00
30.10	0.83	0.33	2.49	0.00	0.00	0.00
30.15	0.83	0.33	2.49	0.00	0.00	0.00
30.20	0.83	0.33	2.49	0.00	0.00	0.00
30.25	0.83	0.33	2.49	0.00	0.00	0.00
30.30	0.83	0.33	2.49	0.00	0.00	0.00

30.35	0.83	0.33	2.49	0.00	0.00	0.00
30.40	0.83	0.33	2.49	0.00	0.00	0.00
30.45	0.83	0.33	2.49	0.00	0.00	0.00
30.50	0.83	0.33	2.49	0.00	0.00	0.00
30.55	0.83	0.33	2.49	0.00	0.00	0.00
30.60	0.83	0.33	2.49	0.00	0.00	0.00
30.65	0.83	0.33	2.50	0.00	0.00	0.00
30.70	0.83	0.33	2.50	0.00	0.00	0.00
30.75	0.83	0.33	2.50	0.00	0.00	0.00
30.80	0.83	0.33	2.50	0.00	0.00	0.00
30.85	0.83	0.33	2.50	0.00	0.00	0.00
30.90	0.83	0.33	2.50	0.00	0.00	0.00
30.95	0.83	0.33	2.50	0.00	0.00	0.00
31.00	0.83	0.33	2.50	0.00	0.00	0.00
31.05	0.83	0.33	2.50	0.00	0.00	0.00
31.10	0.83	0.33	2.50	0.00	0.00	0.00
31.15	0.83	0.33	2.50	0.00	0.00	0.00
31.20	0.83	0.33	2.51	0.00	0.00	0.00
31.25	0.83	0.33	2.51	0.00	0.00	0.00
31.30	0.83	0.33	2.51	0.00	0.00	0.00
31.35	0.83	0.33	2.51	0.00	0.00	0.00
31.40	0.83	0.33	2.51	0.00	0.00	0.00
31.45	0.83	0.33	2.51	0.00	0.00	0.00
31.50	0.83	0.33	2.51	0.00	0.00	0.00
31.55	0.83	0.33	2.51	0.00	0.00	0.00
31.60	0.83	0.33	2.51	0.00	0.00	0.00
31.65	0.83	0.33	2.51	0.00	0.00	0.00
31.70	0.83	0.33	2.52	0.00	0.00	0.00
31.75	0.83	0.33	2.52	0.00	0.00	0.00
31.80	0.83	0.33	2.52	0.00	0.00	0.00
31.85	0.83	0.33	2.52	0.00	0.00	0.00
31.90	0.83	0.33	2.52	0.00	0.00	0.00
31.95	0.83	0.33	2.52	0.00	0.00	0.00
32.00	0.83	0.33	2.52	0.00	0.00	0.00
32.05	0.83	0.33	2.52	0.00	0.00	0.00
32.10	0.83	0.33	2.52	0.00	0.00	0.00
32.15	0.83	0.33	2.52	0.00	0.00	0.00
32.20	0.83	0.33	2.53	0.00	0.00	0.00
32.25	0.83	0.33	2.53	0.00	0.00	0.00
32.30	0.83	0.33	2.53	0.00	0.00	0.00
32.35	0.83	0.33	2.53	0.00	0.00	0.00
32.40	0.83	0.33	2.53	0.00	0.00	0.00
32.45	0.83	0.33	2.53	0.00	0.00	0.00
32.50	0.83	0.33	2.53	0.00	0.00	0.00
32.55	0.83	0.33	2.53	0.00	0.00	0.00
32.60	0.83	0.33	2.53	0.00	0.00	0.00
32.65	0.83	0.33	2.53	0.00	0.00	0.00
32.70	0.83	0.33	2.54	0.00	0.00	0.00
32.75	0.83	0.33	2.54	0.00	0.00	0.00
32.80	0.83	0.33	2.54	0.00	0.00	0.00
32.85	0.83	0.33	2.54	0.00	0.00	0.00
32.90	0.83	0.33	2.54	0.00	0.00	0.00
32.95	0.83	0.33	2.54	0.00	0.00	0.00
33.00	0.83	0.33	2.54	0.00	0.00	0.00
33.05	0.83	0.33	2.54	0.00	0.00	0.00
33.10	0.83	0.33	2.54	0.00	0.00	0.00
33.15	0.83	0.33	2.54	0.00	0.00	0.00
33.20	0.83	0.33	2.55	0.00	0.00	0.00
33.25	0.83	0.33	2.55	0.00	0.00	0.00
33.30	0.83	0.33	2.55	0.00	0.00	0.00
33.35	0.83	0.33	2.55	0.00	0.00	0.00
33.40	0.83	0.33	2.55	0.00	0.00	0.00
33.45	0.83	0.33	2.55	0.00	0.00	0.00
33.50	0.83	0.33	2.55	0.00	0.00	0.00
33.55	0.83	0.33	2.55	0.00	0.00	0.00
33.60	0.83	0.33	2.55	0.00	0.00	0.00
33.65	0.83	0.33	2.55	0.00	0.00	0.00
33.70	0.83	0.33	2.56	0.00	0.00	0.00
33.75	0.83	0.32	2.56	0.00	0.00	0.00
33.80	0.83	0.32	2.56	0.00	0.00	0.00
33.85	0.83	0.32	2.56	0.00	0.00	0.00

33.90	0.83	0.32	2.56	0.00	0.00	0.00
33.95	0.83	0.32	2.56	0.00	0.00	0.00
34.00	0.83	0.32	2.56	0.00	0.00	0.00
34.05	0.83	0.32	2.56	0.00	0.00	0.00
34.10	0.83	0.32	2.56	0.00	0.00	0.00
34.15	0.83	0.32	2.57	0.00	0.00	0.00
34.20	0.83	0.32	2.57	0.00	0.00	0.00
34.25	0.83	0.32	2.57	0.00	0.00	0.00
34.30	0.83	0.32	2.57	0.00	0.00	0.00
34.35	0.83	0.32	2.57	0.00	0.00	0.00
34.40	0.83	0.32	2.57	0.00	0.00	0.00
34.45	0.83	0.32	2.57	0.00	0.00	0.00
34.50	0.83	0.32	2.57	0.00	0.00	0.00
34.55	0.83	0.32	2.57	0.00	0.00	0.00
34.60	0.83	0.32	2.57	0.00	0.00	0.00
34.65	0.83	0.32	2.58	0.00	0.00	0.00
34.70	0.83	0.32	2.58	0.00	0.00	0.00
34.75	0.83	0.32	2.58	0.00	0.00	0.00
34.80	0.83	0.32	2.58	0.00	0.00	0.00
34.85	0.83	0.32	2.58	0.00	0.00	0.00
34.90	0.83	0.32	2.58	0.00	0.00	0.00
34.95	0.83	0.32	2.58	0.00	0.00	0.00
35.00	0.83	0.32	2.58	0.00	0.00	0.00
35.05	0.83	0.32	2.58	0.00	0.00	0.00
35.10	0.83	0.32	2.59	0.00	0.00	0.00
35.15	0.83	0.32	2.59	0.00	0.00	0.00
35.20	0.83	0.32	2.59	0.00	0.00	0.00
35.25	0.83	0.32	2.59	0.00	0.00	0.00
35.30	0.83	0.32	2.59	0.00	0.00	0.00
35.35	0.83	0.32	2.59	0.00	0.00	0.00
35.40	0.83	0.32	2.59	0.00	0.00	0.00
35.45	0.83	0.32	2.59	0.00	0.00	0.00
35.50	0.84	0.32	2.61	0.00	0.00	0.00
35.55	0.84	0.32	2.61	0.00	0.00	0.00
35.60	0.84	0.32	2.61	0.00	0.00	0.00
35.65	0.84	0.32	2.61	0.00	0.00	0.00
35.70	0.84	0.32	2.61	0.00	0.00	0.00
35.75	0.84	0.32	2.61	0.00	0.00	0.00
35.80	0.83	0.32	2.61	0.00	0.00	0.00
35.85	0.83	0.32	2.61	0.00	0.00	0.00
35.90	0.83	0.32	2.62	0.00	0.00	0.00
35.95	0.83	0.32	2.62	0.00	0.00	0.00
36.00	0.83	0.32	2.62	0.00	0.00	0.00
36.05	0.83	0.32	2.62	0.00	0.00	0.00
36.10	0.83	0.32	2.62	0.00	0.00	0.00
36.15	0.83	0.32	2.62	0.00	0.00	0.00
36.20	0.83	0.32	2.62	0.00	0.00	0.00
36.25	0.83	0.32	2.62	0.00	0.00	0.00
36.30	0.83	0.32	2.62	0.00	0.00	0.00
36.35	0.83	0.32	2.62	0.00	0.00	0.00
36.40	0.83	0.32	2.62	0.00	0.00	0.00
36.45	0.83	0.32	2.62	0.00	0.00	0.00
36.50	0.83	0.32	2.62	0.00	0.00	0.00
36.55	0.83	0.32	2.62	0.00	0.00	0.00
36.60	0.83	0.32	2.62	0.00	0.00	0.00
36.65	0.83	0.32	2.62	0.00	0.00	0.00
36.70	0.83	0.32	2.63	0.00	0.00	0.00
36.75	0.83	0.32	2.63	0.00	0.00	0.00
36.80	0.83	0.32	2.63	0.00	0.00	0.00
36.85	0.83	0.32	2.63	0.00	0.00	0.00
36.90	0.83	0.32	2.63	0.00	0.00	0.00
36.95	0.83	0.32	2.63	0.00	0.00	0.00
37.00	0.83	0.32	2.63	0.00	0.00	0.00
37.05	0.83	0.32	2.63	0.00	0.00	0.00
37.10	0.83	0.32	2.63	0.00	0.00	0.00
37.15	0.83	0.32	2.63	0.00	0.00	0.00
37.20	0.83	0.32	2.63	0.00	0.00	0.00
37.25	0.83	0.32	2.63	0.00	0.00	0.00
37.30	0.83	0.32	2.63	0.00	0.00	0.00
37.35	0.83	0.32	2.63	0.00	0.00	0.00
37.40	0.83	0.32	2.64	0.00	0.00	0.00

37.45	0.83	0.31	2.64	0.00	0.00	0.00
37.50	0.83	0.31	2.64	0.00	0.00	0.00
37.55	0.83	0.31	2.64	0.00	0.00	0.00
37.60	0.83	0.31	2.64	0.00	0.00	0.00
37.65	0.83	0.31	2.64	0.00	0.00	0.00
37.70	0.83	0.31	2.64	0.00	0.00	0.00
37.75	0.83	0.31	2.64	0.00	0.00	0.00
37.80	0.83	0.31	2.64	0.00	0.00	0.00
37.85	0.83	0.31	2.64	0.00	0.00	0.00
37.90	0.83	0.31	2.64	0.00	0.00	0.00
37.95	0.83	0.31	2.64	0.00	0.00	0.00
38.00	0.83	0.31	2.64	0.00	0.00	0.00
38.05	0.83	0.31	2.64	0.00	0.00	0.00
38.10	0.83	0.31	2.64	0.00	0.00	0.00
38.15	0.83	0.31	2.65	0.00	0.00	0.00
38.20	0.83	0.31	2.65	0.00	0.00	0.00
38.25	0.83	0.31	2.65	0.00	0.00	0.00
38.30	0.83	0.31	2.65	0.00	0.00	0.00
38.35	0.83	0.31	2.65	0.00	0.00	0.00
38.40	0.83	0.31	2.65	0.00	0.00	0.00
38.45	0.83	0.31	2.65	0.00	0.00	0.00
38.50	0.83	0.31	2.65	0.00	0.00	0.00
38.55	0.83	0.31	2.65	0.00	0.00	0.00
38.60	0.83	0.31	2.65	0.00	0.00	0.00
38.65	0.83	0.31	2.65	0.00	0.00	0.00
38.70	0.83	0.31	2.65	0.00	0.00	0.00
38.75	0.83	0.31	2.65	0.00	0.00	0.00
38.80	0.83	0.31	2.65	0.00	0.00	0.00
38.85	0.83	0.31	2.66	0.00	0.00	0.00
38.90	0.83	0.31	2.66	0.00	0.00	0.00
38.95	0.83	0.31	2.66	0.00	0.00	0.00
39.00	0.83	0.31	2.66	0.00	0.00	0.00
39.05	2.00	0.31	5.00	0.00	0.00	0.00
39.10	2.00	0.31	5.00	0.00	0.00	0.00
39.15	2.00	0.31	5.00	0.00	0.00	0.00
39.20	2.00	0.31	5.00	0.00	0.00	0.00
39.25	2.00	0.31	5.00	0.00	0.00	0.00
39.30	2.00	0.31	5.00	0.00	0.00	0.00
39.35	2.00	0.31	5.00	0.00	0.00	0.00
39.40	2.00	0.31	5.00	0.00	0.00	0.00
39.45	2.00	0.31	5.00	0.00	0.00	0.00
39.50	2.00	0.31	5.00	0.00	0.00	0.00
39.55	2.00	0.31	5.00	0.00	0.00	0.00
39.60	2.00	0.31	5.00	0.00	0.00	0.00
39.65	2.00	0.31	5.00	0.00	0.00	0.00
39.70	2.00	0.31	5.00	0.00	0.00	0.00
39.75	2.00	0.31	5.00	0.00	0.00	0.00
39.80	2.00	0.31	5.00	0.00	0.00	0.00
39.85	2.00	0.31	5.00	0.00	0.00	0.00
39.90	2.00	0.31	5.00	0.00	0.00	0.00
39.95	2.00	0.31	5.00	0.00	0.00	0.00
40.00	2.00	0.31	5.00	0.00	0.00	0.00
40.05	2.00	0.31	5.00	0.00	0.00	0.00
40.10	2.00	0.31	5.00	0.00	0.00	0.00
40.15	2.00	0.31	5.00	0.00	0.00	0.00
40.20	2.00	0.31	5.00	0.00	0.00	0.00
40.25	2.00	0.31	5.00	0.00	0.00	0.00
40.30	2.00	0.31	5.00	0.00	0.00	0.00
40.35	2.00	0.31	5.00	0.00	0.00	0.00
40.40	2.00	0.31	5.00	0.00	0.00	0.00
40.45	2.00	0.31	5.00	0.00	0.00	0.00
40.50	2.00	0.31	5.00	0.00	0.00	0.00
40.55	2.00	0.31	5.00	0.00	0.00	0.00
40.60	2.00	0.31	5.00	0.00	0.00	0.00
40.65	2.00	0.31	5.00	0.00	0.00	0.00
40.70	2.00	0.31	5.00	0.00	0.00	0.00
40.75	2.00	0.31	5.00	0.00	0.00	0.00
40.80	2.00	0.31	5.00	0.00	0.00	0.00
40.85	2.00	0.31	5.00	0.00	0.00	0.00
40.90	2.00	0.31	5.00	0.00	0.00	0.00
40.95	2.00	0.31	5.00	0.00	0.00	0.00

41.00	2.00	0.31	5.00	0.00	0.00	0.00
41.05	2.00	0.31	5.00	0.00	0.00	0.00
41.10	2.00	0.31	5.00	0.00	0.00	0.00
41.15	2.00	0.31	5.00	0.00	0.00	0.00
41.20	2.00	0.31	5.00	0.00	0.00	0.00
41.25	2.00	0.31	5.00	0.00	0.00	0.00
41.30	2.00	0.30	5.00	0.00	0.00	0.00
41.35	2.00	0.30	5.00	0.00	0.00	0.00
41.40	2.00	0.30	5.00	0.00	0.00	0.00
41.45	2.00	0.30	5.00	0.00	0.00	0.00
41.50	2.00	0.30	5.00	0.00	0.00	0.00
41.55	2.00	0.30	5.00	0.00	0.00	0.00
41.60	2.00	0.30	5.00	0.00	0.00	0.00
41.65	2.00	0.30	5.00	0.00	0.00	0.00
41.70	2.00	0.30	5.00	0.00	0.00	0.00
41.75	2.00	0.30	5.00	0.00	0.00	0.00
41.80	2.00	0.30	5.00	0.00	0.00	0.00
41.85	2.00	0.30	5.00	0.00	0.00	0.00
41.90	2.00	0.30	5.00	0.00	0.00	0.00
41.95	2.00	0.30	5.00	0.00	0.00	0.00
42.00	2.00	0.30	5.00	0.00	0.00	0.00
42.05	2.00	0.30	5.00	0.00	0.00	0.00
42.10	2.00	0.30	5.00	0.00	0.00	0.00
42.15	2.00	0.30	5.00	0.00	0.00	0.00
42.20	2.00	0.30	5.00	0.00	0.00	0.00
42.25	2.00	0.30	5.00	0.00	0.00	0.00
42.30	2.00	0.30	5.00	0.00	0.00	0.00
42.35	2.00	0.30	5.00	0.00	0.00	0.00
42.40	2.00	0.30	5.00	0.00	0.00	0.00
42.45	2.00	0.30	5.00	0.00	0.00	0.00
42.50	2.00	0.30	5.00	0.00	0.00	0.00
42.55	2.00	0.30	5.00	0.00	0.00	0.00
42.60	2.00	0.30	5.00	0.00	0.00	0.00
42.65	2.00	0.30	5.00	0.00	0.00	0.00
42.70	2.00	0.30	5.00	0.00	0.00	0.00
42.75	2.00	0.30	5.00	0.00	0.00	0.00
42.80	2.00	0.30	5.00	0.00	0.00	0.00
42.85	2.00	0.30	5.00	0.00	0.00	0.00
42.90	2.00	0.30	5.00	0.00	0.00	0.00
42.95	2.00	0.30	5.00	0.00	0.00	0.00
43.00	2.00	0.30	5.00	0.00	0.00	0.00
43.05	2.00	0.30	5.00	0.00	0.00	0.00
43.10	2.00	0.30	5.00	0.00	0.00	0.00
43.15	2.00	0.30	5.00	0.00	0.00	0.00
43.20	2.00	0.30	5.00	0.00	0.00	0.00
43.25	2.00	0.30	5.00	0.00	0.00	0.00
43.30	2.00	0.30	5.00	0.00	0.00	0.00
43.35	2.00	0.30	5.00	0.00	0.00	0.00
43.40	2.00	0.30	5.00	0.00	0.00	0.00
43.45	2.00	0.30	5.00	0.00	0.00	0.00
43.50	2.00	0.30	5.00	0.00	0.00	0.00
43.55	2.00	0.30	5.00	0.00	0.00	0.00
43.60	2.00	0.30	5.00	0.00	0.00	0.00
43.65	2.00	0.30	5.00	0.00	0.00	0.00
43.70	2.00	0.30	5.00	0.00	0.00	0.00
43.75	2.00	0.30	5.00	0.00	0.00	0.00
43.80	2.00	0.30	5.00	0.00	0.00	0.00
43.85	2.00	0.30	5.00	0.00	0.00	0.00
43.90	2.00	0.30	5.00	0.00	0.00	0.00
43.95	2.00	0.30	5.00	0.00	0.00	0.00
44.00	2.00	0.30	5.00	0.00	0.00	0.00
44.05	2.00	0.30	5.00	0.00	0.00	0.00
44.10	2.00	0.30	5.00	0.00	0.00	0.00
44.15	2.00	0.30	5.00	0.00	0.00	0.00
44.20	2.00	0.30	5.00	0.00	0.00	0.00
44.25	2.00	0.30	5.00	0.00	0.00	0.00
44.30	2.00	0.30	5.00	0.00	0.00	0.00
44.35	2.00	0.30	5.00	0.00	0.00	0.00
44.40	2.00	0.30	5.00	0.00	0.00	0.00
44.45	2.00	0.30	5.00	0.00	0.00	0.00
44.50	2.00	0.30	5.00	0.00	0.00	0.00

44.55	2.00	0.30	5.00	0.00	0.00	0.00
44.60	2.00	0.30	5.00	0.00	0.00	0.00
44.65	2.00	0.30	5.00	0.00	0.00	0.00
44.70	2.00	0.30	5.00	0.00	0.00	0.00
44.75	2.00	0.30	5.00	0.00	0.00	0.00
44.80	2.00	0.30	5.00	0.00	0.00	0.00
44.85	2.00	0.30	5.00	0.00	0.00	0.00
44.90	2.00	0.30	5.00	0.00	0.00	0.00
44.95	2.00	0.30	5.00	0.00	0.00	0.00
45.00	2.00	0.30	5.00	0.00	0.00	0.00
45.05	2.00	0.30	5.00	0.00	0.00	0.00
45.10	2.00	0.30	5.00	0.00	0.00	0.00
45.15	2.00	0.30	5.00	0.00	0.00	0.00
45.20	2.00	0.30	5.00	0.00	0.00	0.00
45.25	2.00	0.30	5.00	0.00	0.00	0.00
45.30	2.00	0.30	5.00	0.00	0.00	0.00
45.35	2.00	0.30	5.00	0.00	0.00	0.00
45.40	2.00	0.30	5.00	0.00	0.00	0.00
45.45	2.00	0.30	5.00	0.00	0.00	0.00
45.50	2.00	0.30	5.00	0.00	0.00	0.00
45.55	2.00	0.29	5.00	0.00	0.00	0.00
45.60	2.00	0.29	5.00	0.00	0.00	0.00
45.65	2.00	0.29	5.00	0.00	0.00	0.00
45.70	2.00	0.29	5.00	0.00	0.00	0.00
45.75	2.00	0.29	5.00	0.00	0.00	0.00
45.80	2.00	0.29	5.00	0.00	0.00	0.00
45.85	2.00	0.29	5.00	0.00	0.00	0.00
45.90	2.00	0.29	5.00	0.00	0.00	0.00
45.95	2.00	0.29	5.00	0.00	0.00	0.00
46.00	2.00	0.29	5.00	0.00	0.00	0.00
46.05	2.00	0.29	5.00	0.00	0.00	0.00
46.10	2.00	0.29	5.00	0.00	0.00	0.00
46.15	2.00	0.29	5.00	0.00	0.00	0.00
46.20	2.00	0.29	5.00	0.00	0.00	0.00
46.25	2.00	0.29	5.00	0.00	0.00	0.00
46.30	2.00	0.29	5.00	0.00	0.00	0.00
46.35	2.00	0.29	5.00	0.00	0.00	0.00
46.40	2.00	0.29	5.00	0.00	0.00	0.00
46.45	2.00	0.29	5.00	0.00	0.00	0.00
46.50	2.00	0.29	5.00	0.00	0.00	0.00
46.55	2.00	0.29	5.00	0.00	0.00	0.00
46.60	2.00	0.29	5.00	0.00	0.00	0.00
46.65	2.00	0.29	5.00	0.00	0.00	0.00
46.70	2.00	0.29	5.00	0.00	0.00	0.00
46.75	2.00	0.29	5.00	0.00	0.00	0.00
46.80	2.00	0.29	5.00	0.00	0.00	0.00
46.85	2.00	0.29	5.00	0.00	0.00	0.00
46.90	2.00	0.29	5.00	0.00	0.00	0.00
46.95	2.00	0.29	5.00	0.00	0.00	0.00
47.00	2.00	0.29	5.00	0.00	0.00	0.00
47.05	2.00	0.29	5.00	0.00	0.00	0.00
47.10	2.00	0.29	5.00	0.00	0.00	0.00
47.15	2.00	0.29	5.00	0.00	0.00	0.00
47.20	2.00	0.29	5.00	0.00	0.00	0.00
47.25	2.00	0.29	5.00	0.00	0.00	0.00
47.30	2.00	0.29	5.00	0.00	0.00	0.00
47.35	2.00	0.29	5.00	0.00	0.00	0.00
47.40	2.00	0.29	5.00	0.00	0.00	0.00
47.45	2.00	0.29	5.00	0.00	0.00	0.00
47.50	2.00	0.29	5.00	0.00	0.00	0.00
47.55	2.00	0.29	5.00	0.00	0.00	0.00
47.60	2.00	0.29	5.00	0.00	0.00	0.00
47.65	2.00	0.29	5.00	0.00	0.00	0.00
47.70	2.00	0.29	5.00	0.00	0.00	0.00
47.75	2.00	0.29	5.00	0.00	0.00	0.00
47.80	2.00	0.29	5.00	0.00	0.00	0.00
47.85	2.00	0.29	5.00	0.00	0.00	0.00
47.90	2.00	0.29	5.00	0.00	0.00	0.00
47.95	2.00	0.29	5.00	0.00	0.00	0.00
48.00	2.00	0.29	5.00	0.00	0.00	0.00
48.05	2.00	0.29	5.00	0.00	0.00	0.00

48.10	2.00	0.29	5.00	0.00	0.00	0.00
48.15	2.00	0.29	5.00	0.00	0.00	0.00
48.20	2.00	0.29	5.00	0.00	0.00	0.00
48.25	2.00	0.29	5.00	0.00	0.00	0.00
48.30	2.00	0.29	5.00	0.00	0.00	0.00
48.35	2.00	0.29	5.00	0.00	0.00	0.00
48.40	2.00	0.29	5.00	0.00	0.00	0.00
48.45	2.00	0.29	5.00	0.00	0.00	0.00
48.50	2.00	0.29	5.00	0.00	0.00	0.00
48.55	2.00	0.29	5.00	0.00	0.00	0.00
48.60	2.00	0.29	5.00	0.00	0.00	0.00
48.65	2.00	0.29	5.00	0.00	0.00	0.00
48.70	2.00	0.29	5.00	0.00	0.00	0.00
48.75	2.00	0.29	5.00	0.00	0.00	0.00
48.80	2.00	0.29	5.00	0.00	0.00	0.00
48.85	2.00	0.29	5.00	0.00	0.00	0.00
48.90	2.00	0.29	5.00	0.00	0.00	0.00
48.95	2.00	0.29	5.00	0.00	0.00	0.00
49.00	2.00	0.29	5.00	0.00	0.00	0.00
49.05	2.00	0.29	5.00	0.00	0.00	0.00
49.10	2.00	0.29	5.00	0.00	0.00	0.00
49.15	2.00	0.29	5.00	0.00	0.00	0.00
49.20	2.00	0.29	5.00	0.00	0.00	0.00
49.25	2.00	0.29	5.00	0.00	0.00	0.00
49.30	2.00	0.29	5.00	0.00	0.00	0.00
49.35	2.00	0.28	5.00	0.00	0.00	0.00
49.40	2.00	0.28	5.00	0.00	0.00	0.00
49.45	2.00	0.28	5.00	0.00	0.00	0.00
49.50	2.00	0.28	5.00	0.00	0.00	0.00
49.55	2.00	0.28	5.00	0.00	0.00	0.00
49.60	2.00	0.28	5.00	0.00	0.00	0.00
49.65	2.00	0.28	5.00	0.00	0.00	0.00
49.70	2.00	0.28	5.00	0.00	0.00	0.00
49.75	2.00	0.28	5.00	0.00	0.00	0.00
49.80	2.00	0.28	5.00	0.00	0.00	0.00
49.85	2.00	0.28	5.00	0.00	0.00	0.00
49.90	2.00	0.28	5.00	0.00	0.00	0.00
49.95	2.00	0.28	5.00	0.00	0.00	0.00
50.00	2.00	0.28	5.00	0.00	0.00	0.00

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* F.5.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, C5R is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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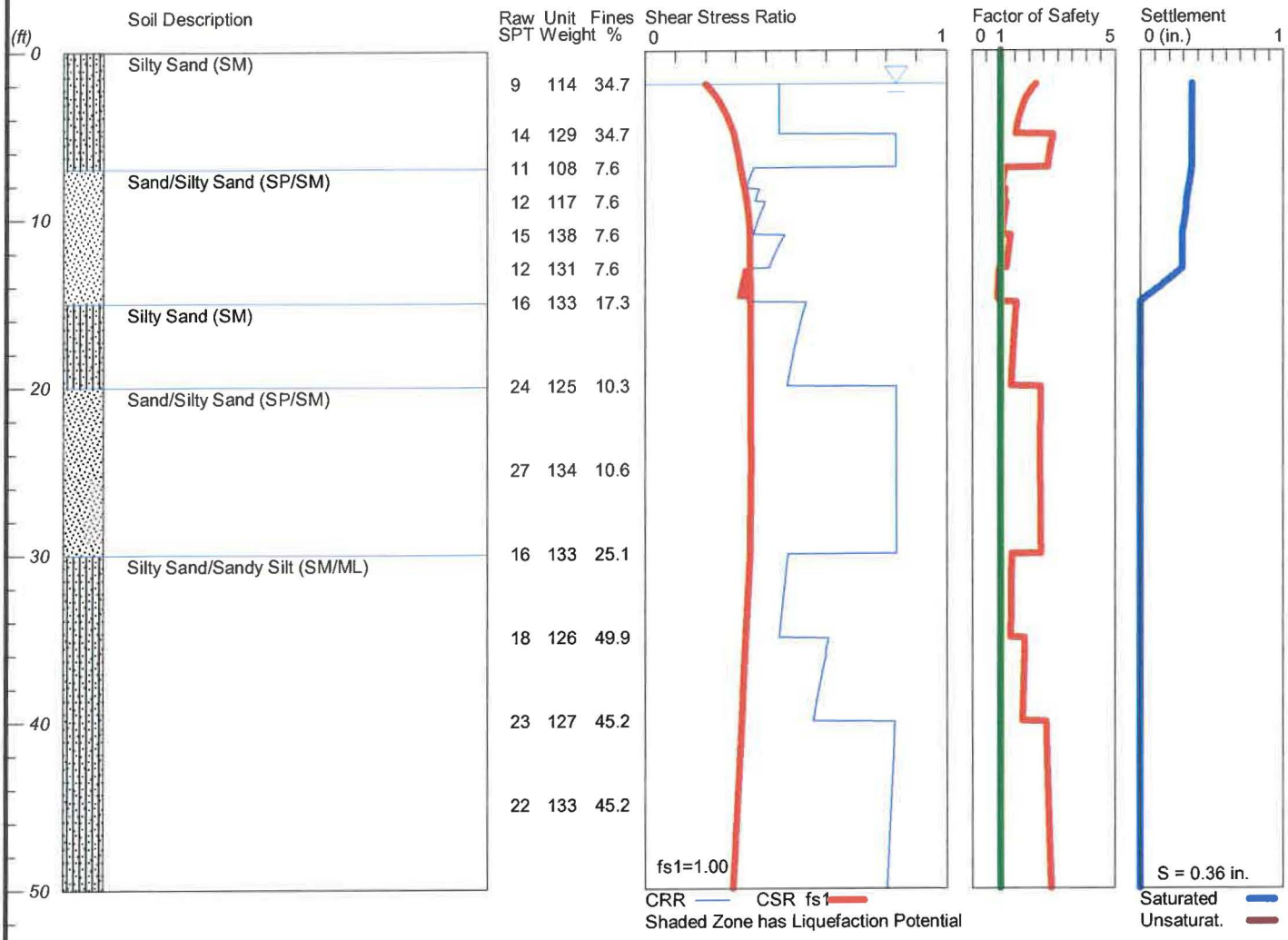
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.5. Factor of Safety against liquefaction, F.5.=CRRm/CSRsf
S_sat 5ettlement from saturated sands
5_dry Settlement from Unsaturated Sands
5_all Total 5ettlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy 5oils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B15 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B1S\B15 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-22165

Surface Elev.=
Hole No.=B15
Depth of Hole= 50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 15.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B1S
Depth of Hole=50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 15.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.1S
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Tokimatsu, M-correction
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.4
7. Borehole Diameter, Cb= 1.05
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	9.00	114.00	34.70
5.00	14.00	129.00	34.70
7.00	11.00	108.00	7.60
9.00	12.00	117.00	7.60
11.00	15.00	138.00	7.60
13.00	12.00	131.00	7.60
15.00	16.00	133.00	17.30
20.00	24.00	125.00	10.30
25.00	27.00	134.00	10.60
30.00	16.00	133.00	25.10
35.00	18.00	126.00	49.90
40.00	23.00	127.00	45.20
45.00	22.00	133.00	45.20

Output Results:
Settlement of Saturated Sands=0.36 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.36 in.
Differential Settlement=0.178 to 0.235 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

2.00	0.44	0.20	2.23	0.36	0.00	0.36
2.05	0.44	0.20	2.21	0.36	0.00	0.36
2.10	0.44	0.20	2.18	0.36	0.00	0.36
2.15	0.44	0.21	2.15	0.36	0.00	0.36
2.20	0.44	0.21	2.12	0.36	0.00	0.36
2.25	0.44	0.21	2.10	0.36	0.00	0.36
2.30	0.44	0.21	2.08	0.36	0.00	0.36
2.35	0.44	0.22	2.05	0.36	0.00	0.36
2.40	0.44	0.22	2.03	0.36	0.00	0.36
2.45	0.44	0.22	2.01	0.36	0.00	0.36
2.50	0.44	0.22	1.99	0.36	0.00	0.36
2.55	0.44	0.22	1.97	0.36	0.00	0.36
2.60	0.44	0.23	1.96	0.36	0.00	0.36
2.65	0.44	0.23	1.94	0.36	0.00	0.36
2.70	0.44	0.23	1.92	0.36	0.00	0.36
2.75	0.44	0.23	1.90	0.36	0.00	0.36
2.80	0.44	0.23	1.89	0.36	0.00	0.36
2.85	0.44	0.24	1.87	0.36	0.00	0.36
2.90	0.44	0.24	1.86	0.36	0.00	0.36
2.95	0.44	0.24	1.84	0.36	0.00	0.36
3.00	0.44	0.24	1.83	0.36	0.00	0.36
3.05	0.44	0.24	1.82	0.36	0.00	0.36
3.10	0.44	0.25	1.81	0.36	0.00	0.36
3.15	0.44	0.25	1.79	0.36	0.00	0.36
3.20	0.44	0.25	1.78	0.36	0.00	0.36
3.25	0.44	0.25	1.77	0.36	0.00	0.36
3.30	0.44	0.25	1.76	0.36	0.00	0.36
3.35	0.44	0.25	1.75	0.36	0.00	0.36
3.40	0.44	0.26	1.74	0.36	0.00	0.36
3.45	0.44	0.26	1.73	0.36	0.00	0.36
3.50	0.44	0.26	1.72	0.36	0.00	0.36
3.55	0.44	0.26	1.71	0.36	0.00	0.36
3.60	0.44	0.26	1.70	0.36	0.00	0.36
3.65	0.44	0.26	1.69	0.36	0.00	0.36
3.70	0.44	0.26	1.68	0.36	0.00	0.36
3.75	0.44	0.27	1.67	0.36	0.00	0.36
3.80	0.44	0.27	1.66	0.36	0.00	0.36
3.85	0.44	0.27	1.65	0.36	0.00	0.36
3.90	0.44	0.27	1.65	0.36	0.00	0.36
3.95	0.44	0.27	1.64	0.36	0.00	0.36
4.00	0.44	0.27	1.63	0.36	0.00	0.36
4.05	0.44	0.27	1.62	0.36	0.00	0.36
4.10	0.44	0.27	1.62	0.36	0.00	0.36
4.15	0.44	0.28	1.61	0.36	0.00	0.36
4.20	0.44	0.28	1.60	0.36	0.00	0.36
4.25	0.44	0.28	1.60	0.36	0.00	0.36
4.30	0.44	0.28	1.59	0.36	0.00	0.36
4.35	0.44	0.28	1.58	0.36	0.00	0.36
4.40	0.44	0.28	1.58	0.36	0.00	0.36
4.45	0.44	0.28	1.57	0.36	0.00	0.36
4.50	0.44	0.28	1.56	0.36	0.00	0.36
4.55	0.44	0.28	1.56	0.36	0.00	0.36
4.60	0.44	0.29	1.55	0.36	0.00	0.36
4.65	0.44	0.29	1.55	0.36	0.00	0.36
4.70	0.44	0.29	1.54	0.36	0.00	0.36
4.75	0.44	0.29	1.54	0.36	0.00	0.36
4.80	0.44	0.29	1.53	0.36	0.00	0.36
4.85	0.44	0.29	1.53	0.36	0.00	0.36
4.90	0.44	0.29	1.52	0.36	0.00	0.36
4.95	0.44	0.29	1.52	0.36	0.00	0.36
5.00	0.83	0.29	2.83	0.36	0.00	0.36
5.05	0.83	0.29	2.82	0.36	0.00	0.36
5.10	0.83	0.30	2.81	0.36	0.00	0.36
5.15	0.83	0.30	2.81	0.36	0.00	0.36
5.20	0.83	0.30	2.80	0.36	0.00	0.36
5.25	0.83	0.30	2.80	0.36	0.00	0.36
5.30	0.83	0.30	2.79	0.36	0.00	0.36
5.35	0.83	0.30	2.78	0.36	0.00	0.36
5.40	0.83	0.30	2.78	0.36	0.00	0.36
5.45	0.83	0.30	2.77	0.36	0.00	0.36

5.50	0.83	0.30	2.77	0.36	0.00	0.36
5.55	0.83	0.30	2.76	0.36	0.00	0.36
5.60	0.83	0.30	2.75	0.36	0.00	0.36
5.65	0.83	0.30	2.75	0.36	0.00	0.36
5.70	0.83	0.30	2.74	0.36	0.00	0.36
5.75	0.83	0.30	2.74	0.36	0.00	0.36
5.80	0.83	0.30	2.73	0.36	0.00	0.36
5.85	0.83	0.30	2.73	0.36	0.00	0.36
5.90	0.83	0.30	2.72	0.36	0.00	0.36
5.95	0.83	0.31	2.72	0.36	0.00	0.36
6.00	0.83	0.31	2.71	0.36	0.00	0.36
6.05	0.83	0.31	2.71	0.36	0.00	0.36
6.10	0.83	0.31	2.71	0.36	0.00	0.36
6.15	0.83	0.31	2.70	0.36	0.00	0.36
6.20	0.83	0.31	2.70	0.36	0.00	0.36
6.25	0.83	0.31	2.69	0.36	0.00	0.36
6.30	0.83	0.31	2.69	0.36	0.00	0.36
6.35	0.83	0.31	2.68	0.36	0.00	0.36
6.40	0.83	0.31	2.68	0.36	0.00	0.36
6.45	0.83	0.31	2.68	0.36	0.00	0.36
6.50	0.83	0.31	2.67	0.36	0.00	0.36
6.55	0.83	0.31	2.67	0.36	0.00	0.36
6.60	0.83	0.31	2.66	0.36	0.00	0.36
6.65	0.83	0.31	2.66	0.36	0.00	0.36
6.70	0.83	0.31	2.66	0.36	0.00	0.36
6.75	0.83	0.31	2.65	0.36	0.00	0.36
6.80	0.83	0.31	2.65	0.36	0.00	0.36
6.85	0.83	0.31	2.65	0.36	0.00	0.36
6.90	0.83	0.31	2.64	0.36	0.00	0.36
6.95	0.83	0.31	2.64	0.36	0.00	0.36
7.00	0.36	0.31	1.14	0.36	0.00	0.36
7.05	0.36	0.32	1.14	0.35	0.00	0.35
7.10	0.36	0.32	1.13	0.35	0.00	0.35
7.15	0.36	0.32	1.12	0.35	0.00	0.35
7.20	0.35	0.32	1.12	0.35	0.00	0.35
7.25	0.35	0.32	1.11	0.35	0.00	0.35
7.30	0.35	0.32	1.11	0.35	0.00	0.35
7.35	0.35	0.32	1.10	0.35	0.00	0.35
7.40	0.35	0.32	1.10	0.35	0.00	0.35
7.45	0.35	0.32	1.09	0.35	0.00	0.35
7.50	0.35	0.32	1.08	0.35	0.00	0.35
7.55	0.35	0.32	1.08	0.35	0.00	0.35
7.60	0.35	0.32	1.07	0.35	0.00	0.35
7.65	0.35	0.32	1.07	0.34	0.00	0.34
7.70	0.34	0.32	1.06	0.34	0.00	0.34
7.75	0.34	0.32	1.06	0.34	0.00	0.34
7.80	0.34	0.32	1.05	0.34	0.00	0.34
7.85	0.34	0.32	1.05	0.34	0.00	0.34
7.90	0.34	0.33	1.05	0.34	0.00	0.34
7.95	0.34	0.33	1.04	0.34	0.00	0.34
8.00	0.34	0.33	1.04	0.34	0.00	0.34
8.05	0.34	0.33	1.03	0.34	0.00	0.34
8.10	0.34	0.33	1.03	0.33	0.00	0.33
8.15	0.34	0.33	1.02	0.33	0.00	0.33
8.20	0.33	0.33	1.02	0.33	0.00	0.33
8.25	0.38	0.33	1.15	0.33	0.00	0.33
8.30	0.38	0.33	1.15	0.33	0.00	0.33
8.35	0.38	0.33	1.14	0.33	0.00	0.33
8.40	0.38	0.33	1.14	0.33	0.00	0.33
8.45	0.37	0.33	1.13	0.33	0.00	0.33
8.50	0.37	0.33	1.13	0.33	0.00	0.33
8.55	0.37	0.33	1.12	0.33	0.00	0.33
8.60	0.37	0.33	1.12	0.33	0.00	0.33
8.65	0.37	0.33	1.11	0.32	0.00	0.32
8.70	0.37	0.33	1.11	0.32	0.00	0.32
8.75	0.37	0.33	1.10	0.32	0.00	0.32
8.80	0.37	0.33	1.10	0.32	0.00	0.32
8.85	0.37	0.33	1.09	0.32	0.00	0.32
8.90	0.36	0.34	1.09	0.32	0.00	0.32
8.95	0.36	0.34	1.08	0.32	0.00	0.32
9.00	0.40	0.34	1.19	0.32	0.00	0.32

9.05	0.40	0.34	1.18	0.32	0.00	0.32
9.10	0.40	0.34	1.18	0.32	0.00	0.32
9.15	0.39	0.34	1.17	0.32	0.00	0.32
9.20	0.39	0.34	1.17	0.32	0.00	0.32
9.25	0.39	0.34	1.16	0.32	0.00	0.32
9.30	0.39	0.34	1.16	0.32	0.00	0.32
9.35	0.39	0.34	1.15	0.32	0.00	0.32
9.40	0.39	0.34	1.15	0.32	0.00	0.32
9.45	0.39	0.34	1.14	0.32	0.00	0.32
9.50	0.39	0.34	1.14	0.32	0.00	0.32
9.55	0.39	0.34	1.14	0.32	0.00	0.32
9.60	0.38	0.34	1.13	0.31	0.00	0.31
9.65	0.38	0.34	1.13	0.31	0.00	0.31
9.70	0.38	0.34	1.12	0.31	0.00	0.31
9.75	0.38	0.34	1.12	0.31	0.00	0.31
9.80	0.38	0.34	1.12	0.31	0.00	0.31
9.85	0.38	0.34	1.11	0.31	0.00	0.31
9.90	0.38	0.34	1.11	0.31	0.00	0.31
9.95	0.38	0.34	1.10	0.31	0.00	0.31
10.00	0.38	0.34	1.10	0.31	0.00	0.31
10.05	0.37	0.34	1.10	0.31	0.00	0.31
10.10	0.37	0.34	1.09	0.31	0.00	0.31
10.15	0.37	0.34	1.09	0.31	0.00	0.31
10.20	0.37	0.34	1.08	0.30	0.00	0.30
10.25	0.37	0.34	1.08	0.30	0.00	0.30
10.30	0.37	0.34	1.08	0.30	0.00	0.30
10.35	0.37	0.34	1.07	0.30	0.00	0.30
10.40	0.37	0.34	1.07	0.30	0.00	0.30
10.45	0.37	0.34	1.07	0.30	0.00	0.30
10.50	0.37	0.34	1.06	0.30	0.00	0.30
10.55	0.37	0.34	1.06	0.30	0.00	0.30
10.60	0.36	0.34	1.06	0.30	0.00	0.30
10.65	0.36	0.35	1.05	0.30	0.00	0.30
10.70	0.36	0.35	1.05	0.29	0.00	0.29
10.75	0.36	0.35	1.05	0.29	0.00	0.29
10.80	0.36	0.35	1.04	0.29	0.00	0.29
10.85	0.36	0.35	1.04	0.29	0.00	0.29
10.90	0.36	0.35	1.04	0.29	0.00	0.29
10.95	0.36	0.35	1.03	0.29	0.00	0.29
11.00	0.46	0.35	1.33	0.29	0.00	0.29
11.05	0.46	0.35	1.33	0.29	0.00	0.29
11.10	0.46	0.35	1.32	0.29	0.00	0.29
11.15	0.46	0.35	1.32	0.29	0.00	0.29
11.20	0.46	0.35	1.31	0.29	0.00	0.29
11.25	0.45	0.35	1.31	0.29	0.00	0.29
11.30	0.45	0.35	1.31	0.29	0.00	0.29
11.35	0.45	0.35	1.30	0.29	0.00	0.29
11.40	0.45	0.35	1.30	0.29	0.00	0.29
11.45	0.45	0.35	1.29	0.29	0.00	0.29
11.50	0.45	0.35	1.29	0.29	0.00	0.29
11.55	0.45	0.35	1.28	0.29	0.00	0.29
11.60	0.44	0.35	1.28	0.29	0.00	0.29
11.65	0.44	0.35	1.28	0.29	0.00	0.29
11.70	0.44	0.35	1.27	0.29	0.00	0.29
11.75	0.44	0.35	1.27	0.29	0.00	0.29
11.80	0.44	0.35	1.26	0.29	0.00	0.29
11.85	0.44	0.35	1.26	0.29	0.00	0.29
11.90	0.44	0.35	1.26	0.29	0.00	0.29
11.95	0.43	0.35	1.25	0.29	0.00	0.29
12.00	0.43	0.35	1.25	0.29	0.00	0.29
12.05	0.43	0.35	1.24	0.29	0.00	0.29
12.10	0.43	0.35	1.24	0.29	0.00	0.29
12.15	0.43	0.35	1.24	0.29	0.00	0.29
12.20	0.43	0.35	1.23	0.29	0.00	0.29
12.25	0.43	0.35	1.23	0.29	0.00	0.29
12.30	0.43	0.35	1.23	0.29	0.00	0.29
12.35	0.42	0.35	1.22	0.29	0.00	0.29
12.40	0.42	0.35	1.22	0.29	0.00	0.29
12.45	0.42	0.35	1.22	0.29	0.00	0.29
12.50	0.42	0.35	1.21	0.29	0.00	0.29
12.55	0.42	0.35	1.21	0.29	0.00	0.29

12.60	0.42	0.35	1.21	0.29	0.00	0.29
12.65	0.42	0.35	1.20	0.29	0.00	0.29
12.70	0.42	0.35	1.20	0.29	0.00	0.29
12.75	0.41	0.35	1.20	0.29	0.00	0.29
12.80	0.41	0.35	1.19	0.29	0.00	0.29
12.85	0.41	0.35	1.19	0.29	0.00	0.29
12.90	0.41	0.35	1.19	0.29	0.00	0.29
12.95	0.41	0.35	1.18	0.29	0.00	0.29
13.00	0.32	0.35	0.94*	0.29	0.00	0.29
13.05	0.32	0.35	0.94*	0.28	0.00	0.28
13.10	0.32	0.35	0.93*	0.27	0.00	0.27
13.15	0.32	0.35	0.93*	0.27	0.00	0.27
13.20	0.32	0.35	0.93*	0.26	0.00	0.26
13.25	0.32	0.35	0.93*	0.25	0.00	0.25
13.30	0.32	0.35	0.93*	0.25	0.00	0.25
13.35	0.32	0.35	0.92*	0.24	0.00	0.24
13.40	0.32	0.35	0.92*	0.23	0.00	0.23
13.45	0.32	0.35	0.92*	0.23	0.00	0.23
13.50	0.32	0.35	0.92*	0.22	0.00	0.22
13.55	0.32	0.35	0.92*	0.21	0.00	0.21
13.60	0.32	0.35	0.91*	0.21	0.00	0.21
13.65	0.32	0.35	0.91*	0.20	0.00	0.20
13.70	0.32	0.35	0.91*	0.19	0.00	0.19
13.75	0.32	0.35	0.91*	0.18	0.00	0.18
13.80	0.31	0.35	0.91*	0.18	0.00	0.18
13.85	0.31	0.35	0.90*	0.17	0.00	0.17
13.90	0.31	0.35	0.90*	0.16	0.00	0.16
13.95	0.31	0.35	0.90*	0.15	0.00	0.15
14.00	0.31	0.35	0.90*	0.15	0.00	0.15
14.05	0.31	0.35	0.90*	0.14	0.00	0.14
14.10	0.31	0.35	0.90*	0.13	0.00	0.13
14.15	0.31	0.35	0.89*	0.12	0.00	0.12
14.20	0.31	0.35	0.89*	0.12	0.00	0.12
14.25	0.31	0.35	0.89*	0.11	0.00	0.11
14.30	0.31	0.35	0.89*	0.10	0.00	0.10
14.35	0.31	0.35	0.89*	0.09	0.00	0.09
14.40	0.31	0.35	0.89*	0.09	0.00	0.09
14.45	0.31	0.35	0.88*	0.08	0.00	0.08
14.50	0.31	0.35	0.88*	0.07	0.00	0.07
14.55	0.31	0.35	0.88*	0.06	0.00	0.06
14.60	0.31	0.35	0.88*	0.06	0.00	0.06
14.65	0.31	0.35	0.88*	0.05	0.00	0.05
14.70	0.30	0.35	0.88*	0.04	0.00	0.04
14.75	0.30	0.35	0.87*	0.03	0.00	0.03
14.80	0.34	0.35	0.97*	0.02	0.00	0.02
14.85	0.34	0.35	0.97*	0.02	0.00	0.02
14.90	0.34	0.35	0.97*	0.01	0.00	0.01
14.95	0.34	0.35	0.97*	0.01	0.00	0.01
15.00	0.53	0.35	1.53	0.00	0.00	0.00
15.05	0.53	0.35	1.53	0.00	0.00	0.00
15.10	0.53	0.35	1.53	0.00	0.00	0.00
15.15	0.53	0.35	1.53	0.00	0.00	0.00
15.20	0.53	0.35	1.52	0.00	0.00	0.00
15.25	0.53	0.35	1.52	0.00	0.00	0.00
15.30	0.53	0.35	1.52	0.00	0.00	0.00
15.35	0.53	0.35	1.52	0.00	0.00	0.00
15.40	0.53	0.35	1.51	0.00	0.00	0.00
15.45	0.53	0.35	1.51	0.00	0.00	0.00
15.50	0.53	0.35	1.51	0.00	0.00	0.00
15.55	0.52	0.35	1.51	0.00	0.00	0.00
15.60	0.52	0.35	1.50	0.00	0.00	0.00
15.65	0.52	0.35	1.50	0.00	0.00	0.00
15.70	0.52	0.35	1.50	0.00	0.00	0.00
15.75	0.52	0.35	1.50	0.00	0.00	0.00
15.80	0.52	0.35	1.50	0.00	0.00	0.00
15.85	0.52	0.35	1.49	0.00	0.00	0.00
15.90	0.52	0.35	1.49	0.00	0.00	0.00
15.95	0.52	0.35	1.49	0.00	0.00	0.00
16.00	0.52	0.35	1.49	0.00	0.00	0.00
16.05	0.52	0.35	1.48	0.00	0.00	0.00
16.10	0.52	0.35	1.48	0.00	0.00	0.00

16.15	0.52	0.35	1.48	0.00	0.00	0.00
16.20	0.51	0.35	1.48	0.00	0.00	0.00
16.25	0.51	0.35	1.48	0.00	0.00	0.00
16.30	0.51	0.35	1.47	0.00	0.00	0.00
16.35	0.51	0.35	1.47	0.00	0.00	0.00
16.40	0.51	0.35	1.47	0.00	0.00	0.00
16.45	0.51	0.35	1.47	0.00	0.00	0.00
16.50	0.51	0.35	1.47	0.00	0.00	0.00
16.55	0.51	0.35	1.46	0.00	0.00	0.00
16.60	0.51	0.35	1.46	0.00	0.00	0.00
16.65	0.51	0.35	1.46	0.00	0.00	0.00
16.70	0.51	0.35	1.46	0.00	0.00	0.00
16.75	0.51	0.35	1.46	0.00	0.00	0.00
16.80	0.51	0.35	1.45	0.00	0.00	0.00
16.85	0.51	0.35	1.45	0.00	0.00	0.00
16.90	0.51	0.35	1.45	0.00	0.00	0.00
16.95	0.50	0.35	1.45	0.00	0.00	0.00
17.00	0.50	0.35	1.45	0.00	0.00	0.00
17.05	0.50	0.35	1.45	0.00	0.00	0.00
17.10	0.50	0.35	1.44	0.00	0.00	0.00
17.15	0.50	0.35	1.44	0.00	0.00	0.00
17.20	0.50	0.35	1.44	0.00	0.00	0.00
17.25	0.50	0.35	1.44	0.00	0.00	0.00
17.30	0.50	0.35	1.44	0.00	0.00	0.00
17.35	0.50	0.35	1.43	0.00	0.00	0.00
17.40	0.50	0.35	1.43	0.00	0.00	0.00
17.45	0.50	0.35	1.43	0.00	0.00	0.00
17.50	0.50	0.35	1.43	0.00	0.00	0.00
17.55	0.50	0.35	1.43	0.00	0.00	0.00
17.60	0.50	0.35	1.43	0.00	0.00	0.00
17.65	0.50	0.35	1.42	0.00	0.00	0.00
17.70	0.50	0.35	1.42	0.00	0.00	0.00
17.75	0.49	0.35	1.42	0.00	0.00	0.00
17.80	0.49	0.35	1.42	0.00	0.00	0.00
17.85	0.49	0.35	1.42	0.00	0.00	0.00
17.90	0.49	0.35	1.42	0.00	0.00	0.00
17.95	0.49	0.35	1.41	0.00	0.00	0.00
18.00	0.49	0.35	1.41	0.00	0.00	0.00
18.05	0.49	0.35	1.41	0.00	0.00	0.00
18.10	0.49	0.35	1.41	0.00	0.00	0.00
18.15	0.49	0.35	1.41	0.00	0.00	0.00
18.20	0.49	0.35	1.41	0.00	0.00	0.00
18.25	0.49	0.35	1.40	0.00	0.00	0.00
18.30	0.49	0.35	1.40	0.00	0.00	0.00
18.35	0.49	0.35	1.40	0.00	0.00	0.00
18.40	0.49	0.35	1.40	0.00	0.00	0.00
18.45	0.49	0.35	1.40	0.00	0.00	0.00
18.50	0.49	0.35	1.40	0.00	0.00	0.00
18.55	0.49	0.35	1.39	0.00	0.00	0.00
18.60	0.48	0.35	1.39	0.00	0.00	0.00
18.65	0.48	0.35	1.39	0.00	0.00	0.00
18.70	0.48	0.35	1.39	0.00	0.00	0.00
18.75	0.48	0.35	1.39	0.00	0.00	0.00
18.80	0.48	0.35	1.39	0.00	0.00	0.00
18.85	0.48	0.35	1.39	0.00	0.00	0.00
18.90	0.48	0.35	1.38	0.00	0.00	0.00
18.95	0.48	0.35	1.38	0.00	0.00	0.00
19.00	0.48	0.35	1.38	0.00	0.00	0.00
19.05	0.48	0.35	1.38	0.00	0.00	0.00
19.10	0.48	0.35	1.38	0.00	0.00	0.00
19.15	0.48	0.35	1.38	0.00	0.00	0.00
19.20	0.48	0.35	1.37	0.00	0.00	0.00
19.25	0.48	0.35	1.37	0.00	0.00	0.00
19.30	0.48	0.35	1.37	0.00	0.00	0.00
19.35	0.48	0.35	1.37	0.00	0.00	0.00
19.40	0.48	0.35	1.37	0.00	0.00	0.00
19.45	0.48	0.35	1.37	0.00	0.00	0.00
19.50	0.48	0.35	1.37	0.00	0.00	0.00
19.55	0.47	0.35	1.36	0.00	0.00	0.00
19.60	0.47	0.35	1.36	0.00	0.00	0.00
19.65	0.47	0.35	1.36	0.00	0.00	0.00

19.70	0.47	0.35	1.36	0.00	0.00	0.00
19.75	0.47	0.35	1.36	0.00	0.00	0.00
19.80	0.47	0.35	1.36	0.00	0.00	0.00
19.85	0.47	0.35	1.36	0.00	0.00	0.00
19.90	0.47	0.35	1.36	0.00	0.00	0.00
19.95	0.47	0.35	1.35	0.00	0.00	0.00
20.00	0.47	0.35	1.35	0.00	0.00	0.00
20.05	0.83	0.35	2.39	0.00	0.00	0.00
20.10	0.83	0.35	2.39	0.00	0.00	0.00
20.15	0.83	0.35	2.39	0.00	0.00	0.00
20.20	0.83	0.35	2.39	0.00	0.00	0.00
20.25	0.83	0.35	2.39	0.00	0.00	0.00
20.30	0.83	0.35	2.39	0.00	0.00	0.00
20.35	0.83	0.35	2.39	0.00	0.00	0.00
20.40	0.83	0.35	2.39	0.00	0.00	0.00
20.45	0.83	0.35	2.39	0.00	0.00	0.00
20.50	0.83	0.35	2.39	0.00	0.00	0.00
20.55	0.83	0.35	2.39	0.00	0.00	0.00
20.60	0.83	0.35	2.39	0.00	0.00	0.00
20.65	0.83	0.35	2.39	0.00	0.00	0.00
20.70	0.83	0.35	2.39	0.00	0.00	0.00
20.75	0.83	0.35	2.39	0.00	0.00	0.00
20.80	0.83	0.35	2.39	0.00	0.00	0.00
20.85	0.83	0.35	2.39	0.00	0.00	0.00
20.90	0.83	0.35	2.39	0.00	0.00	0.00
20.95	0.83	0.35	2.39	0.00	0.00	0.00
21.00	0.83	0.35	2.39	0.00	0.00	0.00
21.05	0.83	0.35	2.39	0.00	0.00	0.00
21.10	0.83	0.35	2.39	0.00	0.00	0.00
21.15	0.83	0.35	2.39	0.00	0.00	0.00
21.20	0.83	0.35	2.39	0.00	0.00	0.00
21.25	0.83	0.35	2.39	0.00	0.00	0.00
21.30	0.83	0.35	2.39	0.00	0.00	0.00
21.35	0.83	0.35	2.38	0.00	0.00	0.00
21.40	0.83	0.35	2.38	0.00	0.00	0.00
21.45	0.83	0.35	2.38	0.00	0.00	0.00
21.50	0.83	0.35	2.38	0.00	0.00	0.00
21.55	0.83	0.35	2.38	0.00	0.00	0.00
21.60	0.83	0.35	2.38	0.00	0.00	0.00
21.65	0.83	0.35	2.38	0.00	0.00	0.00
21.70	0.83	0.35	2.38	0.00	0.00	0.00
21.75	0.83	0.35	2.38	0.00	0.00	0.00
21.80	0.83	0.35	2.38	0.00	0.00	0.00
21.85	0.83	0.35	2.38	0.00	0.00	0.00
21.90	0.83	0.35	2.38	0.00	0.00	0.00
21.95	0.83	0.35	2.38	0.00	0.00	0.00
22.00	0.83	0.35	2.38	0.00	0.00	0.00
22.05	0.83	0.35	2.38	0.00	0.00	0.00
22.10	0.83	0.35	2.38	0.00	0.00	0.00
22.15	0.83	0.35	2.38	0.00	0.00	0.00
22.20	0.83	0.35	2.38	0.00	0.00	0.00
22.25	0.83	0.35	2.38	0.00	0.00	0.00
22.30	0.83	0.35	2.38	0.00	0.00	0.00
22.35	0.83	0.35	2.38	0.00	0.00	0.00
22.40	0.83	0.35	2.38	0.00	0.00	0.00
22.45	0.83	0.35	2.38	0.00	0.00	0.00
22.50	0.83	0.35	2.38	0.00	0.00	0.00
22.55	0.83	0.35	2.38	0.00	0.00	0.00
22.60	0.83	0.35	2.38	0.00	0.00	0.00
22.65	0.83	0.35	2.38	0.00	0.00	0.00
22.70	0.83	0.35	2.38	0.00	0.00	0.00
22.75	0.83	0.35	2.38	0.00	0.00	0.00
22.80	0.83	0.35	2.38	0.00	0.00	0.00
22.85	0.83	0.35	2.38	0.00	0.00	0.00
22.90	0.83	0.35	2.38	0.00	0.00	0.00
22.95	0.83	0.35	2.38	0.00	0.00	0.00
23.00	0.83	0.35	2.38	0.00	0.00	0.00
23.05	0.83	0.35	2.38	0.00	0.00	0.00
23.10	0.83	0.35	2.38	0.00	0.00	0.00
23.15	0.83	0.35	2.38	0.00	0.00	0.00
23.20	0.83	0.35	2.38	0.00	0.00	0.00

23.25	0.83	0.35	2.38	0.00	0.00	0.00
23.30	0.83	0.35	2.38	0.00	0.00	0.00
23.35	0.83	0.35	2.38	0.00	0.00	0.00
23.40	0.83	0.35	2.38	0.00	0.00	0.00
23.45	0.83	0.35	2.38	0.00	0.00	0.00
23.50	0.83	0.35	2.38	0.00	0.00	0.00
23.55	0.83	0.35	2.38	0.00	0.00	0.00
23.60	0.83	0.35	2.38	0.00	0.00	0.00
23.65	0.83	0.35	2.38	0.00	0.00	0.00
23.70	0.83	0.35	2.38	0.00	0.00	0.00
23.75	0.83	0.35	2.38	0.00	0.00	0.00
23.80	0.83	0.35	2.38	0.00	0.00	0.00
23.85	0.83	0.35	2.38	0.00	0.00	0.00
23.90	0.83	0.35	2.38	0.00	0.00	0.00
23.95	0.83	0.35	2.38	0.00	0.00	0.00
24.00	0.83	0.35	2.38	0.00	0.00	0.00
24.05	0.83	0.35	2.38	0.00	0.00	0.00
24.10	0.83	0.35	2.38	0.00	0.00	0.00
24.15	0.83	0.35	2.38	0.00	0.00	0.00
24.20	0.83	0.35	2.38	0.00	0.00	0.00
24.25	0.83	0.35	2.38	0.00	0.00	0.00
24.30	0.83	0.35	2.38	0.00	0.00	0.00
24.35	0.83	0.35	2.38	0.00	0.00	0.00
24.40	0.83	0.35	2.38	0.00	0.00	0.00
24.45	0.83	0.35	2.38	0.00	0.00	0.00
24.50	0.83	0.35	2.38	0.00	0.00	0.00
24.55	0.83	0.35	2.38	0.00	0.00	0.00
24.60	0.83	0.35	2.38	0.00	0.00	0.00
24.65	0.83	0.35	2.38	0.00	0.00	0.00
24.70	0.83	0.35	2.38	0.00	0.00	0.00
24.75	0.83	0.35	2.38	0.00	0.00	0.00
24.80	0.83	0.35	2.38	0.00	0.00	0.00
24.85	0.83	0.35	2.38	0.00	0.00	0.00
24.90	0.83	0.35	2.38	0.00	0.00	0.00
24.95	0.83	0.35	2.38	0.00	0.00	0.00
25.00	0.83	0.35	2.38	0.00	0.00	0.00
25.05	0.83	0.35	2.38	0.00	0.00	0.00
25.10	0.83	0.35	2.38	0.00	0.00	0.00
25.15	0.83	0.35	2.38	0.00	0.00	0.00
25.20	0.83	0.35	2.38	0.00	0.00	0.00
25.25	0.83	0.35	2.38	0.00	0.00	0.00
25.30	0.83	0.35	2.38	0.00	0.00	0.00
25.35	0.83	0.35	2.38	0.00	0.00	0.00
25.40	0.83	0.35	2.38	0.00	0.00	0.00
25.45	0.83	0.35	2.38	0.00	0.00	0.00
25.50	0.83	0.35	2.38	0.00	0.00	0.00
25.55	0.83	0.35	2.38	0.00	0.00	0.00
25.60	0.83	0.35	2.38	0.00	0.00	0.00
25.65	0.83	0.35	2.38	0.00	0.00	0.00
25.70	0.83	0.35	2.38	0.00	0.00	0.00
25.75	0.83	0.35	2.38	0.00	0.00	0.00
25.80	0.83	0.35	2.38	0.00	0.00	0.00
25.85	0.83	0.35	2.38	0.00	0.00	0.00
25.90	0.83	0.35	2.38	0.00	0.00	0.00
25.95	0.83	0.35	2.38	0.00	0.00	0.00
26.00	0.83	0.35	2.38	0.00	0.00	0.00
26.05	0.83	0.35	2.38	0.00	0.00	0.00
26.10	0.83	0.35	2.38	0.00	0.00	0.00
26.15	0.83	0.35	2.38	0.00	0.00	0.00
26.20	0.83	0.35	2.38	0.00	0.00	0.00
26.25	0.83	0.35	2.38	0.00	0.00	0.00
26.30	0.83	0.35	2.38	0.00	0.00	0.00
26.35	0.83	0.35	2.39	0.00	0.00	0.00
26.40	0.83	0.35	2.39	0.00	0.00	0.00
26.45	0.83	0.35	2.39	0.00	0.00	0.00
26.50	0.83	0.35	2.39	0.00	0.00	0.00
26.55	0.83	0.35	2.39	0.00	0.00	0.00
26.60	0.83	0.35	2.39	0.00	0.00	0.00
26.65	0.83	0.35	2.39	0.00	0.00	0.00
26.70	0.83	0.35	2.39	0.00	0.00	0.00
26.75	0.83	0.35	2.39	0.00	0.00	0.00

26.80	0.83	0.35	2.39	0.00	0.00	0.00
26.85	0.83	0.35	2.39	0.00	0.00	0.00
26.90	0.83	0.35	2.39	0.00	0.00	0.00
26.95	0.83	0.35	2.39	0.00	0.00	0.00
27.00	0.83	0.35	2.39	0.00	0.00	0.00
27.05	0.83	0.35	2.39	0.00	0.00	0.00
27.10	0.83	0.35	2.39	0.00	0.00	0.00
27.15	0.83	0.35	2.39	0.00	0.00	0.00
27.20	0.83	0.35	2.39	0.00	0.00	0.00
27.25	0.83	0.35	2.39	0.00	0.00	0.00
27.30	0.83	0.35	2.39	0.00	0.00	0.00
27.35	0.83	0.35	2.39	0.00	0.00	0.00
27.40	0.83	0.35	2.39	0.00	0.00	0.00
27.45	0.83	0.35	2.39	0.00	0.00	0.00
27.50	0.83	0.35	2.39	0.00	0.00	0.00
27.55	0.83	0.35	2.39	0.00	0.00	0.00
27.60	0.83	0.35	2.39	0.00	0.00	0.00
27.65	0.83	0.35	2.39	0.00	0.00	0.00
27.70	0.83	0.35	2.39	0.00	0.00	0.00
27.75	0.83	0.35	2.39	0.00	0.00	0.00
27.80	0.83	0.35	2.39	0.00	0.00	0.00
27.85	0.83	0.35	2.39	0.00	0.00	0.00
27.90	0.83	0.35	2.39	0.00	0.00	0.00
27.95	0.83	0.35	2.39	0.00	0.00	0.00
28.00	0.83	0.35	2.39	0.00	0.00	0.00
28.05	0.83	0.35	2.39	0.00	0.00	0.00
28.10	0.83	0.35	2.39	0.00	0.00	0.00
28.15	0.83	0.35	2.39	0.00	0.00	0.00
28.20	0.83	0.35	2.39	0.00	0.00	0.00
28.25	0.83	0.35	2.40	0.00	0.00	0.00
28.30	0.83	0.35	2.40	0.00	0.00	0.00
28.35	0.83	0.35	2.40	0.00	0.00	0.00
28.40	0.83	0.35	2.40	0.00	0.00	0.00
28.45	0.83	0.35	2.40	0.00	0.00	0.00
28.50	0.83	0.35	2.40	0.00	0.00	0.00
28.55	0.83	0.35	2.40	0.00	0.00	0.00
28.60	0.83	0.35	2.40	0.00	0.00	0.00
28.65	0.83	0.35	2.40	0.00	0.00	0.00
28.70	0.83	0.35	2.40	0.00	0.00	0.00
28.75	0.83	0.35	2.40	0.00	0.00	0.00
28.80	0.83	0.35	2.40	0.00	0.00	0.00
28.85	0.83	0.35	2.40	0.00	0.00	0.00
28.90	0.83	0.35	2.40	0.00	0.00	0.00
28.95	0.83	0.35	2.40	0.00	0.00	0.00
29.00	0.83	0.35	2.40	0.00	0.00	0.00
29.05	0.83	0.35	2.40	0.00	0.00	0.00
29.10	0.83	0.35	2.40	0.00	0.00	0.00
29.15	0.83	0.35	2.40	0.00	0.00	0.00
29.20	0.83	0.35	2.40	0.00	0.00	0.00
29.25	0.83	0.35	2.40	0.00	0.00	0.00
29.30	0.83	0.35	2.40	0.00	0.00	0.00
29.35	0.83	0.35	2.40	0.00	0.00	0.00
29.40	0.83	0.35	2.40	0.00	0.00	0.00
29.45	0.83	0.35	2.40	0.00	0.00	0.00
29.50	0.83	0.35	2.40	0.00	0.00	0.00
29.55	0.83	0.35	2.40	0.00	0.00	0.00
29.60	0.83	0.35	2.40	0.00	0.00	0.00
29.65	0.83	0.35	2.40	0.00	0.00	0.00
29.70	0.83	0.35	2.40	0.00	0.00	0.00
29.75	0.83	0.35	2.40	0.00	0.00	0.00
29.80	0.83	0.35	2.40	0.00	0.00	0.00
29.85	0.83	0.35	2.40	0.00	0.00	0.00
29.90	0.83	0.35	2.40	0.00	0.00	0.00
29.95	0.83	0.35	2.40	0.00	0.00	0.00
30.00	0.83	0.35	2.40	0.00	0.00	0.00
30.05	0.47	0.35	1.37	0.00	0.00	0.00
30.10	0.47	0.35	1.37	0.00	0.00	0.00
30.15	0.47	0.34	1.37	0.00	0.00	0.00
30.20	0.47	0.34	1.37	0.00	0.00	0.00
30.25	0.47	0.34	1.37	0.00	0.00	0.00
30.30	0.47	0.34	1.37	0.00	0.00	0.00

30.35	0.47	0.34	1.37	0.00	0.00	0.00
30.40	0.47	0.34	1.37	0.00	0.00	0.00
30.45	0.47	0.34	1.37	0.00	0.00	0.00
30.50	0.47	0.34	1.37	0.00	0.00	0.00
30.55	0.47	0.34	1.37	0.00	0.00	0.00
30.60	0.47	0.34	1.36	0.00	0.00	0.00
30.65	0.47	0.34	1.36	0.00	0.00	0.00
30.70	0.47	0.34	1.36	0.00	0.00	0.00
30.75	0.47	0.34	1.36	0.00	0.00	0.00
30.80	0.47	0.34	1.36	0.00	0.00	0.00
30.85	0.47	0.34	1.36	0.00	0.00	0.00
30.90	0.47	0.34	1.36	0.00	0.00	0.00
30.95	0.47	0.34	1.36	0.00	0.00	0.00
31.00	0.47	0.34	1.36	0.00	0.00	0.00
31.05	0.47	0.34	1.36	0.00	0.00	0.00
31.10	0.47	0.34	1.36	0.00	0.00	0.00
31.15	0.47	0.34	1.36	0.00	0.00	0.00
31.20	0.47	0.34	1.36	0.00	0.00	0.00
31.25	0.46	0.34	1.36	0.00	0.00	0.00
31.30	0.46	0.34	1.36	0.00	0.00	0.00
31.35	0.46	0.34	1.36	0.00	0.00	0.00
31.40	0.46	0.34	1.36	0.00	0.00	0.00
31.45	0.46	0.34	1.36	0.00	0.00	0.00
31.50	0.46	0.34	1.36	0.00	0.00	0.00
31.55	0.46	0.34	1.36	0.00	0.00	0.00
31.60	0.46	0.34	1.36	0.00	0.00	0.00
31.65	0.46	0.34	1.36	0.00	0.00	0.00
31.70	0.46	0.34	1.36	0.00	0.00	0.00
31.75	0.46	0.34	1.36	0.00	0.00	0.00
31.80	0.46	0.34	1.36	0.00	0.00	0.00
31.85	0.46	0.34	1.36	0.00	0.00	0.00
31.90	0.46	0.34	1.36	0.00	0.00	0.00
31.95	0.46	0.34	1.36	0.00	0.00	0.00
32.00	0.46	0.34	1.35	0.00	0.00	0.00
32.05	0.46	0.34	1.35	0.00	0.00	0.00
32.10	0.46	0.34	1.35	0.00	0.00	0.00
32.15	0.46	0.34	1.35	0.00	0.00	0.00
32.20	0.46	0.34	1.35	0.00	0.00	0.00
32.25	0.46	0.34	1.35	0.00	0.00	0.00
32.30	0.46	0.34	1.35	0.00	0.00	0.00
32.35	0.46	0.34	1.35	0.00	0.00	0.00
32.40	0.46	0.34	1.35	0.00	0.00	0.00
32.45	0.46	0.34	1.35	0.00	0.00	0.00
32.50	0.46	0.34	1.35	0.00	0.00	0.00
32.55	0.46	0.34	1.35	0.00	0.00	0.00
32.60	0.46	0.34	1.35	0.00	0.00	0.00
32.65	0.46	0.34	1.35	0.00	0.00	0.00
32.70	0.46	0.34	1.35	0.00	0.00	0.00
32.75	0.46	0.34	1.35	0.00	0.00	0.00
32.80	0.46	0.34	1.35	0.00	0.00	0.00
32.85	0.46	0.34	1.35	0.00	0.00	0.00
32.90	0.45	0.34	1.35	0.00	0.00	0.00
32.95	0.45	0.34	1.35	0.00	0.00	0.00
33.00	0.45	0.34	1.35	0.00	0.00	0.00
33.05	0.45	0.34	1.35	0.00	0.00	0.00
33.10	0.45	0.34	1.35	0.00	0.00	0.00
33.15	0.45	0.34	1.35	0.00	0.00	0.00
33.20	0.45	0.34	1.35	0.00	0.00	0.00
33.25	0.45	0.34	1.35	0.00	0.00	0.00
33.30	0.45	0.34	1.35	0.00	0.00	0.00
33.35	0.45	0.34	1.35	0.00	0.00	0.00
33.40	0.45	0.34	1.35	0.00	0.00	0.00
33.45	0.45	0.34	1.35	0.00	0.00	0.00
33.50	0.45	0.34	1.35	0.00	0.00	0.00
33.55	0.45	0.34	1.35	0.00	0.00	0.00
33.60	0.45	0.33	1.35	0.00	0.00	0.00
33.65	0.45	0.33	1.35	0.00	0.00	0.00
33.70	0.45	0.33	1.35	0.00	0.00	0.00
33.75	0.45	0.33	1.35	0.00	0.00	0.00
33.80	0.45	0.33	1.34	0.00	0.00	0.00
33.85	0.45	0.33	1.34	0.00	0.00	0.00

33.90	0.45	0.33	1.34	0.00	0.00	0.00
33.95	0.45	0.33	1.34	0.00	0.00	0.00
34.00	0.45	0.33	1.34	0.00	0.00	0.00
34.05	0.45	0.33	1.34	0.00	0.00	0.00
34.10	0.45	0.33	1.34	0.00	0.00	0.00
34.15	0.45	0.33	1.34	0.00	0.00	0.00
34.20	0.45	0.33	1.34	0.00	0.00	0.00
34.25	0.45	0.33	1.34	0.00	0.00	0.00
34.30	0.45	0.33	1.34	0.00	0.00	0.00
34.35	0.45	0.33	1.34	0.00	0.00	0.00
34.40	0.45	0.33	1.34	0.00	0.00	0.00
34.45	0.45	0.33	1.34	0.00	0.00	0.00
34.50	0.45	0.33	1.34	0.00	0.00	0.00
34.55	0.45	0.33	1.34	0.00	0.00	0.00
34.60	0.45	0.33	1.34	0.00	0.00	0.00
34.65	0.45	0.33	1.34	0.00	0.00	0.00
34.70	0.44	0.33	1.34	0.00	0.00	0.00
34.75	0.44	0.33	1.34	0.00	0.00	0.00
34.80	0.44	0.33	1.34	0.00	0.00	0.00
34.85	0.44	0.33	1.34	0.00	0.00	0.00
34.90	0.44	0.33	1.34	0.00	0.00	0.00
34.95	0.44	0.33	1.34	0.00	0.00	0.00
35.00	0.44	0.33	1.34	0.00	0.00	0.00
35.05	0.61	0.33	1.83	0.00	0.00	0.00
35.10	0.61	0.33	1.83	0.00	0.00	0.00
35.15	0.60	0.33	1.83	0.00	0.00	0.00
35.20	0.60	0.33	1.83	0.00	0.00	0.00
35.25	0.60	0.33	1.83	0.00	0.00	0.00
35.30	0.60	0.33	1.83	0.00	0.00	0.00
35.35	0.60	0.33	1.83	0.00	0.00	0.00
35.40	0.60	0.33	1.82	0.00	0.00	0.00
35.45	0.60	0.33	1.82	0.00	0.00	0.00
35.50	0.60	0.33	1.82	0.00	0.00	0.00
35.55	0.60	0.33	1.82	0.00	0.00	0.00
35.60	0.60	0.33	1.82	0.00	0.00	0.00
35.65	0.60	0.33	1.82	0.00	0.00	0.00
35.70	0.60	0.33	1.82	0.00	0.00	0.00
35.75	0.60	0.33	1.82	0.00	0.00	0.00
35.80	0.60	0.33	1.82	0.00	0.00	0.00
35.85	0.60	0.33	1.82	0.00	0.00	0.00
35.90	0.60	0.33	1.81	0.00	0.00	0.00
35.95	0.60	0.33	1.81	0.00	0.00	0.00
36.00	0.60	0.33	1.82	0.00	0.00	0.00
36.05	0.60	0.33	1.82	0.00	0.00	0.00
36.10	0.60	0.33	1.82	0.00	0.00	0.00
36.15	0.60	0.33	1.82	0.00	0.00	0.00
36.20	0.60	0.33	1.82	0.00	0.00	0.00
36.25	0.60	0.33	1.82	0.00	0.00	0.00
36.30	0.59	0.33	1.82	0.00	0.00	0.00
36.35	0.59	0.33	1.82	0.00	0.00	0.00
36.40	0.59	0.33	1.81	0.00	0.00	0.00
36.45	0.59	0.33	1.81	0.00	0.00	0.00
36.50	0.59	0.33	1.81	0.00	0.00	0.00
36.55	0.59	0.33	1.81	0.00	0.00	0.00
36.60	0.59	0.33	1.81	0.00	0.00	0.00
36.65	0.59	0.33	1.81	0.00	0.00	0.00
36.70	0.59	0.33	1.81	0.00	0.00	0.00
36.75	0.59	0.33	1.81	0.00	0.00	0.00
36.80	0.59	0.33	1.80	0.00	0.00	0.00
36.85	0.59	0.33	1.80	0.00	0.00	0.00
36.90	0.59	0.33	1.80	0.00	0.00	0.00
36.95	0.59	0.33	1.80	0.00	0.00	0.00
37.00	0.59	0.33	1.80	0.00	0.00	0.00
37.05	0.59	0.33	1.80	0.00	0.00	0.00
37.10	0.59	0.33	1.80	0.00	0.00	0.00
37.15	0.58	0.33	1.80	0.00	0.00	0.00
37.20	0.58	0.33	1.80	0.00	0.00	0.00
37.25	0.58	0.33	1.79	0.00	0.00	0.00
37.30	0.58	0.33	1.79	0.00	0.00	0.00
37.35	0.58	0.32	1.79	0.00	0.00	0.00
37.40	0.58	0.32	1.79	0.00	0.00	0.00

37.45	0.58	0.32	1.79	0.00	0.00	0.00
37.50	0.58	0.32	1.79	0.00	0.00	0.00
37.55	0.58	0.32	1.79	0.00	0.00	0.00
37.60	0.58	0.32	1.79	0.00	0.00	0.00
37.65	0.58	0.32	1.79	0.00	0.00	0.00
37.70	0.58	0.32	1.79	0.00	0.00	0.00
37.75	0.58	0.32	1.78	0.00	0.00	0.00
37.80	0.58	0.32	1.78	0.00	0.00	0.00
37.85	0.58	0.32	1.78	0.00	0.00	0.00
37.90	0.58	0.32	1.78	0.00	0.00	0.00
37.95	0.58	0.32	1.78	0.00	0.00	0.00
38.00	0.58	0.32	1.78	0.00	0.00	0.00
38.05	0.57	0.32	1.78	0.00	0.00	0.00
38.10	0.57	0.32	1.78	0.00	0.00	0.00
38.15	0.57	0.32	1.78	0.00	0.00	0.00
38.20	0.57	0.32	1.78	0.00	0.00	0.00
38.25	0.57	0.32	1.78	0.00	0.00	0.00
38.30	0.57	0.32	1.77	0.00	0.00	0.00
38.35	0.57	0.32	1.77	0.00	0.00	0.00
38.40	0.57	0.32	1.77	0.00	0.00	0.00
38.45	0.57	0.32	1.77	0.00	0.00	0.00
38.50	0.57	0.32	1.77	0.00	0.00	0.00
38.55	0.57	0.32	1.77	0.00	0.00	0.00
38.60	0.57	0.32	1.77	0.00	0.00	0.00
38.65	0.57	0.32	1.77	0.00	0.00	0.00
38.70	0.57	0.32	1.77	0.00	0.00	0.00
38.75	0.57	0.32	1.77	0.00	0.00	0.00
38.80	0.57	0.32	1.77	0.00	0.00	0.00
38.85	0.57	0.32	1.76	0.00	0.00	0.00
38.90	0.57	0.32	1.76	0.00	0.00	0.00
38.95	0.57	0.32	1.76	0.00	0.00	0.00
39.00	0.57	0.32	1.76	0.00	0.00	0.00
39.05	0.56	0.32	1.76	0.00	0.00	0.00
39.10	0.56	0.32	1.76	0.00	0.00	0.00
39.15	0.56	0.32	1.76	0.00	0.00	0.00
39.20	0.56	0.32	1.76	0.00	0.00	0.00
39.25	0.56	0.32	1.76	0.00	0.00	0.00
39.30	0.56	0.32	1.76	0.00	0.00	0.00
39.35	0.56	0.32	1.76	0.00	0.00	0.00
39.40	0.56	0.32	1.76	0.00	0.00	0.00
39.45	0.56	0.32	1.75	0.00	0.00	0.00
39.50	0.56	0.32	1.75	0.00	0.00	0.00
39.55	0.56	0.32	1.75	0.00	0.00	0.00
39.60	0.56	0.32	1.75	0.00	0.00	0.00
39.65	0.56	0.32	1.75	0.00	0.00	0.00
39.70	0.56	0.32	1.75	0.00	0.00	0.00
39.75	0.56	0.32	1.75	0.00	0.00	0.00
39.80	0.56	0.32	1.75	0.00	0.00	0.00
39.85	0.56	0.32	1.75	0.00	0.00	0.00
39.90	0.56	0.32	1.75	0.00	0.00	0.00
39.95	0.56	0.32	1.75	0.00	0.00	0.00
40.00	0.56	0.32	1.75	0.00	0.00	0.00
40.05	0.83	0.32	2.60	0.00	0.00	0.00
40.10	0.83	0.32	2.60	0.00	0.00	0.00
40.15	0.83	0.32	2.60	0.00	0.00	0.00
40.20	0.83	0.32	2.60	0.00	0.00	0.00
40.25	0.82	0.32	2.60	0.00	0.00	0.00
40.30	0.82	0.32	2.60	0.00	0.00	0.00
40.35	0.82	0.32	2.60	0.00	0.00	0.00
40.40	0.82	0.32	2.60	0.00	0.00	0.00
40.45	0.82	0.32	2.60	0.00	0.00	0.00
40.50	0.82	0.32	2.60	0.00	0.00	0.00
40.55	0.82	0.32	2.60	0.00	0.00	0.00
40.60	0.82	0.32	2.60	0.00	0.00	0.00
40.65	0.82	0.32	2.61	0.00	0.00	0.00
40.70	0.82	0.32	2.61	0.00	0.00	0.00
40.75	0.82	0.32	2.61	0.00	0.00	0.00
40.80	0.82	0.32	2.61	0.00	0.00	0.00
40.85	0.82	0.32	2.61	0.00	0.00	0.00
40.90	0.82	0.32	2.61	0.00	0.00	0.00
40.95	0.82	0.32	2.61	0.00	0.00	0.00

41.00	0.82	0.32	2.61	0.00	0.00	0.00
41.05	0.82	0.32	2.61	0.00	0.00	0.00
41.10	0.82	0.32	2.61	0.00	0.00	0.00
41.15	0.82	0.31	2.61	0.00	0.00	0.00
41.20	0.82	0.31	2.61	0.00	0.00	0.00
41.25	0.82	0.31	2.61	0.00	0.00	0.00
41.30	0.82	0.31	2.61	0.00	0.00	0.00
41.35	0.82	0.31	2.62	0.00	0.00	0.00
41.40	0.82	0.31	2.62	0.00	0.00	0.00
41.45	0.82	0.31	2.62	0.00	0.00	0.00
41.50	0.82	0.31	2.62	0.00	0.00	0.00
41.55	0.82	0.31	2.62	0.00	0.00	0.00
41.60	0.82	0.31	2.62	0.00	0.00	0.00
41.65	0.82	0.31	2.62	0.00	0.00	0.00
41.70	0.82	0.31	2.62	0.00	0.00	0.00
41.75	0.82	0.31	2.62	0.00	0.00	0.00
41.80	0.82	0.31	2.62	0.00	0.00	0.00
41.85	0.82	0.31	2.62	0.00	0.00	0.00
41.90	0.82	0.31	2.62	0.00	0.00	0.00
41.95	0.82	0.31	2.62	0.00	0.00	0.00
42.00	0.82	0.31	2.62	0.00	0.00	0.00
42.05	0.82	0.31	2.63	0.00	0.00	0.00
42.10	0.82	0.31	2.63	0.00	0.00	0.00
42.15	0.82	0.31	2.63	0.00	0.00	0.00
42.20	0.82	0.31	2.63	0.00	0.00	0.00
42.25	0.82	0.31	2.63	0.00	0.00	0.00
42.30	0.82	0.31	2.63	0.00	0.00	0.00
42.35	0.82	0.31	2.63	0.00	0.00	0.00
42.40	0.82	0.31	2.63	0.00	0.00	0.00
42.45	0.82	0.31	2.63	0.00	0.00	0.00
42.50	0.82	0.31	2.63	0.00	0.00	0.00
42.55	0.82	0.31	2.63	0.00	0.00	0.00
42.60	0.82	0.31	2.63	0.00	0.00	0.00
42.65	0.82	0.31	2.63	0.00	0.00	0.00
42.70	0.82	0.31	2.64	0.00	0.00	0.00
42.75	0.82	0.31	2.64	0.00	0.00	0.00
42.80	0.82	0.31	2.64	0.00	0.00	0.00
42.85	0.82	0.31	2.64	0.00	0.00	0.00
42.90	0.82	0.31	2.64	0.00	0.00	0.00
42.95	0.82	0.31	2.64	0.00	0.00	0.00
43.00	0.82	0.31	2.64	0.00	0.00	0.00
43.05	0.82	0.31	2.64	0.00	0.00	0.00
43.10	0.82	0.31	2.64	0.00	0.00	0.00
43.15	0.82	0.31	2.64	0.00	0.00	0.00
43.20	0.82	0.31	2.64	0.00	0.00	0.00
43.25	0.82	0.31	2.64	0.00	0.00	0.00
43.30	0.82	0.31	2.64	0.00	0.00	0.00
43.35	0.82	0.31	2.65	0.00	0.00	0.00
43.40	0.82	0.31	2.65	0.00	0.00	0.00
43.45	0.82	0.31	2.65	0.00	0.00	0.00
43.50	0.82	0.31	2.65	0.00	0.00	0.00
43.55	0.82	0.31	2.65	0.00	0.00	0.00
43.60	0.82	0.31	2.65	0.00	0.00	0.00
43.65	0.82	0.31	2.65	0.00	0.00	0.00
43.70	0.82	0.31	2.65	0.00	0.00	0.00
43.75	0.82	0.31	2.65	0.00	0.00	0.00
43.80	0.82	0.31	2.65	0.00	0.00	0.00
43.85	0.82	0.31	2.65	0.00	0.00	0.00
43.90	0.82	0.31	2.65	0.00	0.00	0.00
43.95	0.82	0.31	2.65	0.00	0.00	0.00
44.00	0.82	0.31	2.66	0.00	0.00	0.00
44.05	0.82	0.31	2.66	0.00	0.00	0.00
44.10	0.82	0.31	2.66	0.00	0.00	0.00
44.15	0.82	0.31	2.66	0.00	0.00	0.00
44.20	0.81	0.31	2.66	0.00	0.00	0.00
44.25	0.81	0.31	2.66	0.00	0.00	0.00
44.30	0.81	0.31	2.66	0.00	0.00	0.00
44.35	0.81	0.31	2.66	0.00	0.00	0.00
44.40	0.81	0.31	2.66	0.00	0.00	0.00
44.45	0.81	0.31	2.66	0.00	0.00	0.00
44.50	0.81	0.31	2.66	0.00	0.00	0.00

44.55	0.81	0.31	2.66	0.00	0.00	0.00
44.60	0.81	0.31	2.67	0.00	0.00	0.00
44.65	0.81	0.31	2.67	0.00	0.00	0.00
44.70	0.81	0.31	2.67	0.00	0.00	0.00
44.75	0.81	0.30	2.67	0.00	0.00	0.00
44.80	0.81	0.30	2.67	0.00	0.00	0.00
44.85	0.81	0.30	2.67	0.00	0.00	0.00
44.90	0.81	0.30	2.67	0.00	0.00	0.00
44.95	0.81	0.30	2.67	0.00	0.00	0.00
45.00	0.81	0.30	2.67	0.00	0.00	0.00
45.05	0.81	0.30	2.67	0.00	0.00	0.00
45.10	0.81	0.30	2.67	0.00	0.00	0.00
45.15	0.81	0.30	2.67	0.00	0.00	0.00
45.20	0.81	0.30	2.68	0.00	0.00	0.00
45.25	0.81	0.30	2.68	0.00	0.00	0.00
45.30	0.81	0.30	2.68	0.00	0.00	0.00
45.35	0.81	0.30	2.68	0.00	0.00	0.00
45.40	0.81	0.30	2.68	0.00	0.00	0.00
45.45	0.81	0.30	2.68	0.00	0.00	0.00
45.50	0.81	0.30	2.68	0.00	0.00	0.00
45.55	0.81	0.30	2.68	0.00	0.00	0.00
45.60	0.81	0.30	2.68	0.00	0.00	0.00
45.65	0.81	0.30	2.68	0.00	0.00	0.00
45.70	0.81	0.30	2.68	0.00	0.00	0.00
45.75	0.81	0.30	2.69	0.00	0.00	0.00
45.80	0.81	0.30	2.69	0.00	0.00	0.00
45.85	0.81	0.30	2.69	0.00	0.00	0.00
45.90	0.81	0.30	2.69	0.00	0.00	0.00
45.95	0.81	0.30	2.69	0.00	0.00	0.00
46.00	0.81	0.30	2.69	0.00	0.00	0.00
46.05	0.81	0.30	2.69	0.00	0.00	0.00
46.10	0.81	0.30	2.69	0.00	0.00	0.00
46.15	0.81	0.30	2.69	0.00	0.00	0.00
46.20	0.81	0.30	2.69	0.00	0.00	0.00
46.25	0.81	0.30	2.69	0.00	0.00	0.00
46.30	0.81	0.30	2.70	0.00	0.00	0.00
46.35	0.81	0.30	2.70	0.00	0.00	0.00
46.40	0.81	0.30	2.70	0.00	0.00	0.00
46.45	0.81	0.30	2.70	0.00	0.00	0.00
46.50	0.81	0.30	2.70	0.00	0.00	0.00
46.55	0.81	0.30	2.70	0.00	0.00	0.00
46.60	0.81	0.30	2.70	0.00	0.00	0.00
46.65	0.81	0.30	2.70	0.00	0.00	0.00
46.70	0.81	0.30	2.70	0.00	0.00	0.00
46.75	0.81	0.30	2.70	0.00	0.00	0.00
46.80	0.81	0.30	2.71	0.00	0.00	0.00
46.85	0.81	0.30	2.71	0.00	0.00	0.00
46.90	0.81	0.30	2.71	0.00	0.00	0.00
46.95	0.81	0.30	2.71	0.00	0.00	0.00
47.00	0.81	0.30	2.71	0.00	0.00	0.00
47.05	0.81	0.30	2.71	0.00	0.00	0.00
47.10	0.81	0.30	2.71	0.00	0.00	0.00
47.15	0.81	0.30	2.71	0.00	0.00	0.00
47.20	0.81	0.30	2.71	0.00	0.00	0.00
47.25	0.81	0.30	2.71	0.00	0.00	0.00
47.30	0.81	0.30	2.71	0.00	0.00	0.00
47.35	0.81	0.30	2.72	0.00	0.00	0.00
47.40	0.81	0.30	2.72	0.00	0.00	0.00
47.45	0.81	0.30	2.72	0.00	0.00	0.00
47.50	0.81	0.30	2.72	0.00	0.00	0.00
47.55	0.81	0.30	2.72	0.00	0.00	0.00
47.60	0.81	0.30	2.72	0.00	0.00	0.00
47.65	0.81	0.30	2.72	0.00	0.00	0.00
47.70	0.81	0.30	2.72	0.00	0.00	0.00
47.75	0.81	0.30	2.72	0.00	0.00	0.00
47.80	0.81	0.30	2.72	0.00	0.00	0.00
47.85	0.81	0.30	2.73	0.00	0.00	0.00
47.90	0.81	0.30	2.73	0.00	0.00	0.00
47.95	0.81	0.30	2.73	0.00	0.00	0.00
48.00	0.80	0.30	2.73	0.00	0.00	0.00
48.05	0.80	0.29	2.73	0.00	0.00	0.00

48.10	0.80	0.29	2.73	0.00	0.00	0.00
48.15	0.80	0.29	2.73	0.00	0.00	0.00
48.20	0.80	0.29	2.73	0.00	0.00	0.00
48.25	0.80	0.29	2.73	0.00	0.00	0.00
48.30	0.80	0.29	2.73	0.00	0.00	0.00
48.35	0.80	0.29	2.73	0.00	0.00	0.00
48.40	0.80	0.29	2.74	0.00	0.00	0.00
48.45	0.80	0.29	2.74	0.00	0.00	0.00
48.50	0.80	0.29	2.74	0.00	0.00	0.00
48.55	0.80	0.29	2.74	0.00	0.00	0.00
48.60	0.80	0.29	2.74	0.00	0.00	0.00
48.65	0.80	0.29	2.74	0.00	0.00	0.00
48.70	0.80	0.29	2.74	0.00	0.00	0.00
48.75	0.80	0.29	2.74	0.00	0.00	0.00
48.80	0.80	0.29	2.74	0.00	0.00	0.00
48.85	0.80	0.29	2.74	0.00	0.00	0.00
48.90	0.80	0.29	2.75	0.00	0.00	0.00
48.95	0.80	0.29	2.75	0.00	0.00	0.00
49.00	0.80	0.29	2.75	0.00	0.00	0.00
49.05	0.80	0.29	2.75	0.00	0.00	0.00
49.10	0.80	0.29	2.75	0.00	0.00	0.00
49.15	0.80	0.29	2.7S	0.00	0.00	0.00
49.20	0.80	0.29	2.75	0.00	0.00	0.00
49.25	0.80	0.29	2.75	0.00	0.00	0.00
49.30	0.80	0.29	2.75	0.00	0.00	0.00
49.35	0.80	0.29	2.75	0.00	0.00	0.00
49.40	0.80	0.29	2.76	0.00	0.00	0.00
49.45	0.80	0.29	2.76	0.00	0.00	0.00
49.S0	0.80	0.29	2.76	0.00	0.00	0.00
49.55	0.80	0.29	2.76	0.00	0.00	0.00
49.60	0.80	0.29	2.76	0.00	0.00	0.00
49.65	0.80	0.29	2.76	0.00	0.00	0.00
49.70	0.80	0.29	2.76	0.00	0.00	0.00
49.75	0.80	0.29	2.76	0.00	0.00	0.00
49.80	0.80	0.29	2.76	0.00	0.00	0.00
49.85	0.80	0.29	2.76	0.00	0.00	0.00
49.90	0.80	0.29	2.77	0.00	0.00	0.00
49.95	0.80	0.29	2.77	0.00	0.00	0.00
50.00	0.80	0.29	2.77	0.00	0.00	0.00

---

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0S81tsf); Unit Weight = pcf; Depth = ft; 5ettlement = in.

---

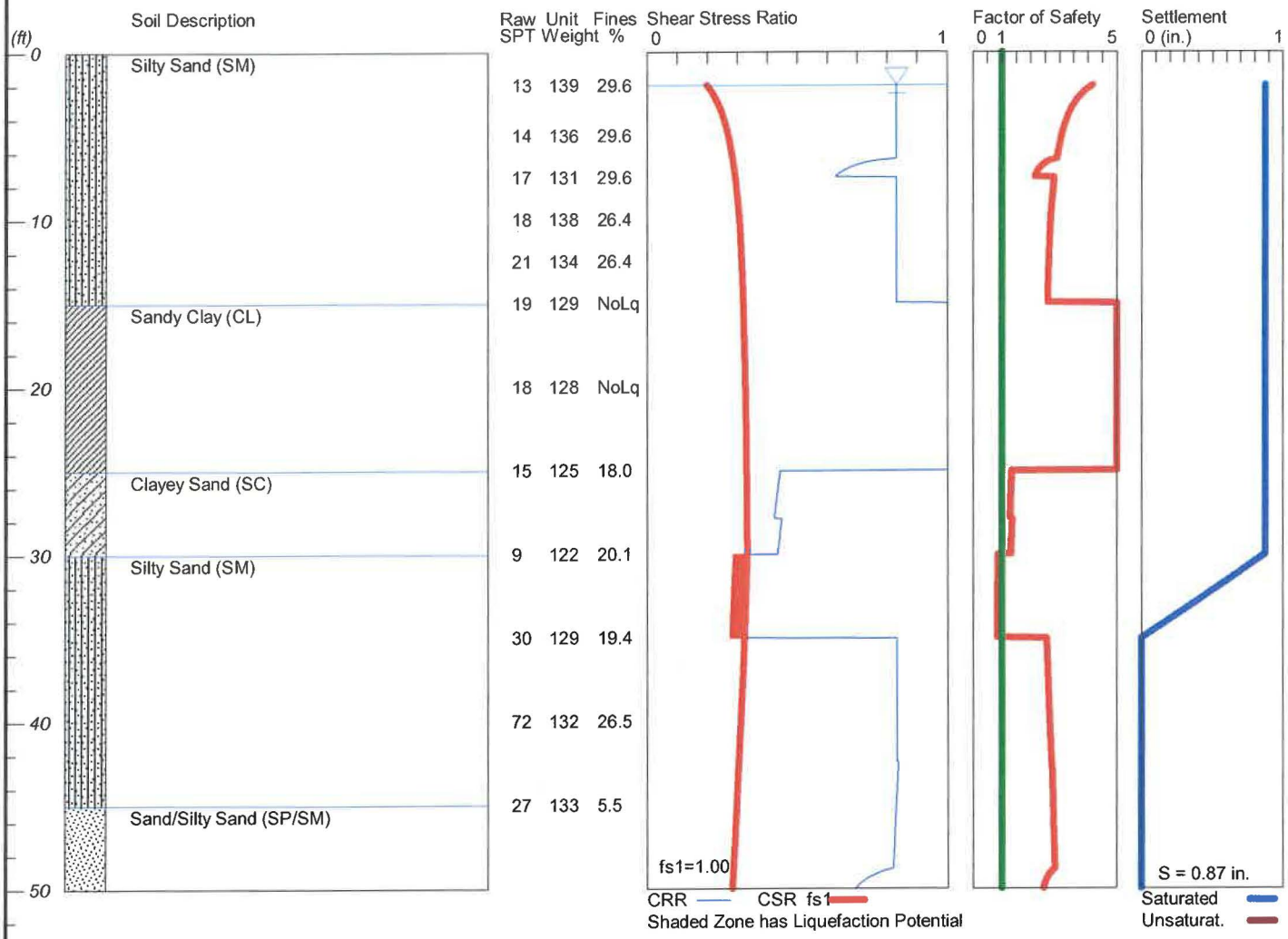
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.5. Factor of Safety against liquefaction, F.5.=CRRm/CSRsf
S_sat Settlement from saturated sands
5_dry 5ettlement from Unsaturated 5ands
S_all Total 5ettlement from Saturated and Unsaturated 5ands
NoLiq No-Liquefy 5oils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B17 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



LiquefyPro CivilTech Software USA www.civiltech.com

Krazan

012-22165

Plate A-1

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*****************************************************************************************************
                                    LIQUEFACTION ANALYSIS SUMMARY
                                   Copyright by CivilTech Software
                                        www.civiltech.com
*****************************************************************************************************
    Font: Courier New, Regular, Size 8 is recommended for this report.
    Licensed to ,   8/9/2023        11:19:46 AM

    Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B17\B17
Liquefaction.liq
    Title:  Triangle Development
    Subtitle:  012-22165

    Surface Elev.=
    Hole No.=B17
    Depth of Hole= 50.00 ft
    Water Table during Earthquake= 2.00 ft
    Water Table during In-Situ Testing= 6.00 ft
    Max. Acceleration= 0.31 g
    Earthquake Magnitude= 6.15

 Input Data:
    Surface Elev.=
    Hole No.=B17
    Depth of Hole=50.00 ft
    Water Table during Earthquake= 2.00 ft
    Water Table during In-Situ Testing= 6.00 ft
    Max. Acceleration=0.31 g
    Earthquake Magnitude=6.15
    No-Liquefiable Soils:   CL, OL are Non-Liq. Soil

    1. SPT or BPT Calculation.
    2. Settlement Analysis Method: Tokimatsu, M-correction
    3. Fines Correction for Liquefaction: Stark/Olson et al.*
    4. Fine Correction for Settlement: During Liquefaction*
    5. Settlement Calculation in: All zones*
    6. Hammer Energy Ratio,                                    Ce = 1.4
    7. Borehole Diameter,                                          Cb= 1.05
    8. Sampling Method,                                          Cs= 1
    9. User request factor of safety (apply to CSR) ,   User= 1
       Plot one CSR curve (fs1=User)
    10. Use Curve Smoothing: No
    * Recommended Options

    In-Situ Test Data:
    Depth   SPT     gamma   Fines
    ft              pcf     %
    ____________________________________
    2.00    13.00   139.00  29.60
    5.00    14.00   136.00  29.60
    7.50    17.00   131.00  29.60
    10.00   18.00   138.00  26.40
    12.50   21.00   134.00  26.40
    15.00   19.00   129.00  NoLiq
    20.00   18.00   128.00  NoLiq
    25.00   15.00   125.00  18.00
    30.00   9.00    122.00  20.10
    35.00   30.00   129.00  19.40
    40.00   72.00   132.00  26.50
    45.00   27.00   133.00  5.50
    ____________________________________

Output Results:
    Settlement of Saturated Sands=0.87 in.
    Settlement of Unsaturated Sands=0.00 in.
    Total Settlement of Saturated and Unsaturated Sands=0.87 in.
    Differential Settlement=0.437 to 0.576 in.

    Depth   CRRm    CSRfs   F.S.    S_sat.  S_dry   S_all
    ft                              in.     in.     in.
    ____________________________________________________
```

2.00	0.83	0.20	4.18	0.87	0.00	0.87
2.05	0.83	0.20	4.14	0.87	0.00	0.87
2.10	0.83	0.20	4.09	0.87	0.00	0.87
2.15	0.83	0.20	4.05	0.87	0.00	0.87
2.20	0.83	0.21	4.01	0.87	0.00	0.87
2.25	0.83	0.21	3.98	0.87	0.00	0.87
2.30	0.83	0.21	3.94	0.87	0.00	0.87
2.35	0.83	0.21	3.91	0.87	0.00	0.87
2.40	0.83	0.21	3.87	0.87	0.00	0.87
2.45	0.83	0.22	3.84	0.87	0.00	0.87
2.50	0.83	0.22	3.81	0.87	0.00	0.87
2.55	0.83	0.22	3.78	0.87	0.00	0.87
2.60	0.83	0.22	3.75	0.87	0.00	0.87
2.65	0.83	0.22	3.73	0.87	0.00	0.87
2.70	0.83	0.22	3.70	0.87	0.00	0.87
2.75	0.83	0.23	3.68	0.87	0.00	0.87
2.80	0.83	0.23	3.65	0.87	0.00	0.87
2.85	0.83	0.23	3.63	0.87	0.00	0.87
2.90	0.83	0.23	3.61	0.87	0.00	0.87
2.95	0.83	0.23	3.59	0.87	0.00	0.87
3.00	0.83	0.23	3.56	0.87	0.00	0.87
3.05	0.83	0.23	3.54	0.87	0.00	0.87
3.10	0.83	0.24	3.53	0.87	0.00	0.87
3.15	0.83	0.24	3.51	0.87	0.00	0.87
3.20	0.83	0.24	3.49	0.87	0.00	0.87
3.25	0.83	0.24	3.47	0.87	0.00	0.87
3.30	0.83	0.24	3.45	0.87	0.00	0.87
3.35	0.83	0.24	3.44	0.87	0.00	0.87
3.40	0.83	0.24	3.42	0.87	0.00	0.87
3.45	0.83	0.24	3.40	0.87	0.00	0.87
3.50	0.83	0.25	3.39	0.87	0.00	0.87
3.55	0.83	0.25	3.37	0.87	0.00	0.87
3.60	0.83	0.25	3.36	0.87	0.00	0.87
3.65	0.83	0.25	3.35	0.87	0.00	0.87
3.70	0.83	0.25	3.33	0.87	0.00	0.87
3.75	0.83	0.25	3.32	0.87	0.00	0.87
3.80	0.83	0.25	3.31	0.87	0.00	0.87
3.85	0.83	0.25	3.29	0.87	0.00	0.87
3.90	0.83	0.25	3.28	0.87	0.00	0.87
3.95	0.83	0.25	3.27	0.87	0.00	0.87
4.00	0.83	0.25	3.26	0.87	0.00	0.87
4.05	0.83	0.26	3.25	0.87	0.00	0.87
4.10	0.83	0.26	3.24	0.87	0.00	0.87
4.15	0.83	0.26	3.23	0.87	0.00	0.87
4.20	0.83	0.26	3.22	0.87	0.00	0.87
4.25	0.83	0.26	3.21	0.87	0.00	0.87
4.30	0.83	0.26	3.20	0.87	0.00	0.87
4.35	0.83	0.26	3.19	0.87	0.00	0.87
4.40	0.83	0.26	3.18	0.87	0.00	0.87
4.45	0.83	0.26	3.17	0.87	0.00	0.87
4.50	0.83	0.26	3.16	0.87	0.00	0.87
4.55	0.83	0.26	3.15	0.87	0.00	0.87
4.60	0.83	0.26	3.14	0.87	0.00	0.87
4.65	0.83	0.27	3.13	0.87	0.00	0.87
4.70	0.83	0.27	3.12	0.87	0.00	0.87
4.75	0.83	0.27	3.12	0.87	0.00	0.87
4.80	0.83	0.27	3.11	0.87	0.00	0.87
4.85	0.83	0.27	3.10	0.87	0.00	0.87
4.90	0.83	0.27	3.09	0.87	0.00	0.87
4.95	0.83	0.27	3.08	0.87	0.00	0.87
5.00	0.83	0.27	3.08	0.87	0.00	0.87
5.05	0.83	0.27	3.07	0.87	0.00	0.87
5.10	0.83	0.27	3.06	0.87	0.00	0.87
5.15	0.83	0.27	3.06	0.87	0.00	0.87
5.20	0.83	0.27	3.05	0.87	0.00	0.87
5.25	0.83	0.27	3.04	0.87	0.00	0.87
5.30	0.83	0.27	3.04	0.87	0.00	0.87
5.35	0.83	0.27	3.03	0.87	0.00	0.87
5.40	0.83	0.27	3.02	0.87	0.00	0.87
5.45	0.83	0.28	3.02	0.87	0.00	0.87
5.50	0.83	0.28	3.01	0.87	0.00	0.87

5.55	0.83	0.28	3.00	0.87	0.00	0.87
5.60	0.83	0.28	3.00	0.87	0.00	0.87
5.65	0.83	0.28	2.99	0.87	0.00	0.87
5.70	0.83	0.28	2.99	0.87	0.00	0.87
5.75	0.83	0.28	2.98	0.87	0.00	0.87
5.80	0.83	0.28	2.98	0.87	0.00	0.87
5.85	0.83	0.28	2.97	0.87	0.00	0.87
5.90	0.83	0.28	2.96	0.87	0.00	0.87
5.95	0.83	0.28	2.96	0.87	0.00	0.87
6.00	0.83	0.28	2.95	0.87	0.00	0.87
6.05	0.83	0.28	2.95	0.87	0.00	0.87
6.10	0.83	0.28	2.94	0.87	0.00	0.87
6.15	0.83	0.28	2.94	0.87	0.00	0.87
6.20	0.83	0.28	2.93	0.87	0.00	0.87
6.25	0.83	0.28	2.93	0.87	0.00	0.87
6.30	0.83	0.28	2.92	0.87	0.00	0.87
6.35	0.83	0.28	2.92	0.87	0.00	0.87
6.40	0.82	0.28	2.87	0.87	0.00	0.87
6.45	0.79	0.29	2.76	0.87	0.00	0.87
6.50	0.76	0.29	2.68	0.87	0.00	0.87
6.55	0.75	0.29	2.61	0.87	0.00	0.87
6.60	0.73	0.29	2.56	0.87	0.00	0.87
6.65	0.72	0.29	2.51	0.87	0.00	0.87
6.70	0.71	0.29	2.47	0.87	0.00	0.87
6.75	0.70	0.29	2.43	0.87	0.00	0.87
6.80	0.69	0.29	2.40	0.87	0.00	0.87
6.85	0.68	0.29	2.37	0.87	0.00	0.87
6.90	0.68	0.29	2.35	0.87	0.00	0.87
6.95	0.67	0.29	2.32	0.87	0.00	0.87
7.00	0.67	0.29	2.30	0.87	0.00	0.87
7.05	0.66	0.29	2.28	0.87	0.00	0.87
7.10	0.66	0.29	2.26	0.87	0.00	0.87
7.15	0.65	0.29	2.24	0.87	0.00	0.87
7.20	0.65	0.29	2.22	0.87	0.00	0.87
7.25	0.64	0.29	2.21	0.87	0.00	0.87
7.30	0.64	0.29	2.19	0.87	0.00	0.87
7.35	0.64	0.29	2.18	0.87	0.00	0.87
7.40	0.63	0.29	2.16	0.87	0.00	0.87
7.45	0.63	0.29	2.15	0.87	0.00	0.87
7.50	0.83	0.29	2.83	0.87	0.00	0.87
7.55	0.83	0.29	2.83	0.87	0.00	0.87
7.60	0.83	0.29	2.83	0.87	0.00	0.87
7.65	0.83	0.29	2.82	0.87	0.00	0.87
7.70	0.83	0.29	2.82	0.87	0.00	0.87
7.75	0.83	0.30	2.81	0.87	0.00	0.87
7.80	0.83	0.30	2.81	0.87	0.00	0.87
7.85	0.83	0.30	2.81	0.87	0.00	0.87
7.90	0.83	0.30	2.81	0.87	0.00	0.87
7.95	0.83	0.30	2.80	0.87	0.00	0.87
8.00	0.83	0.30	2.80	0.87	0.00	0.87
8.05	0.83	0.30	2.80	0.87	0.00	0.87
8.10	0.83	0.30	2.79	0.87	0.00	0.87
8.15	0.83	0.30	2.79	0.87	0.00	0.87
8.20	0.83	0.30	2.79	0.87	0.00	0.87
8.25	0.83	0.30	2.78	0.87	0.00	0.87
8.30	0.83	0.30	2.78	0.87	0.00	0.87
8.35	0.83	0.30	2.78	0.87	0.00	0.87
8.40	0.83	0.30	2.78	0.87	0.00	0.87
8.45	0.83	0.30	2.77	0.87	0.00	0.87
8.50	0.83	0.30	2.77	0.87	0.00	0.87
8.55	0.83	0.30	2.77	0.87	0.00	0.87
8.60	0.83	0.30	2.76	0.87	0.00	0.87
8.65	0.83	0.30	2.76	0.87	0.00	0.87
8.70	0.83	0.30	2.76	0.87	0.00	0.87
8.75	0.83	0.30	2.76	0.87	0.00	0.87
8.80	0.83	0.30	2.75	0.87	0.00	0.87
8.85	0.83	0.30	2.75	0.87	0.00	0.87
8.90	0.83	0.30	2.75	0.87	0.00	0.87
8.95	0.83	0.30	2.75	0.87	0.00	0.87
9.00	0.83	0.30	2.74	0.87	0.00	0.87
9.05	0.83	0.30	2.74	0.87	0.00	0.87

9.10	0.83	0.30	2.74	0.87	0.00	0.87
9.15	0.83	0.30	2.74	0.87	0.00	0.87
9.20	0.83	0.30	2.73	0.87	0.00	0.87
9.25	0.83	0.30	2.73	0.87	0.00	0.87
9.30	0.83	0.30	2.73	0.87	0.00	0.87
9.35	0.83	0.30	2.73	0.87	0.00	0.87
9.40	0.83	0.30	2.73	0.87	0.00	0.87
9.45	0.83	0.31	2.72	0.87	0.00	0.87
9.50	0.83	0.31	2.72	0.87	0.00	0.87
9.55	0.83	0.31	2.72	0.87	0.00	0.87
9.60	0.83	0.31	2.72	0.87	0.00	0.87
9.65	0.83	0.31	2.71	0.87	0.00	0.87
9.70	0.83	0.31	2.71	0.87	0.00	0.87
9.75	0.83	0.31	2.71	0.87	0.00	0.87
9.80	0.83	0.31	2.71	0.87	0.00	0.87
9.85	0.83	0.31	2.71	0.87	0.00	0.87
9.90	0.83	0.31	2.70	0.87	0.00	0.87
9.95	0.83	0.31	2.70	0.87	0.00	0.87
10.00	0.83	0.31	2.70	0.87	0.00	0.87
10.05	0.83	0.31	2.70	0.87	0.00	0.87
10.10	0.83	0.31	2.70	0.87	0.00	0.87
10.15	0.83	0.31	2.70	0.87	0.00	0.87
10.20	0.83	0.31	2.69	0.87	0.00	0.87
10.25	0.83	0.31	2.69	0.87	0.00	0.87
10.30	0.83	0.31	2.69	0.87	0.00	0.87
10.35	0.83	0.31	2.69	0.87	0.00	0.87
10.40	0.83	0.31	2.69	0.87	0.00	0.87
10.45	0.83	0.31	2.69	0.87	0.00	0.87
10.50	0.83	0.31	2.69	0.87	0.00	0.87
10.55	0.83	0.31	2.68	0.87	0.00	0.87
10.60	0.83	0.31	2.68	0.87	0.00	0.87
10.65	0.83	0.31	2.68	0.87	0.00	0.87
10.70	0.83	0.31	2.68	0.87	0.00	0.87
10.75	0.83	0.31	2.68	0.87	0.00	0.87
10.80	0.83	0.31	2.68	0.87	0.00	0.87
10.85	0.83	0.31	2.68	0.87	0.00	0.87
10.90	0.83	0.31	2.68	0.87	0.00	0.87
10.95	0.83	0.31	2.67	0.87	0.00	0.87
11.00	0.83	0.31	2.67	0.87	0.00	0.87
11.05	0.83	0.31	2.67	0.87	0.00	0.87
11.10	0.83	0.31	2.67	0.87	0.00	0.87
11.15	0.83	0.31	2.67	0.87	0.00	0.87
11.20	0.83	0.31	2.67	0.87	0.00	0.87
11.25	0.83	0.31	2.67	0.87	0.00	0.87
11.30	0.83	0.31	2.67	0.87	0.00	0.87
11.35	0.83	0.31	2.67	0.87	0.00	0.87
11.40	0.83	0.31	2.66	0.87	0.00	0.87
11.45	0.83	0.31	2.66	0.87	0.00	0.87
11.50	0.83	0.31	2.66	0.87	0.00	0.87
11.55	0.83	0.31	2.66	0.87	0.00	0.87
11.60	0.83	0.31	2.66	0.87	0.00	0.87
11.65	0.83	0.31	2.66	0.87	0.00	0.87
11.70	0.83	0.31	2.66	0.87	0.00	0.87
11.75	0.83	0.31	2.66	0.87	0.00	0.87
11.80	0.83	0.31	2.66	0.87	0.00	0.87
11.85	0.83	0.31	2.65	0.87	0.00	0.87
11.90	0.83	0.31	2.65	0.87	0.00	0.87
11.95	0.83	0.31	2.65	0.87	0.00	0.87
12.00	0.83	0.31	2.65	0.87	0.00	0.87
12.05	0.83	0.31	2.65	0.87	0.00	0.87
12.10	0.83	0.31	2.65	0.87	0.00	0.87
12.15	0.83	0.31	2.65	0.87	0.00	0.87
12.20	0.83	0.31	2.65	0.87	0.00	0.87
12.25	0.83	0.31	2.65	0.87	0.00	0.87
12.30	0.83	0.31	2.65	0.87	0.00	0.87
12.35	0.83	0.31	2.65	0.87	0.00	0.87
12.40	0.83	0.31	2.64	0.87	0.00	0.87
12.45	0.83	0.31	2.64	0.87	0.00	0.87
12.50	0.83	0.31	2.64	0.87	0.00	0.87
12.55	0.83	0.31	2.64	0.87	0.00	0.87
12.60	0.83	0.31	2.64	0.87	0.00	0.87

12.65	0.83	0.31	2.64	0.87	0.00	0.87
12.70	0.83	0.31	2.64	0.87	0.00	0.87
12.75	0.83	0.31	2.64	0.87	0.00	0.87
12.80	0.83	0.32	2.64	0.87	0.00	0.87
12.85	0.83	0.32	2.64	0.87	0.00	0.87
12.90	0.83	0.32	2.63	0.87	0.00	0.87
12.95	0.83	0.32	2.63	0.87	0.00	0.87
13.00	0.83	0.32	2.63	0.87	0.00	0.87
13.05	0.83	0.32	2.63	0.87	0.00	0.87
13.10	0.83	0.32	2.63	0.87	0.00	0.87
13.15	0.83	0.32	2.63	0.87	0.00	0.87
13.20	0.83	0.32	2.63	0.87	0.00	0.87
13.25	0.83	0.32	2.63	0.87	0.00	0.87
13.30	0.83	0.32	2.63	0.87	0.00	0.87
13.35	0.83	0.32	2.63	0.87	0.00	0.87
13.40	0.83	0.32	2.63	0.87	0.00	0.87
13.45	0.83	0.32	2.62	0.87	0.00	0.87
13.50	0.83	0.32	2.62	0.87	0.00	0.87
13.55	0.83	0.32	2.62	0.87	0.00	0.87
13.60	0.83	0.32	2.62	0.87	0.00	0.87
13.65	0.83	0.32	2.62	0.87	0.00	0.87
13.70	0.83	0.32	2.62	0.87	0.00	0.87
13.75	0.83	0.32	2.62	0.87	0.00	0.87
13.80	0.83	0.32	2.62	0.87	0.00	0.87
13.85	0.83	0.32	2.62	0.87	0.00	0.87
13.90	0.83	0.32	2.62	0.87	0.00	0.87
13.95	0.83	0.32	2.62	0.87	0.00	0.87
14.00	0.83	0.32	2.61	0.87	0.00	0.87
14.05	0.83	0.32	2.61	0.87	0.00	0.87
14.10	0.83	0.32	2.61	0.87	0.00	0.87
14.15	0.83	0.32	2.61	0.87	0.00	0.87
14.20	0.83	0.32	2.61	0.87	0.00	0.87
14.25	0.83	0.32	2.61	0.87	0.00	0.87
14.30	0.83	0.32	2.61	0.87	0.00	0.87
14.35	0.83	0.32	2.61	0.87	0.00	0.87
14.40	0.83	0.32	2.61	0.87	0.00	0.87
14.45	0.83	0.32	2.61	0.87	0.00	0.87
14.50	0.83	0.32	2.61	0.87	0.00	0.87
14.55	0.83	0.32	2.61	0.87	0.00	0.87
14.60	0.83	0.32	2.61	0.87	0.00	0.87
14.65	0.83	0.32	2.61	0.87	0.00	0.87
14.70	0.83	0.32	2.60	0.87	0.00	0.87
14.75	0.83	0.32	2.60	0.87	0.00	0.87
14.80	0.83	0.32	2.60	0.87	0.00	0.87
14.85	0.83	0.32	2.60	0.87	0.00	0.87
14.90	0.83	0.32	2.60	0.87	0.00	0.87
14.95	0.83	0.32	2.60	0.87	0.00	0.87
15.00	2.00	0.32	5.00	0.87	0.00	0.87
15.05	2.00	0.32	5.00	0.87	0.00	0.87
15.10	2.00	0.32	5.00	0.87	0.00	0.87
15.15	2.00	0.32	5.00	0.87	0.00	0.87
15.20	2.00	0.32	5.00	0.87	0.00	0.87
15.25	2.00	0.32	5.00	0.87	0.00	0.87
15.30	2.00	0.32	5.00	0.87	0.00	0.87
15.35	2.00	0.32	5.00	0.87	0.00	0.87
15.40	2.00	0.32	5.00	0.87	0.00	0.87
15.45	2.00	0.32	5.00	0.87	0.00	0.87
15.50	2.00	0.32	5.00	0.87	0.00	0.87
15.55	2.00	0.32	5.00	0.87	0.00	0.87
15.60	2.00	0.32	5.00	0.87	0.00	0.87
15.65	2.00	0.32	5.00	0.87	0.00	0.87
15.70	2.00	0.32	5.00	0.87	0.00	0.87
15.75	2.00	0.32	5.00	0.87	0.00	0.87
15.80	2.00	0.32	5.00	0.87	0.00	0.87
15.85	2.00	0.32	5.00	0.87	0.00	0.87
15.90	2.00	0.32	5.00	0.87	0.00	0.87
15.95	2.00	0.32	5.00	0.87	0.00	0.87
16.00	2.00	0.32	5.00	0.87	0.00	0.87
16.05	2.00	0.32	5.00	0.87	0.00	0.87
16.10	2.00	0.32	5.00	0.87	0.00	0.87
16.15	2.00	0.32	5.00	0.87	0.00	0.87

16.20	2.00	0.32	5.00	0.87	0.00	0.87
16.25	2.00	0.32	5.00	0.87	0.00	0.87
16.30	2.00	0.32	5.00	0.87	0.00	0.87
16.35	2.00	0.32	5.00	0.87	0.00	0.87
16.40	2.00	0.32	5.00	0.87	0.00	0.87
16.45	2.00	0.32	5.00	0.87	0.00	0.87
16.50	2.00	0.32	5.00	0.87	0.00	0.87
16.55	2.00	0.32	5.00	0.87	0.00	0.87
16.60	2.00	0.32	5.00	0.87	0.00	0.87
16.65	2.00	0.32	5.00	0.87	0.00	0.87
16.70	2.00	0.32	5.00	0.87	0.00	0.87
16.75	2.00	0.32	5.00	0.87	0.00	0.87
16.80	2.00	0.32	5.00	0.87	0.00	0.87
16.85	2.00	0.32	5.00	0.87	0.00	0.87
16.90	2.00	0.32	5.00	0.87	0.00	0.87
16.95	2.00	0.32	5.00	0.87	0.00	0.87
17.00	2.00	0.32	5.00	0.87	0.00	0.87
17.05	2.00	0.32	5.00	0.87	0.00	0.87
17.10	2.00	0.32	5.00	0.87	0.00	0.87
17.15	2.00	0.32	5.00	0.87	0.00	0.87
17.20	2.00	0.32	5.00	0.87	0.00	0.87
17.25	2.00	0.32	5.00	0.87	0.00	0.87
17.30	2.00	0.32	5.00	0.87	0.00	0.87
17.35	2.00	0.32	5.00	0.87	0.00	0.87
17.40	2.00	0.32	5.00	0.87	0.00	0.87
17.45	2.00	0.32	5.00	0.87	0.00	0.87
17.50	2.00	0.32	5.00	0.87	0.00	0.87
17.55	2.00	0.32	5.00	0.87	0.00	0.87
17.60	2.00	0.32	5.00	0.87	0.00	0.87
17.65	2.00	0.32	5.00	0.87	0.00	0.87
17.70	2.00	0.32	5.00	0.87	0.00	0.87
17.75	2.00	0.32	5.00	0.87	0.00	0.87
17.80	2.00	0.32	5.00	0.87	0.00	0.87
17.85	2.00	0.32	5.00	0.87	0.00	0.87
17.90	2.00	0.32	5.00	0.87	0.00	0.87
17.95	2.00	0.32	5.00	0.87	0.00	0.87
18.00	2.00	0.32	5.00	0.87	0.00	0.87
18.05	2.00	0.32	5.00	0.87	0.00	0.87
18.10	2.00	0.32	5.00	0.87	0.00	0.87
18.15	2.00	0.32	5.00	0.87	0.00	0.87
18.20	2.00	0.32	5.00	0.87	0.00	0.87
18.25	2.00	0.32	5.00	0.87	0.00	0.87
18.30	2.00	0.32	5.00	0.87	0.00	0.87
18.35	2.00	0.33	5.00	0.87	0.00	0.87
18.40	2.00	0.33	5.00	0.87	0.00	0.87
18.45	2.00	0.33	5.00	0.87	0.00	0.87
18.50	2.00	0.33	5.00	0.87	0.00	0.87
18.55	2.00	0.33	5.00	0.87	0.00	0.87
18.60	2.00	0.33	5.00	0.87	0.00	0.87
18.65	2.00	0.33	5.00	0.87	0.00	0.87
18.70	2.00	0.33	5.00	0.87	0.00	0.87
18.75	2.00	0.33	5.00	0.87	0.00	0.87
18.80	2.00	0.33	5.00	0.87	0.00	0.87
18.85	2.00	0.33	5.00	0.87	0.00	0.87
18.90	2.00	0.33	5.00	0.87	0.00	0.87
18.95	2.00	0.33	5.00	0.87	0.00	0.87
19.00	2.00	0.33	5.00	0.87	0.00	0.87
19.05	2.00	0.33	5.00	0.87	0.00	0.87
19.10	2.00	0.33	5.00	0.87	0.00	0.87
19.15	2.00	0.33	5.00	0.87	0.00	0.87
19.20	2.00	0.33	5.00	0.87	0.00	0.87
19.25	2.00	0.33	5.00	0.87	0.00	0.87
19.30	2.00	0.33	5.00	0.87	0.00	0.87
19.35	2.00	0.33	5.00	0.87	0.00	0.87
19.40	2.00	0.33	5.00	0.87	0.00	0.87
19.45	2.00	0.33	5.00	0.87	0.00	0.87
19.50	2.00	0.33	5.00	0.87	0.00	0.87
19.55	2.00	0.33	5.00	0.87	0.00	0.87
19.60	2.00	0.33	5.00	0.87	0.00	0.87
19.65	2.00	0.33	5.00	0.87	0.00	0.87
19.70	2.00	0.33	5.00	0.87	0.00	0.87

19.75	2.00	0.33	5.00	0.87	0.00	0.87
19.80	2.00	0.33	5.00	0.87	0.00	0.87
19.85	2.00	0.33	5.00	0.87	0.00	0.87
19.90	2.00	0.33	5.00	0.87	0.00	0.87
19.95	2.00	0.33	5.00	0.87	0.00	0.87
20.00	2.00	0.33	5.00	0.87	0.00	0.87
20.05	2.00	0.33	5.00	0.87	0.00	0.87
20.10	2.00	0.33	5.00	0.87	0.00	0.87
20.15	2.00	0.33	5.00	0.87	0.00	0.87
20.20	2.00	0.33	5.00	0.87	0.00	0.87
20.25	2.00	0.33	5.00	0.87	0.00	0.87
20.30	2.00	0.33	5.00	0.87	0.00	0.87
20.35	2.00	0.33	5.00	0.87	0.00	0.87
20.40	2.00	0.33	5.00	0.87	0.00	0.87
20.45	2.00	0.33	5.00	0.87	0.00	0.87
20.50	2.00	0.33	5.00	0.87	0.00	0.87
20.55	2.00	0.33	5.00	0.87	0.00	0.87
20.60	2.00	0.33	5.00	0.87	0.00	0.87
20.65	2.00	0.33	5.00	0.87	0.00	0.87
20.70	2.00	0.33	5.00	0.87	0.00	0.87
20.75	2.00	0.33	5.00	0.87	0.00	0.87
20.80	2.00	0.33	5.00	0.87	0.00	0.87
20.85	2.00	0.33	5.00	0.87	0.00	0.87
20.90	2.00	0.33	5.00	0.87	0.00	0.87
20.95	2.00	0.33	5.00	0.87	0.00	0.87
21.00	2.00	0.33	5.00	0.87	0.00	0.87
21.05	2.00	0.33	5.00	0.87	0.00	0.87
21.10	2.00	0.33	5.00	0.87	0.00	0.87
21.15	2.00	0.33	5.00	0.87	0.00	0.87
21.20	2.00	0.33	5.00	0.87	0.00	0.87
21.25	2.00	0.33	5.00	0.87	0.00	0.87
21.30	2.00	0.33	5.00	0.87	0.00	0.87
21.35	2.00	0.33	5.00	0.87	0.00	0.87
21.40	2.00	0.33	5.00	0.87	0.00	0.87
21.45	2.00	0.33	5.00	0.87	0.00	0.87
21.50	2.00	0.33	5.00	0.87	0.00	0.87
21.55	2.00	0.33	5.00	0.87	0.00	0.87
21.60	2.00	0.33	5.00	0.87	0.00	0.87
21.65	2.00	0.33	5.00	0.87	0.00	0.87
21.70	2.00	0.33	5.00	0.87	0.00	0.87
21.75	2.00	0.33	5.00	0.87	0.00	0.87
21.80	2.00	0.33	5.00	0.87	0.00	0.87
21.85	2.00	0.33	5.00	0.87	0.00	0.87
21.90	2.00	0.33	5.00	0.87	0.00	0.87
21.95	2.00	0.33	5.00	0.87	0.00	0.87
22.00	2.00	0.33	5.00	0.87	0.00	0.87
22.05	2.00	0.33	5.00	0.87	0.00	0.87
22.10	2.00	0.33	5.00	0.87	0.00	0.87
22.15	2.00	0.33	5.00	0.87	0.00	0.87
22.20	2.00	0.33	5.00	0.87	0.00	0.87
22.25	2.00	0.33	5.00	0.87	0.00	0.87
22.30	2.00	0.33	5.00	0.87	0.00	0.87
22.35	2.00	0.33	5.00	0.87	0.00	0.87
22.40	2.00	0.33	5.00	0.87	0.00	0.87
22.45	2.00	0.33	5.00	0.87	0.00	0.87
22.50	2.00	0.33	5.00	0.87	0.00	0.87
22.55	2.00	0.33	5.00	0.87	0.00	0.87
22.60	2.00	0.33	5.00	0.87	0.00	0.87
22.65	2.00	0.33	5.00	0.87	0.00	0.87
22.70	2.00	0.33	5.00	0.87	0.00	0.87
22.75	2.00	0.33	5.00	0.87	0.00	0.87
22.80	2.00	0.33	5.00	0.87	0.00	0.87
22.85	2.00	0.33	5.00	0.87	0.00	0.87
22.90	2.00	0.33	5.00	0.87	0.00	0.87
22.95	2.00	0.33	5.00	0.87	0.00	0.87
23.00	2.00	0.33	5.00	0.87	0.00	0.87
23.05	2.00	0.33	5.00	0.87	0.00	0.87
23.10	2.00	0.33	5.00	0.87	0.00	0.87
23.15	2.00	0.33	5.00	0.87	0.00	0.87
23.20	2.00	0.33	5.00	0.87	0.00	0.87
23.25	2.00	0.33	5.00	0.87	0.00	0.87

23.30	2.00	0.33	5.00	0.87	0.00	0.87
23.35	2.00	0.33	5.00	0.87	0.00	0.87
23.40	2.00	0.33	5.00	0.87	0.00	0.87
23.45	2.00	0.33	5.00	0.87	0.00	0.87
23.50	2.00	0.33	5.00	0.87	0.00	0.87
23.55	2.00	0.33	5.00	0.87	0.00	0.87
23.60	2.00	0.33	5.00	0.87	0.00	0.87
23.65	2.00	0.33	5.00	0.87	0.00	0.87
23.70	2.00	0.33	5.00	0.87	0.00	0.87
23.75	2.00	0.33	5.00	0.87	0.00	0.87
23.80	2.00	0.33	5.00	0.87	0.00	0.87
23.85	2.00	0.33	5.00	0.87	0.00	0.87
23.90	2.00	0.33	5.00	0.87	0.00	0.87
23.95	2.00	0.33	5.00	0.87	0.00	0.87
24.00	2.00	0.33	5.00	0.87	0.00	0.87
24.05	2.00	0.33	5.00	0.87	0.00	0.87
24.10	2.00	0.33	5.00	0.87	0.00	0.87
24.15	2.00	0.33	5.00	0.87	0.00	0.87
24.20	2.00	0.33	5.00	0.87	0.00	0.87
24.25	2.00	0.33	5.00	0.87	0.00	0.87
24.30	2.00	0.33	5.00	0.87	0.00	0.87
24.35	2.00	0.33	5.00	0.87	0.00	0.87
24.40	2.00	0.33	5.00	0.87	0.00	0.87
24.45	2.00	0.33	5.00	0.87	0.00	0.87
24.50	2.00	0.33	5.00	0.87	0.00	0.87
24.55	2.00	0.33	5.00	0.87	0.00	0.87
24.60	2.00	0.33	5.00	0.87	0.00	0.87
24.65	2.00	0.33	5.00	0.87	0.00	0.87
24.70	2.00	0.33	5.00	0.87	0.00	0.87
24.75	2.00	0.33	5.00	0.87	0.00	0.87
24.80	2.00	0.33	5.00	0.87	0.00	0.87
24.85	2.00	0.33	5.00	0.87	0.00	0.87
24.90	2.00	0.33	5.00	0.87	0.00	0.87
24.95	2.00	0.33	5.00	0.87	0.00	0.87
25.00	2.00	0.33	5.00	0.87	0.00	0.87
25.05	0.44	0.33	1.34	0.87	0.00	0.87
25.10	0.44	0.33	1.34	0.87	0.00	0.87
25.15	0.44	0.33	1.34	0.87	0.00	0.87
25.20	0.44	0.33	1.33	0.87	0.00	0.87
25.25	0.44	0.33	1.33	0.87	0.00	0.87
25.30	0.44	0.33	1.33	0.87	0.00	0.87
25.35	0.44	0.33	1.33	0.87	0.00	0.87
25.40	0.44	0.33	1.33	0.87	0.00	0.87
25.45	0.44	0.33	1.33	0.87	0.00	0.87
25.50	0.44	0.33	1.33	0.87	0.00	0.87
25.55	0.44	0.33	1.33	0.87	0.00	0.87
25.60	0.44	0.33	1.32	0.87	0.00	0.87
25.65	0.44	0.33	1.32	0.87	0.00	0.87
25.70	0.44	0.33	1.32	0.87	0.00	0.87
25.75	0.44	0.33	1.32	0.87	0.00	0.87
25.80	0.44	0.33	1.32	0.87	0.00	0.87
25.85	0.44	0.33	1.32	0.87	0.00	0.87
25.90	0.44	0.33	1.32	0.87	0.00	0.87
25.95	0.44	0.33	1.32	0.87	0.00	0.87
26.00	0.44	0.33	1.32	0.87	0.00	0.87
26.05	0.44	0.33	1.31	0.87	0.00	0.87
26.10	0.43	0.33	1.31	0.87	0.00	0.87
26.15	0.43	0.33	1.31	0.87	0.00	0.87
26.20	0.43	0.33	1.31	0.87	0.00	0.87
26.25	0.43	0.33	1.31	0.87	0.00	0.87
26.30	0.43	0.33	1.31	0.87	0.00	0.87
26.35	0.43	0.33	1.31	0.87	0.00	0.87
26.40	0.43	0.33	1.31	0.87	0.00	0.87
26.45	0.43	0.33	1.30	0.87	0.00	0.87
26.50	0.43	0.33	1.30	0.87	0.00	0.87
26.55	0.43	0.33	1.30	0.87	0.00	0.87
26.60	0.43	0.33	1.30	0.87	0.00	0.87
26.65	0.43	0.33	1.30	0.87	0.00	0.87
26.70	0.43	0.33	1.30	0.87	0.00	0.87
26.75	0.43	0.33	1.30	0.87	0.00	0.87
26.80	0.43	0.33	1.30	0.87	0.00	0.87

26.85	0.43	0.33	1.30	0.87	0.00	0.87
26.90	0.43	0.33	1.30	0.87	0.00	0.87
26.95	0.43	0.33	1.29	0.87	0.00	0.87
27.00	0.43	0.33	1.29	0.87	0.00	0.87
27.05	0.43	0.33	1.29	0.87	0.00	0.87
27.10	0.43	0.33	1.29	0.87	0.00	0.87
27.15	0.43	0.33	1.29	0.87	0.00	0.87
27.20	0.43	0.33	1.29	0.87	0.00	0.87
27.25	0.43	0.33	1.29	0.87	0.00	0.87
27.30	0.43	0.33	1.29	0.87	0.00	0.87
27.35	0.43	0.33	1.29	0.87	0.00	0.87
27.40	0.43	0.33	1.28	0.87	0.00	0.87
27.45	0.43	0.33	1.28	0.87	0.00	0.87
27.50	0.43	0.33	1.28	0.87	0.00	0.87
27.55	0.43	0.33	1.28	0.87	0.00	0.87
27.60	0.42	0.33	1.28	0.87	0.00	0.87
27.65	0.42	0.33	1.28	0.87	0.00	0.87
27.70	0.42	0.33	1.28	0.87	0.00	0.87
27.75	0.42	0.33	1.28	0.87	0.00	0.87
27.80	0.42	0.33	1.28	0.87	0.00	0.87
27.85	0.42	0.33	1.28	0.87	0.00	0.87
27.90	0.45	0.33	1.35	0.87	0.00	0.87
27.95	0.45	0.33	1.35	0.87	0.00	0.87
28.00	0.45	0.33	1.35	0.87	0.00	0.87
28.05	0.45	0.33	1.35	0.87	0.00	0.87
28.10	0.45	0.33	1.34	0.87	0.00	0.87
28.15	0.45	0.33	1.34	0.87	0.00	0.87
28.20	0.45	0.33	1.34	0.87	0.00	0.87
28.25	0.45	0.33	1.34	0.87	0.00	0.87
28.30	0.45	0.33	1.34	0.87	0.00	0.87
28.35	0.44	0.33	1.34	0.87	0.00	0.87
28.40	0.44	0.33	1.34	0.87	0.00	0.87
28.45	0.44	0.33	1.34	0.87	0.00	0.87
28.50	0.44	0.33	1.34	0.87	0.00	0.87
28.55	0.44	0.33	1.34	0.87	0.00	0.87
28.60	0.44	0.33	1.33	0.87	0.00	0.87
28.65	0.44	0.33	1.33	0.87	0.00	0.87
28.70	0.44	0.33	1.33	0.87	0.00	0.87
28.75	0.44	0.33	1.33	0.87	0.00	0.87
28.80	0.44	0.33	1.33	0.87	0.00	0.87
28.85	0.44	0.33	1.33	0.87	0.00	0.87
28.90	0.44	0.33	1.33	0.87	0.00	0.87
28.95	0.44	0.33	1.33	0.87	0.00	0.87
29.00	0.44	0.33	1.33	0.87	0.00	0.87
29.05	0.44	0.33	1.32	0.87	0.00	0.87
29.10	0.44	0.33	1.32	0.87	0.00	0.87
29.15	0.44	0.33	1.32	0.87	0.00	0.87
29.20	0.44	0.33	1.32	0.87	0.00	0.87
29.25	0.44	0.33	1.32	0.87	0.00	0.87
29.30	0.44	0.33	1.32	0.87	0.00	0.87
29.35	0.44	0.33	1.32	0.87	0.00	0.87
29.40	0.44	0.33	1.32	0.87	0.00	0.87
29.45	0.44	0.33	1.32	0.87	0.00	0.87
29.50	0.44	0.33	1.32	0.87	0.00	0.87
29.55	0.44	0.33	1.31	0.87	0.00	0.87
29.60	0.44	0.33	1.31	0.87	0.00	0.87
29.65	0.44	0.33	1.31	0.87	0.00	0.87
29.70	0.44	0.33	1.31	0.87	0.00	0.87
29.75	0.44	0.33	1.31	0.87	0.00	0.87
29.80	0.44	0.33	1.31	0.87	0.00	0.87
29.85	0.44	0.33	1.31	0.87	0.00	0.87
29.90	0.43	0.33	1.31	0.87	0.00	0.87
29.95	0.43	0.33	1.31	0.87	0.00	0.87
30.00	0.43	0.33	1.31	0.87	0.00	0.87
30.05	0.29	0.33	0.86*	0.87	0.00	0.87
30.10	0.29	0.33	0.86*	0.86	0.00	0.86
30.15	0.29	0.33	0.86*	0.86	0.00	0.86
30.20	0.28	0.33	0.86*	0.85	0.00	0.85
30.25	0.28	0.33	0.86*	0.84	0.00	0.84
30.30	0.28	0.33	0.86*	0.83	0.00	0.83
30.35	0.28	0.33	0.86*	0.82	0.00	0.82

30.40	0.28	0.33	0.86*	0.81	0.00	0.81
30.45	0.28	0.33	0.86*	0.81	0.00	0.81
30.50	0.28	0.33	0.86*	0.80	0.00	0.80
30.55	0.28	0.33	0.86*	0.79	0.00	0.79
30.60	0.28	0.33	0.86*	0.78	0.00	0.78
30.65	0.28	0.33	0.86*	0.77	0.00	0.77
30.70	0.28	0.33	0.86*	0.76	0.00	0.76
30.75	0.28	0.33	0.86*	0.75	0.00	0.75
30.80	0.28	0.33	0.86*	0.75	0.00	0.75
30.85	0.28	0.33	0.86*	0.74	0.00	0.74
30.90	0.28	0.33	0.86*	0.73	0.00	0.73
30.95	0.28	0.33	0.86*	0.72	0.00	0.72
31.00	0.28	0.33	0.86*	0.71	0.00	0.71
31.05	0.28	0.33	0.85*	0.70	0.00	0.70
31.10	0.28	0.33	0.85*	0.69	0.00	0.69
31.15	0.28	0.33	0.85*	0.69	0.00	0.69
31.20	0.28	0.33	0.85*	0.68	0.00	0.68
31.25	0.28	0.33	0.85*	0.67	0.00	0.67
31.30	0.28	0.33	0.85*	0.66	0.00	0.66
31.35	0.28	0.33	0.85*	0.65	0.00	0.65
31.40	0.28	0.33	0.85*	0.64	0.00	0.64
31.45	0.28	0.33	0.85*	0.63	0.00	0.63
31.50	0.28	0.33	0.85*	0.62	0.00	0.62
31.55	0.28	0.33	0.85*	0.62	0.00	0.62
31.60	0.28	0.33	0.85*	0.61	0.00	0.61
31.65	0.28	0.33	0.85*	0.60	0.00	0.60
31.70	0.28	0.33	0.85*	0.59	0.00	0.59
31.75	0.28	0.33	0.85*	0.58	0.00	0.58
31.80	0.28	0.33	0.85*	0.57	0.00	0.57
31.85	0.28	0.33	0.85*	0.56	0.00	0.56
31.90	0.28	0.33	0.85*	0.56	0.00	0.56
31.95	0.28	0.33	0.85*	0.55	0.00	0.55
32.00	0.28	0.33	0.85*	0.54	0.00	0.54
32.05	0.28	0.33	0.85*	0.53	0.00	0.53
32.10	0.28	0.33	0.85*	0.52	0.00	0.52
32.15	0.28	0.33	0.85*	0.51	0.00	0.51
32.20	0.28	0.33	0.85*	0.50	0.00	0.50
32.25	0.28	0.33	0.85*	0.49	0.00	0.49
32.30	0.28	0.33	0.85*	0.49	0.00	0.49
32.35	0.28	0.33	0.85*	0.48	0.00	0.48
32.40	0.28	0.33	0.85*	0.47	0.00	0.47
32.45	0.28	0.33	0.85*	0.46	0.00	0.46
32.50	0.28	0.33	0.85*	0.45	0.00	0.45
32.55	0.28	0.33	0.85*	0.44	0.00	0.44
32.60	0.28	0.33	0.85*	0.43	0.00	0.43
32.65	0.28	0.33	0.85*	0.42	0.00	0.42
32.70	0.28	0.33	0.85*	0.42	0.00	0.42
32.75	0.28	0.33	0.85*	0.41	0.00	0.41
32.80	0.28	0.33	0.85*	0.40	0.00	0.40
32.85	0.28	0.33	0.85*	0.39	0.00	0.39
32.90	0.28	0.33	0.85*	0.38	0.00	0.38
32.95	0.28	0.33	0.85*	0.37	0.00	0.37
33.00	0.28	0.33	0.85*	0.36	0.00	0.36
33.05	0.28	0.33	0.85*	0.35	0.00	0.35
33.10	0.28	0.33	0.85*	0.35	0.00	0.35
33.15	0.28	0.33	0.85*	0.34	0.00	0.34
33.20	0.28	0.33	0.85*	0.33	0.00	0.33
33.25	0.28	0.33	0.85*	0.32	0.00	0.32
33.30	0.28	0.33	0.85*	0.31	0.00	0.31
33.35	0.28	0.33	0.85*	0.30	0.00	0.30
33.40	0.28	0.33	0.85*	0.29	0.00	0.29
33.45	0.28	0.33	0.85*	0.28	0.00	0.28
33.50	0.28	0.33	0.85*	0.28	0.00	0.28
33.55	0.28	0.33	0.85*	0.27	0.00	0.27
33.60	0.28	0.33	0.85*	0.26	0.00	0.26
33.65	0.28	0.33	0.85*	0.25	0.00	0.25
33.70	0.28	0.33	0.85*	0.24	0.00	0.24
33.75	0.28	0.33	0.85*	0.23	0.00	0.23
33.80	0.28	0.33	0.85*	0.22	0.00	0.22
33.85	0.28	0.33	0.85*	0.21	0.00	0.21
33.90	0.28	0.33	0.85*	0.20	0.00	0.20

33.95	0.28	0.33	0.85*	0.20	0.00	0.20
34.00	0.28	0.33	0.85*	0.19	0.00	0.19
34.05	0.28	0.33	0.85*	0.18	0.00	0.18
34.10	0.28	0.33	0.85*	0.17	0.00	0.17
34.15	0.28	0.33	0.85*	0.16	0.00	0.16
34.20	0.28	0.32	0.85*	0.15	0.00	0.15
34.25	0.28	0.32	0.85*	0.14	0.00	0.14
34.30	0.28	0.32	0.85*	0.13	0.00	0.13
34.35	0.27	0.32	0.85*	0.12	0.00	0.12
34.40	0.27	0.32	0.85*	0.12	0.00	0.12
34.45	0.27	0.32	0.85*	0.11	0.00	0.11
34.50	0.27	0.32	0.85*	0.10	0.00	0.10
34.55	0.27	0.32	0.85*	0.09	0.00	0.09
34.60	0.27	0.32	0.85*	0.08	0.00	0.08
34.65	0.27	0.32	0.85*	0.07	0.00	0.07
34.70	0.27	0.32	0.85*	0.06	0.00	0.06
34.75	0.27	0.32	0.85*	0.05	0.00	0.05
34.80	0.27	0.32	0.85*	0.04	0.00	0.04
34.85	0.27	0.32	0.85*	0.04	0.00	0.04
34.90	0.27	0.32	0.85*	0.03	0.00	0.03
34.95	0.27	0.32	0.85*	0.02	0.00	0.02
35.00	0.27	0.32	0.85*	0.01	0.00	0.01
35.05	0.83	0.32	2.57	0.00	0.00	0.00
35.10	0.83	0.32	2.57	0.00	0.00	0.00
35.15	0.83	0.32	2.57	0.00	0.00	0.00
35.20	0.83	0.32	2.57	0.00	0.00	0.00
35.25	0.83	0.32	2.57	0.00	0.00	0.00
35.30	0.83	0.32	2.57	0.00	0.00	0.00
35.35	0.83	0.32	2.58	0.00	0.00	0.00
35.40	0.83	0.32	2.58	0.00	0.00	0.00
35.45	0.83	0.32	2.58	0.00	0.00	0.00
35.50	0.83	0.32	2.58	0.00	0.00	0.00
35.55	0.83	0.32	2.58	0.00	0.00	0.00
35.60	0.83	0.32	2.58	0.00	0.00	0.00
35.65	0.83	0.32	2.58	0.00	0.00	0.00
35.70	0.83	0.32	2.58	0.00	0.00	0.00
35.75	0.83	0.32	2.58	0.00	0.00	0.00
35.80	0.83	0.32	2.58	0.00	0.00	0.00
35.85	0.83	0.32	2.59	0.00	0.00	0.00
35.90	0.83	0.32	2.59	0.00	0.00	0.00
35.95	0.83	0.32	2.59	0.00	0.00	0.00
36.00	0.83	0.32	2.59	0.00	0.00	0.00
36.05	0.83	0.32	2.59	0.00	0.00	0.00
36.10	0.83	0.32	2.59	0.00	0.00	0.00
36.15	0.83	0.32	2.59	0.00	0.00	0.00
36.20	0.83	0.32	2.59	0.00	0.00	0.00
36.25	0.83	0.32	2.59	0.00	0.00	0.00
36.30	0.83	0.32	2.59	0.00	0.00	0.00
36.35	0.83	0.32	2.60	0.00	0.00	0.00
36.40	0.83	0.32	2.60	0.00	0.00	0.00
36.45	0.83	0.32	2.60	0.00	0.00	0.00
36.50	0.83	0.32	2.60	0.00	0.00	0.00
36.55	0.83	0.32	2.60	0.00	0.00	0.00
36.60	0.83	0.32	2.60	0.00	0.00	0.00
36.65	0.83	0.32	2.60	0.00	0.00	0.00
36.70	0.83	0.32	2.60	0.00	0.00	0.00
36.75	0.83	0.32	2.60	0.00	0.00	0.00
36.80	0.83	0.32	2.60	0.00	0.00	0.00
36.85	0.83	0.32	2.61	0.00	0.00	0.00
36.90	0.83	0.32	2.61	0.00	0.00	0.00
36.95	0.83	0.32	2.61	0.00	0.00	0.00
37.00	0.83	0.32	2.61	0.00	0.00	0.00
37.05	0.83	0.32	2.61	0.00	0.00	0.00
37.10	0.83	0.32	2.61	0.00	0.00	0.00
37.15	0.83	0.32	2.61	0.00	0.00	0.00
37.20	0.83	0.32	2.61	0.00	0.00	0.00
37.25	0.83	0.32	2.61	0.00	0.00	0.00
37.30	0.83	0.32	2.61	0.00	0.00	0.00
37.35	0.83	0.32	2.62	0.00	0.00	0.00
37.40	0.83	0.32	2.62	0.00	0.00	0.00
37.45	0.83	0.32	2.62	0.00	0.00	0.00

37.50	0.83	0.32	2.62	0.00	0.00	0.00
37.55	0.83	0.32	2.62	0.00	0.00	0.00
37.60	0.83	0.32	2.62	0.00	0.00	0.00
37.65	0.83	0.32	2.62	0.00	0.00	0.00
37.70	0.83	0.32	2.62	0.00	0.00	0.00
37.75	0.83	0.32	2.62	0.00	0.00	0.00
37.80	0.83	0.32	2.62	0.00	0.00	0.00
37.85	0.83	0.32	2.63	0.00	0.00	0.00
37.90	0.83	0.32	2.63	0.00	0.00	0.00
37.95	0.83	0.32	2.63	0.00	0.00	0.00
38.00	0.83	0.32	2.63	0.00	0.00	0.00
38.05	0.83	0.32	2.63	0.00	0.00	0.00
38.10	0.83	0.32	2.63	0.00	0.00	0.00
38.15	0.83	0.32	2.63	0.00	0.00	0.00
38.20	0.83	0.32	2.63	0.00	0.00	0.00
38.25	0.83	0.32	2.63	0.00	0.00	0.00
38.30	0.83	0.32	2.64	0.00	0.00	0.00
38.35	0.83	0.32	2.64	0.00	0.00	0.00
38.40	0.83	0.31	2.64	0.00	0.00	0.00
38.45	0.83	0.31	2.64	0.00	0.00	0.00
38.50	0.83	0.31	2.64	0.00	0.00	0.00
38.55	0.83	0.31	2.64	0.00	0.00	0.00
38.60	0.83	0.31	2.64	0.00	0.00	0.00
38.65	0.83	0.31	2.64	0.00	0.00	0.00
38.70	0.83	0.31	2.64	0.00	0.00	0.00
38.75	0.83	0.31	2.64	0.00	0.00	0.00
38.80	0.83	0.31	2.65	0.00	0.00	0.00
38.85	0.83	0.31	2.65	0.00	0.00	0.00
38.90	0.83	0.31	2.65	0.00	0.00	0.00
38.95	0.83	0.31	2.65	0.00	0.00	0.00
39.00	0.83	0.31	2.65	0.00	0.00	0.00
39.05	0.83	0.31	2.65	0.00	0.00	0.00
39.10	0.83	0.31	2.65	0.00	0.00	0.00
39.15	0.83	0.31	2.65	0.00	0.00	0.00
39.20	0.83	0.31	2.65	0.00	0.00	0.00
39.25	0.83	0.31	2.66	0.00	0.00	0.00
39.30	0.83	0.31	2.66	0.00	0.00	0.00
39.35	0.83	0.31	2.66	0.00	0.00	0.00
39.40	0.83	0.31	2.66	0.00	0.00	0.00
39.45	0.83	0.31	2.66	0.00	0.00	0.00
39.50	0.83	0.31	2.66	0.00	0.00	0.00
39.55	0.83	0.31	2.66	0.00	0.00	0.00
39.60	0.83	0.31	2.66	0.00	0.00	0.00
39.65	0.83	0.31	2.66	0.00	0.00	0.00
39.70	0.83	0.31	2.67	0.00	0.00	0.00
39.75	0.83	0.31	2.67	0.00	0.00	0.00
39.80	0.83	0.31	2.67	0.00	0.00	0.00
39.85	0.83	0.31	2.67	0.00	0.00	0.00
39.90	0.83	0.31	2.67	0.00	0.00	0.00
39.95	0.83	0.31	2.67	0.00	0.00	0.00
40.00	0.83	0.31	2.67	0.00	0.00	0.00
40.05	0.83	0.31	2.67	0.00	0.00	0.00
40.10	0.83	0.31	2.67	0.00	0.00	0.00
40.15	0.83	0.31	2.68	0.00	0.00	0.00
40.20	0.83	0.31	2.68	0.00	0.00	0.00
40.25	0.83	0.31	2.68	0.00	0.00	0.00
40.30	0.83	0.31	2.68	0.00	0.00	0.00
40.35	0.83	0.31	2.68	0.00	0.00	0.00
40.40	0.83	0.31	2.68	0.00	0.00	0.00
40.45	0.83	0.31	2.68	0.00	0.00	0.00
40.50	0.83	0.31	2.68	0.00	0.00	0.00
40.55	0.83	0.31	2.69	0.00	0.00	0.00
40.60	0.83	0.31	2.69	0.00	0.00	0.00
40.65	0.83	0.31	2.69	0.00	0.00	0.00
40.70	0.83	0.31	2.69	0.00	0.00	0.00
40.75	0.83	0.31	2.69	0.00	0.00	0.00
40.80	0.83	0.31	2.69	0.00	0.00	0.00
40.85	0.83	0.31	2.69	0.00	0.00	0.00
40.90	0.83	0.31	2.69	0.00	0.00	0.00
40.95	0.83	0.31	2.69	0.00	0.00	0.00
41.00	0.83	0.31	2.70	0.00	0.00	0.00

41.05	0.83	0.31	2.70	0.00	0.00	0.00
41.10	0.83	0.31	2.70	0.00	0.00	0.00
41.15	0.83	0.31	2.70	0.00	0.00	0.00
41.20	0.83	0.31	2.70	0.00	0.00	0.00
41.25	0.83	0.31	2.70	0.00	0.00	0.00
41.30	0.83	0.31	2.70	0.00	0.00	0.00
41.35	0.83	0.31	2.70	0.00	0.00	0.00
41.40	0.83	0.31	2.71	0.00	0.00	0.00
41.45	0.83	0.31	2.71	0.00	0.00	0.00
41.50	0.83	0.31	2.71	0.00	0.00	0.00
41.55	0.83	0.31	2.71	0.00	0.00	0.00
41.60	0.83	0.31	2.71	0.00	0.00	0.00
41.65	0.83	0.31	2.71	0.00	0.00	0.00
41.70	0.83	0.31	2.71	0.00	0.00	0.00
41.75	0.83	0.31	2.71	0.00	0.00	0.00
41.80	0.83	0.31	2.72	0.00	0.00	0.00
41.85	0.83	0.31	2.72	0.00	0.00	0.00
41.90	0.83	0.31	2.72	0.00	0.00	0.00
41.95	0.83	0.31	2.72	0.00	0.00	0.00
42.00	0.83	0.31	2.72	0.00	0.00	0.00
42.05	0.83	0.31	2.72	0.00	0.00	0.00
42.10	0.83	0.31	2.72	0.00	0.00	0.00
42.15	0.83	0.30	2.72	0.00	0.00	0.00
42.20	0.83	0.30	2.73	0.00	0.00	0.00
42.25	0.83	0.30	2.73	0.00	0.00	0.00
42.30	0.83	0.30	2.73	0.00	0.00	0.00
42.35	0.83	0.30	2.73	0.00	0.00	0.00
42.40	0.83	0.30	2.73	0.00	0.00	0.00
42.45	0.84	0.30	2.75	0.00	0.00	0.00
42.50	0.84	0.30	2.75	0.00	0.00	0.00
42.55	0.84	0.30	2.75	0.00	0.00	0.00
42.60	0.84	0.30	2.75	0.00	0.00	0.00
42.65	0.84	0.30	2.75	0.00	0.00	0.00
42.70	0.84	0.30	2.75	0.00	0.00	0.00
42.75	0.84	0.30	2.75	0.00	0.00	0.00
42.80	0.83	0.30	2.75	0.00	0.00	0.00
42.85	0.83	0.30	2.75	0.00	0.00	0.00
42.90	0.83	0.30	2.76	0.00	0.00	0.00
42.95	0.83	0.30	2.76	0.00	0.00	0.00
43.00	0.83	0.30	2.76	0.00	0.00	0.00
43.05	0.83	0.30	2.76	0.00	0.00	0.00
43.10	0.83	0.30	2.76	0.00	0.00	0.00
43.15	0.83	0.30	2.76	0.00	0.00	0.00
43.20	0.83	0.30	2.76	0.00	0.00	0.00
43.25	0.83	0.30	2.76	0.00	0.00	0.00
43.30	0.83	0.30	2.76	0.00	0.00	0.00
43.35	0.83	0.30	2.76	0.00	0.00	0.00
43.40	0.83	0.30	2.76	0.00	0.00	0.00
43.45	0.83	0.30	2.76	0.00	0.00	0.00
43.50	0.83	0.30	2.77	0.00	0.00	0.00
43.55	0.83	0.30	2.77	0.00	0.00	0.00
43.60	0.83	0.30	2.77	0.00	0.00	0.00
43.65	0.83	0.30	2.77	0.00	0.00	0.00
43.70	0.83	0.30	2.77	0.00	0.00	0.00
43.75	0.83	0.30	2.77	0.00	0.00	0.00
43.80	0.83	0.30	2.77	0.00	0.00	0.00
43.85	0.83	0.30	2.77	0.00	0.00	0.00
43.90	0.83	0.30	2.77	0.00	0.00	0.00
43.95	0.83	0.30	2.77	0.00	0.00	0.00
44.00	0.83	0.30	2.77	0.00	0.00	0.00
44.05	0.83	0.30	2.77	0.00	0.00	0.00
44.10	0.83	0.30	2.77	0.00	0.00	0.00
44.15	0.83	0.30	2.78	0.00	0.00	0.00
44.20	0.83	0.30	2.78	0.00	0.00	0.00
44.25	0.83	0.30	2.78	0.00	0.00	0.00
44.30	0.83	0.30	2.78	0.00	0.00	0.00
44.35	0.83	0.30	2.78	0.00	0.00	0.00
44.40	0.83	0.30	2.78	0.00	0.00	0.00
44.45	0.83	0.30	2.78	0.00	0.00	0.00
44.50	0.83	0.30	2.78	0.00	0.00	0.00
44.55	0.83	0.30	2.78	0.00	0.00	0.00

44.60	0.83	0.30	2.78	0.00	0.00	0.00
44.65	0.83	0.30	2.78	0.00	0.00	0.00
44.70	0.83	0.30	2.78	0.00	0.00	0.00
44.75	0.83	0.30	2.79	0.00	0.00	0.00
44.80	0.83	0.30	2.79	0.00	0.00	0.00
44.85	0.83	0.30	2.79	0.00	0.00	0.00
44.90	0.83	0.30	2.79	0.00	0.00	0.00
44.95	0.83	0.30	2.79	0.00	0.00	0.00
45.00	0.83	0.30	2.79	0.00	0.00	0.00
45.05	0.83	0.30	2.79	0.00	0.00	0.00
45.10	0.83	0.30	2.79	0.00	0.00	0.00
45.15	0.83	0.30	2.79	0.00	0.00	0.00
45.20	0.83	0.30	2.79	0.00	0.00	0.00
45.25	0.83	0.30	2.79	0.00	0.00	0.00
45.30	0.83	0.30	2.79	0.00	0.00	0.00
45.35	0.83	0.30	2.80	0.00	0.00	0.00
45.40	0.83	0.30	2.80	0.00	0.00	0.00
45.45	0.83	0.30	2.80	0.00	0.00	0.00
45.50	0.83	0.30	2.80	0.00	0.00	0.00
45.55	0.83	0.30	2.80	0.00	0.00	0.00
45.60	0.83	0.30	2.80	0.00	0.00	0.00
45.65	0.83	0.30	2.80	0.00	0.00	0.00
45.70	0.83	0.30	2.80	0.00	0.00	0.00
45.75	0.83	0.29	2.80	0.00	0.00	0.00
45.80	0.83	0.29	2.80	0.00	0.00	0.00
45.85	0.83	0.29	2.80	0.00	0.00	0.00
45.90	0.83	0.29	2.81	0.00	0.00	0.00
45.95	0.83	0.29	2.81	0.00	0.00	0.00
46.00	0.83	0.29	2.81	0.00	0.00	0.00
46.05	0.83	0.29	2.81	0.00	0.00	0.00
46.10	0.83	0.29	2.81	0.00	0.00	0.00
46.15	0.83	0.29	2.81	0.00	0.00	0.00
46.20	0.83	0.29	2.81	0.00	0.00	0.00
46.25	0.83	0.29	2.81	0.00	0.00	0.00
46.30	0.83	0.29	2.81	0.00	0.00	0.00
46.35	0.82	0.29	2.81	0.00	0.00	0.00
46.40	0.82	0.29	2.81	0.00	0.00	0.00
46.45	0.82	0.29	2.82	0.00	0.00	0.00
46.50	0.82	0.29	2.82	0.00	0.00	0.00
46.55	0.82	0.29	2.82	0.00	0.00	0.00
46.60	0.82	0.29	2.82	0.00	0.00	0.00
46.65	0.82	0.29	2.82	0.00	0.00	0.00
46.70	0.82	0.29	2.82	0.00	0.00	0.00
46.75	0.82	0.29	2.82	0.00	0.00	0.00
46.80	0.82	0.29	2.82	0.00	0.00	0.00
46.85	0.82	0.29	2.82	0.00	0.00	0.00
46.90	0.82	0.29	2.82	0.00	0.00	0.00
46.95	0.82	0.29	2.82	0.00	0.00	0.00
47.00	0.82	0.29	2.83	0.00	0.00	0.00
47.05	0.82	0.29	2.83	0.00	0.00	0.00
47.10	0.82	0.29	2.83	0.00	0.00	0.00
47.15	0.82	0.29	2.83	0.00	0.00	0.00
47.20	0.82	0.29	2.83	0.00	0.00	0.00
47.25	0.82	0.29	2.83	0.00	0.00	0.00
47.30	0.82	0.29	2.83	0.00	0.00	0.00
47.35	0.82	0.29	2.83	0.00	0.00	0.00
47.40	0.82	0.29	2.83	0.00	0.00	0.00
47.45	0.82	0.29	2.83	0.00	0.00	0.00
47.50	0.82	0.29	2.83	0.00	0.00	0.00
47.55	0.82	0.29	2.84	0.00	0.00	0.00
47.60	0.82	0.29	2.84	0.00	0.00	0.00
47.65	0.82	0.29	2.84	0.00	0.00	0.00
47.70	0.82	0.29	2.84	0.00	0.00	0.00
47.75	0.82	0.29	2.84	0.00	0.00	0.00
47.80	0.82	0.29	2.84	0.00	0.00	0.00
47.85	0.82	0.29	2.84	0.00	0.00	0.00
47.90	0.82	0.29	2.84	0.00	0.00	0.00
47.95	0.82	0.29	2.84	0.00	0.00	0.00
48.00	0.82	0.29	2.84	0.00	0.00	0.00
48.05	0.82	0.29	2.84	0.00	0.00	0.00
48.10	0.82	0.29	2.85	0.00	0.00	0.00

48.15	0.82	0.29	2.85	0.00	0.00	0.00
48.20	0.82	0.29	2.85	0.00	0.00	0.00
48.25	0.82	0.29	2.85	0.00	0.00	0.00
48.30	0.82	0.29	2.85	0.00	0.00	0.00
48.35	0.82	0.29	2.85	0.00	0.00	0.00
48.40	0.82	0.29	2.85	0.00	0.00	0.00
48.45	0.82	0.29	2.85	0.00	0.00	0.00
48.50	0.82	0.29	2.85	0.00	0.00	0.00
48.55	0.82	0.29	2.85	0.00	0.00	0.00
48.60	0.82	0.29	2.85	0.00	0.00	0.00
48.65	0.82	0.29	2.86	0.00	0.00	0.00
48.70	0.82	0.29	2.86	0.00	0.00	0.00
48.75	0.82	0.29	2.86	0.00	0.00	0.00
48.80	0.82	0.29	2.86	0.00	0.00	0.00
48.85	0.81	0.29	2.82	0.00	0.00	0.00
48.90	0.80	0.29	2.79	0.00	0.00	0.00
48.95	0.79	0.29	2.76	0.00	0.00	0.00
49.00	0.78	0.29	2.74	0.00	0.00	0.00
49.05	0.77	0.29	2.71	0.00	0.00	0.00
49.10	0.77	0.29	2.69	0.00	0.00	0.00
49.15	0.76	0.29	2.67	0.00	0.00	0.00
49.20	0.76	0.29	2.65	0.00	0.00	0.00
49.25	0.75	0.28	2.63	0.00	0.00	0.00
49.30	0.74	0.28	2.61	0.00	0.00	0.00
49.35	0.74	0.28	2.60	0.00	0.00	0.00
49.40	0.73	0.28	2.58	0.00	0.00	0.00
49.45	0.73	0.28	2.57	0.00	0.00	0.00
49.50	0.73	0.28	2.56	0.00	0.00	0.00
49.55	0.72	0.28	2.54	0.00	0.00	0.00
49.60	0.72	0.28	2.53	0.00	0.00	0.00
49.65	0.71	0.28	2.52	0.00	0.00	0.00
49.70	0.71	0.28	2.51	0.00	0.00	0.00
49.75	0.71	0.28	2.50	0.00	0.00	0.00
49.80	0.70	0.28	2.49	0.00	0.00	0.00
49.85	0.70	0.28	2.48	0.00	0.00	0.00
49.90	0.70	0.28	2.47	0.00	0.00	0.00
49.95	0.70	0.28	2.46	0.00	0.00	0.00
50.00	0.69	0.28	2.45	0.00	0.00	0.00

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* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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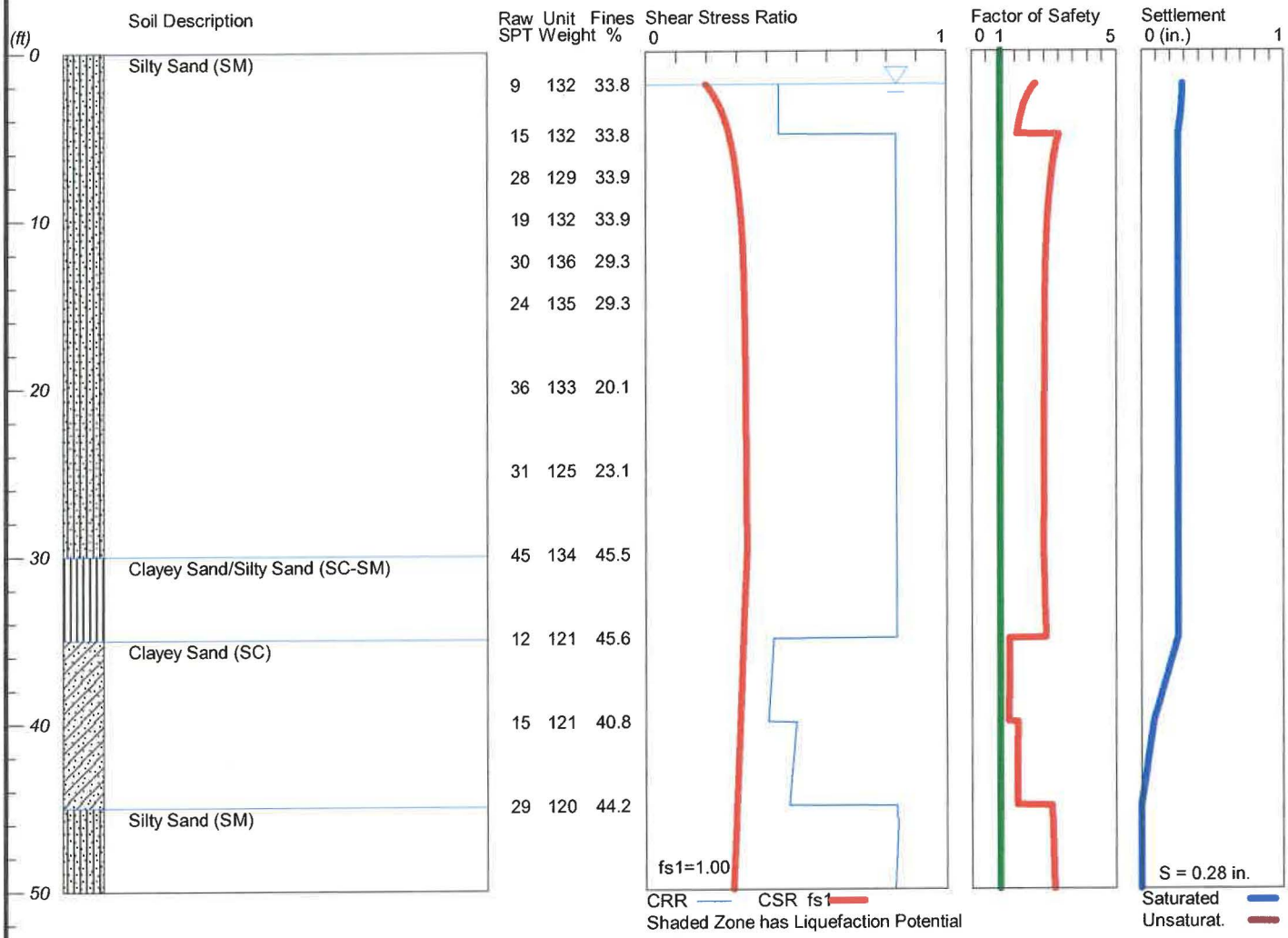
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat Settlement from saturated sands
S_dry Settlement from Unsaturated Sands
S_all Total Settlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B18 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B18\B18 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-22165

Surface Elev.=
Hole No.=B18
Depth of Hole= 50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 3.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B18
Depth of Hole=50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 3.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.4
7. Borehole Diameter, Cb= 1.05
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	9.00	132.00	33.80
5.00	15.00	132.00	33.80
7.50	28.00	129.00	33.90
10.00	19.00	132.00	33.90
12.50	30.00	136.00	29.30
15.00	24.00	135.00	29.30
20.00	36.00	133.00	20.10
25.00	31.00	125.00	23.10
30.00	45.00	134.00	45.50
35.00	12.00	121.00	45.60
40.00	15.00	121.00	40.80
45.00	29.00	120.00	44.20

Output Results:
Settlement of Saturated Sands=0.28 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.28 in.
Differential Settlement=0.142 to 0.188 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

2.00	0.44	0.20	2.21	0.28	0.00	0.28
2.05	0.44	0.20	2.18	0.28	0.00	0.28
2.10	0.44	0.20	2.16	0.28	0.00	0.28
2.15	0.44	0.21	2.14	0.28	0.00	0.28
2.20	0.44	0.21	2.11	0.28	0.00	0.28
2.25	0.44	0.21	2.09	0.28	0.00	0.28
2.30	0.44	0.21	2.07	0.28	0.00	0.28
2.35	0.44	0.21	2.05	0.28	0.00	0.28
2.40	0.44	0.22	2.04	0.28	0.00	0.28
2.45	0.44	0.22	2.02	0.28	0.00	0.28
2.50	0.44	0.22	2.00	0.28	0.00	0.28
2.55	0.44	0.22	1.99	0.28	0.00	0.28
2.60	0.44	0.22	1.97	0.28	0.00	0.28
2.65	0.44	0.22	1.96	0.28	0.00	0.28
2.70	0.44	0.23	1.94	0.28	0.00	0.28
2.75	0.44	0.23	1.93	0.28	0.00	0.28
2.80	0.44	0.23	1.91	0.28	0.00	0.28
2.85	0.44	0.23	1.90	0.28	0.00	0.28
2.90	0.44	0.23	1.89	0.28	0.00	0.28
2.95	0.44	0.23	1.88	0.28	0.00	0.28
3.00	0.44	0.24	1.86	0.28	0.00	0.28
3.05	0.44	0.24	1.85	0.28	0.00	0.28
3.10	0.44	0.24	1.84	0.28	0.00	0.28
3.15	0.44	0.24	1.83	0.28	0.00	0.28
3.20	0.44	0.24	1.82	0.28	0.00	0.28
3.25	0.44	0.24	1.81	0.28	0.00	0.28
3.30	0.44	0.24	1.80	0.28	0.00	0.28
3.35	0.44	0.24	1.79	0.28	0.00	0.28
3.40	0.44	0.25	1.78	0.28	0.00	0.28
3.45	0.44	0.25	1.78	0.28	0.00	0.28
3.50	0.44	0.25	1.77	0.28	0.00	0.28
3.55	0.44	0.25	1.76	0.28	0.00	0.28
3.60	0.44	0.25	1.75	0.28	0.00	0.28
3.65	0.44	0.25	1.74	0.28	0.00	0.28
3.70	0.44	0.25	1.74	0.28	0.00	0.28
3.75	0.44	0.25	1.73	0.28	0.00	0.28
3.80	0.44	0.25	1.72	0.28	0.00	0.28
3.85	0.44	0.26	1.71	0.28	0.00	0.28
3.90	0.44	0.26	1.71	0.27	0.00	0.27
3.95	0.44	0.26	1.70	0.27	0.00	0.27
4.00	0.44	0.26	1.69	0.27	0.00	0.27
4.05	0.44	0.26	1.69	0.27	0.00	0.27
4.10	0.44	0.26	1.68	0.27	0.00	0.27
4.15	0.44	0.26	1.68	0.27	0.00	0.27
4.20	0.44	0.26	1.67	0.27	0.00	0.27
4.25	0.44	0.26	1.66	0.27	0.00	0.27
4.30	0.44	0.26	1.66	0.27	0.00	0.27
4.35	0.44	0.27	1.65	0.27	0.00	0.27
4.40	0.44	0.27	1.65	0.27	0.00	0.27
4.45	0.44	0.27	1.64	0.27	0.00	0.27
4.50	0.44	0.27	1.64	0.27	0.00	0.27
4.55	0.44	0.27	1.63	0.27	0.00	0.27
4.60	0.44	0.27	1.63	0.26	0.00	0.26
4.65	0.44	0.27	1.62	0.26	0.00	0.26
4.70	0.44	0.27	1.62	0.26	0.00	0.26
4.75	0.44	0.27	1.61	0.26	0.00	0.26
4.80	0.44	0.27	1.61	0.26	0.00	0.26
4.85	0.44	0.27	1.61	0.26	0.00	0.26
4.90	0.44	0.27	1.60	0.26	0.00	0.26
4.95	0.44	0.27	1.60	0.26	0.00	0.26
5.00	0.83	0.28	3.02	0.26	0.00	0.26
5.05	0.83	0.28	3.01	0.26	0.00	0.26
5.10	0.83	0.28	3.00	0.26	0.00	0.26
5.15	0.83	0.28	3.00	0.26	0.00	0.26
5.20	0.83	0.28	2.99	0.26	0.00	0.26
5.25	0.83	0.28	2.98	0.26	0.00	0.26
5.30	0.83	0.28	2.97	0.26	0.00	0.26
5.35	0.83	0.28	2.97	0.26	0.00	0.26
5.40	0.83	0.28	2.96	0.26	0.00	0.26
5.45	0.83	0.28	2.95	0.26	0.00	0.26
5.50	0.83	0.28	2.95	0.26	0.00	0.26

5.55	0.83	0.28	2.94	0.26	0.00	0.26
5.60	0.83	0.28	2.94	0.26	0.00	0.26
5.65	0.83	0.28	2.93	0.26	0.00	0.26
5.70	0.83	0.28	2.92	0.26	0.00	0.26
5.75	0.83	0.28	2.92	0.26	0.00	0.26
5.80	0.83	0.29	2.91	0.26	0.00	0.26
5.85	0.83	0.29	2.91	0.26	0.00	0.26
5.90	0.83	0.29	2.90	0.26	0.00	0.26
5.95	0.83	0.29	2.90	0.26	0.00	0.26
6.00	0.83	0.29	2.89	0.26	0.00	0.26
6.05	0.83	0.29	2.89	0.26	0.00	0.26
6.10	0.83	0.29	2.88	0.26	0.00	0.26
6.15	0.83	0.29	2.88	0.26	0.00	0.26
6.20	0.83	0.29	2.87	0.26	0.00	0.26
6.25	0.83	0.29	2.87	0.26	0.00	0.26
6.30	0.83	0.29	2.86	0.26	0.00	0.26
6.35	0.83	0.29	2.86	0.26	0.00	0.26
6.40	0.83	0.29	2.85	0.26	0.00	0.26
6.45	0.83	0.29	2.85	0.26	0.00	0.26
6.50	0.83	0.29	2.84	0.26	0.00	0.26
6.55	0.83	0.29	2.84	0.26	0.00	0.26
6.60	0.83	0.29	2.83	0.26	0.00	0.26
6.65	0.83	0.29	2.83	0.26	0.00	0.26
6.70	0.83	0.29	2.83	0.26	0.00	0.26
6.75	0.83	0.29	2.82	0.26	0.00	0.26
6.80	0.83	0.29	2.82	0.26	0.00	0.26
6.85	0.83	0.30	2.81	0.26	0.00	0.26
6.90	0.83	0.30	2.81	0.26	0.00	0.26
6.95	0.83	0.30	2.81	0.26	0.00	0.26
7.00	0.83	0.30	2.80	0.26	0.00	0.26
7.05	0.83	0.30	2.80	0.26	0.00	0.26
7.10	0.83	0.30	2.80	0.26	0.00	0.26
7.15	0.83	0.30	2.79	0.26	0.00	0.26
7.20	0.83	0.30	2.79	0.26	0.00	0.26
7.25	0.83	0.30	2.78	0.26	0.00	0.26
7.30	0.83	0.30	2.78	0.26	0.00	0.26
7.35	0.83	0.30	2.78	0.26	0.00	0.26
7.40	0.83	0.30	2.77	0.26	0.00	0.26
7.45	0.83	0.30	2.77	0.26	0.00	0.26
7.50	0.83	0.30	2.77	0.26	0.00	0.26
7.55	0.83	0.30	2.76	0.26	0.00	0.26
7.60	0.83	0.30	2.76	0.26	0.00	0.26
7.65	0.83	0.30	2.76	0.26	0.00	0.26
7.70	0.83	0.30	2.75	0.26	0.00	0.26
7.75	0.83	0.30	2.75	0.26	0.00	0.26
7.80	0.83	0.30	2.75	0.26	0.00	0.26
7.85	0.83	0.30	2.75	0.26	0.00	0.26
7.90	0.83	0.30	2.74	0.26	0.00	0.26
7.95	0.83	0.30	2.74	0.26	0.00	0.26
8.00	0.83	0.30	2.74	0.26	0.00	0.26
8.05	0.83	0.30	2.73	0.26	0.00	0.26
8.10	0.83	0.30	2.73	0.26	0.00	0.26
8.15	0.83	0.30	2.73	0.26	0.00	0.26
8.20	0.83	0.30	2.72	0.26	0.00	0.26
8.25	0.83	0.31	2.72	0.26	0.00	0.26
8.30	0.83	0.31	2.72	0.26	0.00	0.26
8.35	0.83	0.31	2.72	0.26	0.00	0.26
8.40	0.83	0.31	2.71	0.26	0.00	0.26
8.45	0.83	0.31	2.71	0.26	0.00	0.26
8.50	0.83	0.31	2.71	0.26	0.00	0.26
8.55	0.83	0.31	2.71	0.26	0.00	0.26
8.60	0.83	0.31	2.70	0.26	0.00	0.26
8.65	0.83	0.31	2.70	0.26	0.00	0.26
8.70	0.83	0.31	2.70	0.26	0.00	0.26
8.75	0.83	0.31	2.69	0.26	0.00	0.26
8.80	0.83	0.31	2.69	0.26	0.00	0.26
8.85	0.83	0.31	2.69	0.26	0.00	0.26
8.90	0.83	0.31	2.69	0.26	0.00	0.26
8.95	0.83	0.31	2.69	0.26	0.00	0.26
9.00	0.83	0.31	2.68	0.26	0.00	0.26
9.05	0.83	0.31	2.68	0.26	0.00	0.26

9.10	0.83	0.31	2.68	0.26	0.00	0.26
9.15	0.83	0.31	2.68	0.26	0.00	0.26
9.20	0.83	0.31	2.67	0.26	0.00	0.26
9.25	0.83	0.31	2.67	0.26	0.00	0.26
9.30	0.83	0.31	2.67	0.26	0.00	0.26
9.35	0.83	0.31	2.67	0.26	0.00	0.26
9.40	0.83	0.31	2.66	0.26	0.00	0.26
9.45	0.83	0.31	2.66	0.26	0.00	0.26
9.50	0.83	0.31	2.66	0.26	0.00	0.26
9.55	0.83	0.31	2.66	0.26	0.00	0.26
9.60	0.83	0.31	2.66	0.26	0.00	0.26
9.65	0.83	0.31	2.65	0.26	0.00	0.26
9.70	0.83	0.31	2.65	0.26	0.00	0.26
9.75	0.83	0.31	2.65	0.26	0.00	0.26
9.80	0.83	0.31	2.65	0.26	0.00	0.26
9.85	0.83	0.31	2.65	0.26	0.00	0.26
9.90	0.83	0.31	2.64	0.26	0.00	0.26
9.95	0.83	0.31	2.64	0.26	0.00	0.26
10.00	0.83	0.31	2.64	0.26	0.00	0.26
10.05	0.83	0.31	2.64	0.26	0.00	0.26
10.10	0.83	0.31	2.64	0.26	0.00	0.26
10.15	0.83	0.32	2.64	0.26	0.00	0.26
10.20	0.83	0.32	2.63	0.26	0.00	0.26
10.25	0.83	0.32	2.63	0.26	0.00	0.26
10.30	0.83	0.32	2.63	0.26	0.00	0.26
10.35	0.83	0.32	2.63	0.26	0.00	0.26
10.40	0.83	0.32	2.63	0.26	0.00	0.26
10.45	0.83	0.32	2.63	0.26	0.00	0.26
10.50	0.83	0.32	2.63	0.26	0.00	0.26
10.55	0.83	0.32	2.62	0.26	0.00	0.26
10.60	0.83	0.32	2.62	0.26	0.00	0.26
10.65	0.83	0.32	2.62	0.26	0.00	0.26
10.70	0.83	0.32	2.62	0.26	0.00	0.26
10.75	0.83	0.32	2.62	0.26	0.00	0.26
10.80	0.83	0.32	2.62	0.26	0.00	0.26
10.85	0.83	0.32	2.62	0.26	0.00	0.26
10.90	0.83	0.32	2.61	0.26	0.00	0.26
10.95	0.83	0.32	2.61	0.26	0.00	0.26
11.00	0.83	0.32	2.61	0.26	0.00	0.26
11.05	0.83	0.32	2.61	0.26	0.00	0.26
11.10	0.83	0.32	2.61	0.26	0.00	0.26
11.15	0.83	0.32	2.61	0.26	0.00	0.26
11.20	0.83	0.32	2.61	0.26	0.00	0.26
11.25	0.83	0.32	2.60	0.26	0.00	0.26
11.30	0.83	0.32	2.60	0.26	0.00	0.26
11.35	0.83	0.32	2.60	0.26	0.00	0.26
11.40	0.83	0.32	2.60	0.26	0.00	0.26
11.45	0.83	0.32	2.60	0.26	0.00	0.26
11.50	0.83	0.32	2.60	0.26	0.00	0.26
11.55	0.83	0.32	2.60	0.26	0.00	0.26
11.60	0.83	0.32	2.60	0.26	0.00	0.26
11.65	0.83	0.32	2.60	0.26	0.00	0.26
11.70	0.83	0.32	2.59	0.26	0.00	0.26
11.75	0.83	0.32	2.59	0.26	0.00	0.26
11.80	0.83	0.32	2.59	0.26	0.00	0.26
11.85	0.83	0.32	2.59	0.26	0.00	0.26
11.90	0.83	0.32	2.59	0.26	0.00	0.26
11.95	0.83	0.32	2.59	0.26	0.00	0.26
12.00	0.83	0.32	2.59	0.26	0.00	0.26
12.05	0.83	0.32	2.59	0.26	0.00	0.26
12.10	0.83	0.32	2.59	0.26	0.00	0.26
12.15	0.83	0.32	2.58	0.26	0.00	0.26
12.20	0.83	0.32	2.58	0.26	0.00	0.26
12.25	0.83	0.32	2.58	0.26	0.00	0.26
12.30	0.83	0.32	2.58	0.26	0.00	0.26
12.35	0.83	0.32	2.58	0.26	0.00	0.26
12.40	0.83	0.32	2.58	0.26	0.00	0.26
12.45	0.83	0.32	2.58	0.26	0.00	0.26
12.50	0.83	0.32	2.58	0.26	0.00	0.26
12.55	0.83	0.32	2.58	0.26	0.00	0.26
12.60	0.83	0.32	2.58	0.26	0.00	0.26

12.65	0.83	0.32	2.58	0.26	0.00	0.26
12.70	0.83	0.32	2.57	0.26	0.00	0.26
12.75	0.83	0.32	2.57	0.26	0.00	0.26
12.80	0.83	0.32	2.57	0.26	0.00	0.26
12.85	0.83	0.32	2.57	0.26	0.00	0.26
12.90	0.83	0.32	2.57	0.26	0.00	0.26
12.95	0.83	0.32	2.57	0.26	0.00	0.26
13.00	0.83	0.32	2.57	0.26	0.00	0.26
13.05	0.83	0.32	2.57	0.26	0.00	0.26
13.10	0.83	0.32	2.57	0.26	0.00	0.26
13.15	0.83	0.32	2.57	0.26	0.00	0.26
13.20	0.83	0.32	2.57	0.26	0.00	0.26
13.25	0.83	0.32	2.57	0.26	0.00	0.26
13.30	0.83	0.32	2.57	0.26	0.00	0.26
13.35	0.83	0.32	2.57	0.26	0.00	0.26
13.40	0.83	0.32	2.57	0.26	0.00	0.26
13.45	0.83	0.32	2.56	0.26	0.00	0.26
13.50	0.83	0.32	2.56	0.26	0.00	0.26
13.55	0.83	0.32	2.56	0.26	0.00	0.26
13.60	0.83	0.32	2.56	0.26	0.00	0.26
13.65	0.83	0.32	2.56	0.26	0.00	0.26
13.70	0.83	0.32	2.56	0.26	0.00	0.26
13.75	0.83	0.32	2.56	0.26	0.00	0.26
13.80	0.83	0.32	2.56	0.26	0.00	0.26
13.85	0.83	0.32	2.56	0.26	0.00	0.26
13.90	0.83	0.32	2.56	0.26	0.00	0.26
13.95	0.83	0.32	2.56	0.26	0.00	0.26
14.00	0.83	0.32	2.56	0.26	0.00	0.26
14.05	0.83	0.32	2.56	0.26	0.00	0.26
14.10	0.83	0.32	2.56	0.26	0.00	0.26
14.15	0.83	0.32	2.56	0.26	0.00	0.26
14.20	0.83	0.32	2.56	0.26	0.00	0.26
14.25	0.83	0.33	2.56	0.26	0.00	0.26
14.30	0.83	0.33	2.56	0.26	0.00	0.26
14.35	0.83	0.33	2.55	0.26	0.00	0.26
14.40	0.83	0.33	2.55	0.26	0.00	0.26
14.45	0.83	0.33	2.55	0.26	0.00	0.26
14.50	0.83	0.33	2.55	0.26	0.00	0.26
14.55	0.83	0.33	2.55	0.26	0.00	0.26
14.60	0.83	0.33	2.55	0.26	0.00	0.26
14.65	0.83	0.33	2.55	0.26	0.00	0.26
14.70	0.83	0.33	2.55	0.26	0.00	0.26
14.75	0.83	0.33	2.55	0.26	0.00	0.26
14.80	0.83	0.33	2.55	0.26	0.00	0.26
14.85	0.83	0.33	2.55	0.26	0.00	0.26
14.90	0.83	0.33	2.55	0.26	0.00	0.26
14.95	0.83	0.33	2.55	0.26	0.00	0.26
15.00	0.83	0.33	2.55	0.26	0.00	0.26
15.05	0.83	0.33	2.55	0.26	0.00	0.26
15.10	0.83	0.33	2.55	0.26	0.00	0.26
15.15	0.83	0.33	2.55	0.26	0.00	0.26
15.20	0.83	0.33	2.55	0.26	0.00	0.26
15.25	0.83	0.33	2.55	0.26	0.00	0.26
15.30	0.83	0.33	2.55	0.26	0.00	0.26
15.35	0.83	0.33	2.55	0.26	0.00	0.26
15.40	0.83	0.33	2.55	0.26	0.00	0.26
15.45	0.83	0.33	2.54	0.26	0.00	0.26
15.50	0.83	0.33	2.54	0.26	0.00	0.26
15.55	0.83	0.33	2.54	0.26	0.00	0.26
15.60	0.83	0.33	2.54	0.26	0.00	0.26
15.65	0.83	0.33	2.54	0.26	0.00	0.26
15.70	0.83	0.33	2.54	0.26	0.00	0.26
15.75	0.83	0.33	2.54	0.26	0.00	0.26
15.80	0.83	0.33	2.54	0.26	0.00	0.26
15.85	0.83	0.33	2.54	0.26	0.00	0.26
15.90	0.83	0.33	2.54	0.26	0.00	0.26
15.95	0.83	0.33	2.54	0.26	0.00	0.26
16.00	0.83	0.33	2.54	0.26	0.00	0.26
16.05	0.83	0.33	2.54	0.26	0.00	0.26
16.10	0.83	0.33	2.54	0.26	0.00	0.26
16.15	0.83	0.33	2.54	0.26	0.00	0.26

16.20	0.83	0.33	2.54	0.26	0.00	0.26
16.25	0.83	0.33	2.54	0.26	0.00	0.26
16.30	0.83	0.33	2.54	0.26	0.00	0.26
16.35	0.83	0.33	2.54	0.26	0.00	0.26
16.40	0.83	0.33	2.54	0.26	0.00	0.26
16.45	0.83	0.33	2.54	0.26	0.00	0.26
16.50	0.83	0.33	2.54	0.26	0.00	0.26
16.55	0.83	0.33	2.54	0.26	0.00	0.26
16.60	0.83	0.33	2.54	0.26	0.00	0.26
16.65	0.83	0.33	2.54	0.26	0.00	0.26
16.70	0.83	0.33	2.54	0.26	0.00	0.26
16.75	0.83	0.33	2.54	0.26	0.00	0.26
16.80	0.83	0.33	2.53	0.26	0.00	0.26
16.85	0.83	0.33	2.53	0.26	0.00	0.26
16.90	0.83	0.33	2.53	0.26	0.00	0.26
16.95	0.83	0.33	2.53	0.26	0.00	0.26
17.00	0.83	0.33	2.53	0.26	0.00	0.26
17.05	0.83	0.33	2.53	0.26	0.00	0.26
17.10	0.83	0.33	2.53	0.26	0.00	0.26
17.15	0.83	0.33	2.53	0.26	0.00	0.26
17.20	0.83	0.33	2.53	0.26	0.00	0.26
17.25	0.83	0.33	2.53	0.26	0.00	0.26
17.30	0.83	0.33	2.53	0.26	0.00	0.26
17.35	0.83	0.33	2.53	0.26	0.00	0.26
17.40	0.83	0.33	2.53	0.26	0.00	0.26
17.45	0.83	0.33	2.53	0.26	0.00	0.26
17.50	0.83	0.33	2.53	0.26	0.00	0.26
17.55	0.83	0.33	2.53	0.26	0.00	0.26
17.60	0.83	0.33	2.53	0.26	0.00	0.26
17.65	0.83	0.33	2.53	0.26	0.00	0.26
17.70	0.83	0.33	2.53	0.26	0.00	0.26
17.75	0.83	0.33	2.53	0.26	0.00	0.26
17.80	0.83	0.33	2.53	0.26	0.00	0.26
17.85	0.83	0.33	2.53	0.26	0.00	0.26
17.90	0.83	0.33	2.53	0.26	0.00	0.26
17.95	0.83	0.33	2.53	0.26	0.00	0.26
18.00	0.83	0.33	2.53	0.26	0.00	0.26
18.05	0.83	0.33	2.53	0.26	0.00	0.26
18.10	0.83	0.33	2.53	0.26	0.00	0.26
18.15	0.83	0.33	2.53	0.26	0.00	0.26
18.20	0.83	0.33	2.53	0.26	0.00	0.26
18.25	0.83	0.33	2.53	0.26	0.00	0.26
18.30	0.83	0.33	2.53	0.26	0.00	0.26
18.35	0.83	0.33	2.53	0.26	0.00	0.26
18.40	0.83	0.33	2.53	0.26	0.00	0.26
18.45	0.83	0.33	2.53	0.26	0.00	0.26
18.50	0.83	0.33	2.53	0.26	0.00	0.26
18.55	0.83	0.33	2.53	0.26	0.00	0.26
18.60	0.83	0.33	2.53	0.26	0.00	0.26
18.65	0.83	0.33	2.53	0.26	0.00	0.26
18.70	0.83	0.33	2.53	0.26	0.00	0.26
18.75	0.83	0.33	2.53	0.26	0.00	0.26
18.80	0.83	0.33	2.52	0.26	0.00	0.26
18.85	0.83	0.33	2.52	0.26	0.00	0.26
18.90	0.83	0.33	2.52	0.26	0.00	0.26
18.95	0.83	0.33	2.52	0.26	0.00	0.26
19.00	0.83	0.33	2.52	0.26	0.00	0.26
19.05	0.83	0.33	2.52	0.26	0.00	0.26
19.10	0.83	0.33	2.52	0.26	0.00	0.26
19.15	0.83	0.33	2.52	0.26	0.00	0.26
19.20	0.83	0.33	2.52	0.26	0.00	0.26
19.25	0.83	0.33	2.52	0.26	0.00	0.26
19.30	0.83	0.33	2.52	0.26	0.00	0.26
19.35	0.83	0.33	2.52	0.26	0.00	0.26
19.40	0.83	0.33	2.52	0.26	0.00	0.26
19.45	0.83	0.33	2.52	0.26	0.00	0.26
19.50	0.83	0.33	2.52	0.26	0.00	0.26
19.55	0.83	0.33	2.52	0.26	0.00	0.26
19.60	0.83	0.33	2.52	0.26	0.00	0.26
19.65	0.83	0.33	2.52	0.26	0.00	0.26
19.70	0.83	0.33	2.52	0.26	0.00	0.26

19.75	0.83	0.33	2.52	0.26	0.00	0.26
19.80	0.83	0.33	2.52	0.26	0.00	0.26
19.85	0.83	0.33	2.52	0.26	0.00	0.26
19.90	0.83	0.33	2.52	0.26	0.00	0.26
19.95	0.83	0.33	2.52	0.26	0.00	0.26
20.00	0.83	0.33	2.52	0.26	0.00	0.26
20.05	0.83	0.33	2.52	0.26	0.00	0.26
20.10	0.83	0.33	2.52	0.26	0.00	0.26
20.15	0.83	0.33	2.52	0.26	0.00	0.26
20.20	0.83	0.33	2.52	0.26	0.00	0.26
20.25	0.83	0.33	2.52	0.26	0.00	0.26
20.30	0.83	0.33	2.52	0.26	0.00	0.26
20.35	0.83	0.33	2.52	0.26	0.00	0.26
20.40	0.83	0.33	2.52	0.26	0.00	0.26
20.45	0.83	0.33	2.52	0.26	0.00	0.26
20.50	0.83	0.33	2.52	0.26	0.00	0.26
20.55	0.83	0.33	2.52	0.26	0.00	0.26
20.60	0.83	0.33	2.52	0.26	0.00	0.26
20.65	0.83	0.33	2.52	0.26	0.00	0.26
20.70	0.83	0.33	2.52	0.26	0.00	0.26
20.75	0.83	0.33	2.52	0.26	0.00	0.26
20.80	0.83	0.33	2.52	0.26	0.00	0.26
20.85	0.83	0.33	2.52	0.26	0.00	0.26
20.90	0.83	0.33	2.52	0.26	0.00	0.26
20.95	0.83	0.33	2.52	0.26	0.00	0.26
21.00	0.83	0.33	2.52	0.26	0.00	0.26
21.05	0.83	0.33	2.52	0.26	0.00	0.26
21.10	0.83	0.33	2.52	0.26	0.00	0.26
21.15	0.83	0.33	2.52	0.26	0.00	0.26
21.20	0.83	0.33	2.52	0.26	0.00	0.26
21.25	0.83	0.33	2.52	0.26	0.00	0.26
21.30	0.83	0.33	2.52	0.26	0.00	0.26
21.35	0.83	0.33	2.52	0.26	0.00	0.26
21.40	0.83	0.33	2.52	0.26	0.00	0.26
21.45	0.83	0.33	2.52	0.26	0.00	0.26
21.50	0.83	0.33	2.52	0.26	0.00	0.26
21.55	0.83	0.33	2.52	0.26	0.00	0.26
21.60	0.83	0.33	2.52	0.26	0.00	0.26
21.65	0.83	0.33	2.52	0.26	0.00	0.26
21.70	0.83	0.33	2.52	0.26	0.00	0.26
21.75	0.83	0.33	2.52	0.26	0.00	0.26
21.80	0.83	0.33	2.52	0.26	0.00	0.26
21.85	0.83	0.33	2.52	0.26	0.00	0.26
21.90	0.83	0.33	2.52	0.26	0.00	0.26
21.95	0.83	0.33	2.52	0.26	0.00	0.26
22.00	0.83	0.33	2.51	0.26	0.00	0.26
22.05	0.83	0.33	2.51	0.26	0.00	0.26
22.10	0.83	0.33	2.51	0.26	0.00	0.26
22.15	0.83	0.33	2.51	0.26	0.00	0.26
22.20	0.83	0.33	2.51	0.26	0.00	0.26
22.25	0.83	0.33	2.51	0.26	0.00	0.26
22.30	0.83	0.33	2.51	0.26	0.00	0.26
22.35	0.83	0.33	2.51	0.26	0.00	0.26
22.40	0.83	0.33	2.51	0.26	0.00	0.26
22.45	0.83	0.33	2.51	0.26	0.00	0.26
22.50	0.83	0.33	2.51	0.26	0.00	0.26
22.55	0.83	0.33	2.51	0.26	0.00	0.26
22.60	0.83	0.33	2.51	0.26	0.00	0.26
22.65	0.83	0.33	2.51	0.26	0.00	0.26
22.70	0.83	0.33	2.51	0.26	0.00	0.26
22.75	0.83	0.33	2.51	0.26	0.00	0.26
22.80	0.83	0.33	2.51	0.26	0.00	0.26
22.85	0.83	0.33	2.51	0.26	0.00	0.26
22.90	0.83	0.33	2.51	0.26	0.00	0.26
22.95	0.83	0.33	2.51	0.26	0.00	0.26
23.00	0.83	0.33	2.51	0.26	0.00	0.26
23.05	0.83	0.33	2.51	0.26	0.00	0.26
23.10	0.83	0.33	2.51	0.26	0.00	0.26
23.15	0.83	0.33	2.51	0.26	0.00	0.26
23.20	0.83	0.33	2.51	0.26	0.00	0.26
23.25	0.83	0.33	2.51	0.26	0.00	0.26

23.30	0.83	0.33	2.51	0.26	0.00	0.26
23.35	0.83	0.33	2.51	0.26	0.00	0.26
23.40	0.83	0.33	2.51	0.26	0.00	0.26
23.45	0.83	0.33	2.51	0.26	0.00	0.26
23.50	0.83	0.33	2.51	0.26	0.00	0.26
23.55	0.83	0.33	2.51	0.26	0.00	0.26
23.60	0.83	0.33	2.51	0.26	0.00	0.26
23.65	0.83	0.33	2.51	0.26	0.00	0.26
23.70	0.83	0.33	2.51	0.26	0.00	0.26
23.75	0.83	0.33	2.51	0.26	0.00	0.26
23.80	0.83	0.33	2.51	0.26	0.00	0.26
23.85	0.83	0.33	2.51	0.26	0.00	0.26
23.90	0.83	0.33	2.51	0.26	0.00	0.26
23.95	0.83	0.33	2.51	0.26	0.00	0.26
24.00	0.83	0.33	2.51	0.26	0.00	0.26
24.05	0.83	0.33	2.51	0.26	0.00	0.26
24.10	0.83	0.33	2.51	0.26	0.00	0.26
24.15	0.83	0.33	2.51	0.26	0.00	0.26
24.20	0.83	0.33	2.51	0.26	0.00	0.26
24.25	0.83	0.33	2.51	0.26	0.00	0.26
24.30	0.83	0.33	2.51	0.26	0.00	0.26
24.35	0.83	0.33	2.51	0.26	0.00	0.26
24.40	0.83	0.33	2.51	0.26	0.00	0.26
24.45	0.83	0.33	2.51	0.26	0.00	0.26
24.50	0.83	0.33	2.51	0.26	0.00	0.26
24.55	0.83	0.33	2.51	0.26	0.00	0.26
24.60	0.83	0.33	2.51	0.26	0.00	0.26
24.65	0.83	0.33	2.51	0.26	0.00	0.26
24.70	0.83	0.33	2.51	0.26	0.00	0.26
24.75	0.83	0.33	2.51	0.26	0.00	0.26
24.80	0.83	0.33	2.51	0.26	0.00	0.26
24.85	0.83	0.33	2.51	0.26	0.00	0.26
24.90	0.83	0.33	2.51	0.26	0.00	0.26
24.95	0.83	0.33	2.51	0.26	0.00	0.26
25.00	0.83	0.33	2.51	0.26	0.00	0.26
25.05	0.83	0.33	2.51	0.26	0.00	0.26
25.10	0.83	0.33	2.51	0.26	0.00	0.26
25.15	0.83	0.33	2.51	0.26	0.00	0.26
25.20	0.83	0.33	2.51	0.26	0.00	0.26
25.25	0.83	0.33	2.51	0.26	0.00	0.26
25.30	0.83	0.33	2.51	0.26	0.00	0.26
25.35	0.83	0.33	2.51	0.26	0.00	0.26
25.40	0.83	0.33	2.51	0.26	0.00	0.26
25.45	0.83	0.33	2.51	0.26	0.00	0.26
25.50	0.83	0.33	2.51	0.26	0.00	0.26
25.55	0.83	0.33	2.51	0.26	0.00	0.26
25.60	0.83	0.33	2.51	0.26	0.00	0.26
25.65	0.83	0.33	2.51	0.26	0.00	0.26
25.70	0.83	0.33	2.51	0.26	0.00	0.26
25.75	0.83	0.33	2.51	0.26	0.00	0.26
25.80	0.83	0.33	2.51	0.26	0.00	0.26
25.85	0.83	0.33	2.51	0.26	0.00	0.26
25.90	0.83	0.33	2.51	0.26	0.00	0.26
25.95	0.83	0.33	2.51	0.26	0.00	0.26
26.00	0.83	0.33	2.51	0.26	0.00	0.26
26.05	0.83	0.33	2.51	0.26	0.00	0.26
26.10	0.83	0.33	2.51	0.26	0.00	0.26
26.15	0.83	0.33	2.51	0.26	0.00	0.26
26.20	0.83	0.33	2.51	0.26	0.00	0.26
26.25	0.83	0.33	2.51	0.26	0.00	0.26
26.30	0.83	0.33	2.51	0.26	0.00	0.26
26.35	0.83	0.33	2.51	0.26	0.00	0.26
26.40	0.83	0.33	2.51	0.26	0.00	0.26
26.45	0.83	0.33	2.50	0.26	0.00	0.26
26.50	0.83	0.33	2.50	0.26	0.00	0.26
26.55	0.83	0.33	2.50	0.26	0.00	0.26
26.60	0.83	0.33	2.50	0.26	0.00	0.26
26.65	0.83	0.33	2.50	0.26	0.00	0.26
26.70	0.83	0.33	2.50	0.26	0.00	0.26
26.75	0.83	0.33	2.50	0.26	0.00	0.26
26.80	0.83	0.33	2.50	0.26	0.00	0.26

26.85	0.83	0.33	2.50	0.26	0.00	0.26
26.90	0.83	0.33	2.50	0.26	0.00	0.26
26.95	0.83	0.33	2.50	0.26	0.00	0.26
27.00	0.83	0.33	2.50	0.26	0.00	0.26
27.05	0.83	0.33	2.50	0.26	0.00	0.26
27.10	0.83	0.33	2.50	0.26	0.00	0.26
27.15	0.83	0.33	2.50	0.26	0.00	0.26
27.20	0.83	0.33	2.50	0.26	0.00	0.26
27.25	0.83	0.33	2.50	0.26	0.00	0.26
27.30	0.83	0.33	2.50	0.26	0.00	0.26
27.35	0.83	0.33	2.50	0.26	0.00	0.26
27.40	0.83	0.33	2.50	0.26	0.00	0.26
27.45	0.83	0.33	2.50	0.26	0.00	0.26
27.50	0.83	0.33	2.50	0.26	0.00	0.26
27.55	0.83	0.33	2.50	0.26	0.00	0.26
27.60	0.83	0.33	2.50	0.26	0.00	0.26
27.65	0.83	0.33	2.50	0.26	0.00	0.26
27.70	0.83	0.33	2.50	0.26	0.00	0.26
27.75	0.83	0.33	2.50	0.26	0.00	0.26
27.80	0.83	0.33	2.50	0.26	0.00	0.26
27.85	0.83	0.33	2.50	0.26	0.00	0.26
27.90	0.83	0.33	2.50	0.26	0.00	0.26
27.95	0.83	0.33	2.50	0.26	0.00	0.26
28.00	0.83	0.33	2.50	0.26	0.00	0.26
28.05	0.83	0.33	2.50	0.26	0.00	0.26
28.10	0.83	0.33	2.50	0.26	0.00	0.26
28.15	0.83	0.33	2.50	0.26	0.00	0.26
28.20	0.83	0.33	2.50	0.26	0.00	0.26
28.25	0.83	0.33	2.50	0.26	0.00	0.26
28.30	0.83	0.33	2.50	0.26	0.00	0.26
28.35	0.83	0.33	2.50	0.26	0.00	0.26
28.40	0.83	0.33	2.50	0.26	0.00	0.26
28.45	0.83	0.33	2.50	0.26	0.00	0.26
28.50	0.83	0.33	2.50	0.26	0.00	0.26
28.55	0.83	0.33	2.50	0.26	0.00	0.26
28.60	0.83	0.33	2.50	0.26	0.00	0.26
28.65	0.83	0.33	2.50	0.26	0.00	0.26
28.70	0.83	0.33	2.50	0.26	0.00	0.26
28.75	0.83	0.33	2.50	0.26	0.00	0.26
28.80	0.83	0.33	2.50	0.26	0.00	0.26
28.85	0.83	0.33	2.50	0.26	0.00	0.26
28.90	0.83	0.33	2.50	0.26	0.00	0.26
28.95	0.83	0.33	2.50	0.26	0.00	0.26
29.00	0.83	0.33	2.50	0.26	0.00	0.26
29.05	0.83	0.33	2.50	0.26	0.00	0.26
29.10	0.83	0.33	2.50	0.26	0.00	0.26
29.15	0.83	0.33	2.50	0.26	0.00	0.26
29.20	0.83	0.33	2.50	0.26	0.00	0.26
29.25	0.83	0.33	2.50	0.26	0.00	0.26
29.30	0.83	0.33	2.50	0.26	0.00	0.26
29.35	0.83	0.33	2.50	0.26	0.00	0.26
29.40	0.83	0.33	2.50	0.26	0.00	0.26
29.45	0.83	0.33	2.50	0.26	0.00	0.26
29.50	0.83	0.33	2.50	0.26	0.00	0.26
29.55	0.83	0.33	2.50	0.26	0.00	0.26
29.60	0.83	0.33	2.50	0.26	0.00	0.26
29.65	0.83	0.33	2.50	0.26	0.00	0.26
29.70	0.83	0.33	2.50	0.26	0.00	0.26
29.75	0.83	0.33	2.50	0.26	0.00	0.26
29.80	0.83	0.33	2.50	0.26	0.00	0.26
29.85	0.83	0.33	2.50	0.26	0.00	0.26
29.90	0.83	0.33	2.50	0.26	0.00	0.26
29.95	0.83	0.33	2.50	0.26	0.00	0.26
30.00	0.83	0.33	2.50	0.26	0.00	0.26
30.05	0.83	0.33	2.50	0.26	0.00	0.26
30.10	0.83	0.33	2.50	0.26	0.00	0.26
30.15	0.83	0.33	2.50	0.26	0.00	0.26
30.20	0.83	0.33	2.50	0.26	0.00	0.26
30.25	0.83	0.33	2.50	0.26	0.00	0.26
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30.35	0.83	0.33	2.50	0.26	0.00	0.26

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30.45	0.83	0.33	2.50	0.26	0.00	0.26
30.50	0.83	0.33	2.50	0.26	0.00	0.26
30.55	0.83	0.33	2.51	0.26	0.00	0.26
30.60	0.83	0.33	2.51	0.26	0.00	0.26
30.65	0.83	0.33	2.51	0.26	0.00	0.26
30.70	0.83	0.33	2.51	0.26	0.00	0.26
30.75	0.83	0.33	2.51	0.26	0.00	0.26
30.80	0.83	0.33	2.51	0.26	0.00	0.26
30.85	0.83	0.33	2.51	0.26	0.00	0.26
30.90	0.83	0.33	2.51	0.26	0.00	0.26
30.95	0.83	0.33	2.51	0.26	0.00	0.26
31.00	0.83	0.33	2.51	0.26	0.00	0.26
31.05	0.83	0.33	2.51	0.26	0.00	0.26
31.10	0.83	0.33	2.52	0.26	0.00	0.26
31.15	0.83	0.33	2.52	0.26	0.00	0.26
31.20	0.83	0.33	2.52	0.26	0.00	0.26
31.25	0.83	0.33	2.52	0.26	0.00	0.26
31.30	0.83	0.33	2.52	0.26	0.00	0.26
31.35	0.83	0.33	2.52	0.26	0.00	0.26
31.40	0.83	0.33	2.52	0.26	0.00	0.26
31.45	0.83	0.33	2.52	0.26	0.00	0.26
31.50	0.83	0.33	2.52	0.26	0.00	0.26
31.55	0.83	0.33	2.52	0.26	0.00	0.26
31.60	0.83	0.33	2.53	0.26	0.00	0.26
31.65	0.83	0.33	2.53	0.26	0.00	0.26
31.70	0.83	0.33	2.53	0.26	0.00	0.26
31.75	0.83	0.33	2.53	0.26	0.00	0.26
31.80	0.83	0.33	2.53	0.26	0.00	0.26
31.85	0.83	0.33	2.53	0.26	0.00	0.26
31.90	0.83	0.33	2.53	0.26	0.00	0.26
31.95	0.83	0.33	2.53	0.26	0.00	0.26
32.00	0.83	0.33	2.53	0.26	0.00	0.26
32.05	0.83	0.33	2.53	0.26	0.00	0.26
32.10	0.83	0.33	2.54	0.26	0.00	0.26
32.15	0.83	0.33	2.54	0.26	0.00	0.26
32.20	0.83	0.33	2.54	0.26	0.00	0.26
32.25	0.83	0.33	2.54	0.26	0.00	0.26
32.30	0.83	0.33	2.54	0.26	0.00	0.26
32.35	0.83	0.33	2.54	0.26	0.00	0.26
32.40	0.83	0.33	2.54	0.26	0.00	0.26
32.45	0.83	0.33	2.54	0.26	0.00	0.26
32.50	0.83	0.33	2.54	0.26	0.00	0.26
32.55	0.83	0.33	2.54	0.26	0.00	0.26
32.60	0.83	0.33	2.54	0.26	0.00	0.26
32.65	0.83	0.33	2.55	0.26	0.00	0.26
32.70	0.83	0.33	2.55	0.26	0.00	0.26
32.75	0.83	0.33	2.55	0.26	0.00	0.26
32.80	0.83	0.33	2.55	0.26	0.00	0.26
32.85	0.83	0.33	2.55	0.26	0.00	0.26
32.90	0.83	0.33	2.55	0.26	0.00	0.26
32.95	0.83	0.33	2.55	0.26	0.00	0.26
33.00	0.83	0.33	2.55	0.26	0.00	0.26
33.05	0.83	0.33	2.55	0.26	0.00	0.26
33.10	0.83	0.33	2.55	0.26	0.00	0.26
33.15	0.83	0.33	2.56	0.26	0.00	0.26
33.20	0.83	0.32	2.56	0.26	0.00	0.26
33.25	0.83	0.32	2.56	0.26	0.00	0.26
33.30	0.83	0.32	2.56	0.26	0.00	0.26
33.35	0.83	0.32	2.56	0.26	0.00	0.26
33.40	0.83	0.32	2.56	0.26	0.00	0.26
33.45	0.83	0.32	2.56	0.26	0.00	0.26
33.50	0.83	0.32	2.56	0.26	0.00	0.26
33.55	0.83	0.32	2.56	0.26	0.00	0.26
33.60	0.83	0.32	2.56	0.26	0.00	0.26
33.65	0.83	0.32	2.57	0.26	0.00	0.26
33.70	0.83	0.32	2.57	0.26	0.00	0.26
33.75	0.83	0.32	2.57	0.26	0.00	0.26
33.80	0.83	0.32	2.57	0.26	0.00	0.26
33.85	0.83	0.32	2.57	0.26	0.00	0.26
33.90	0.83	0.32	2.57	0.26	0.00	0.26

33.95	0.83	0.32	2.57	0.26	0.00	0.26
34.00	0.83	0.32	2.57	0.26	0.00	0.26
34.05	0.83	0.32	2.57	0.26	0.00	0.26
34.10	0.83	0.32	2.58	0.26	0.00	0.26
34.15	0.83	0.32	2.58	0.26	0.00	0.26
34.20	0.83	0.32	2.58	0.26	0.00	0.26
34.25	0.83	0.32	2.58	0.26	0.00	0.26
34.30	0.83	0.32	2.58	0.26	0.00	0.26
34.35	0.83	0.32	2.58	0.26	0.00	0.26
34.40	0.83	0.32	2.58	0.26	0.00	0.26
34.45	0.83	0.32	2.58	0.26	0.00	0.26
34.50	0.83	0.32	2.58	0.26	0.00	0.26
34.55	0.83	0.32	2.58	0.26	0.00	0.26
34.60	0.83	0.32	2.59	0.26	0.00	0.26
34.65	0.83	0.32	2.59	0.26	0.00	0.26
34.70	0.83	0.32	2.59	0.26	0.00	0.26
34.75	0.83	0.32	2.59	0.26	0.00	0.26
34.80	0.83	0.32	2.59	0.26	0.00	0.26
34.85	0.83	0.32	2.59	0.26	0.00	0.26
34.90	0.83	0.32	2.59	0.26	0.00	0.26
34.95	0.83	0.32	2.59	0.26	0.00	0.26
35.00	0.83	0.32	2.59	0.26	0.00	0.26
35.05	0.42	0.32	1.32	0.26	0.00	0.26
35.10	0.42	0.32	1.32	0.26	0.00	0.26
35.15	0.42	0.32	1.32	0.25	0.00	0.25
35.20	0.42	0.32	1.32	0.25	0.00	0.25
35.25	0.42	0.32	1.32	0.25	0.00	0.25
35.30	0.42	0.32	1.31	0.25	0.00	0.25
35.35	0.42	0.32	1.31	0.25	0.00	0.25
35.40	0.42	0.32	1.31	0.25	0.00	0.25
35.45	0.42	0.32	1.31	0.24	0.00	0.24
35.50	0.42	0.32	1.31	0.24	0.00	0.24
35.55	0.42	0.32	1.31	0.24	0.00	0.24
35.60	0.42	0.32	1.31	0.24	0.00	0.24
35.65	0.42	0.32	1.31	0.24	0.00	0.24
35.70	0.42	0.32	1.31	0.24	0.00	0.24
35.75	0.42	0.32	1.31	0.23	0.00	0.23
35.80	0.42	0.32	1.31	0.23	0.00	0.23
35.85	0.42	0.32	1.31	0.23	0.00	0.23
35.90	0.42	0.32	1.31	0.23	0.00	0.23
35.95	0.42	0.32	1.31	0.23	0.00	0.23
36.00	0.42	0.32	1.31	0.23	0.00	0.23
36.05	0.42	0.32	1.31	0.22	0.00	0.22
36.10	0.42	0.32	1.31	0.22	0.00	0.22
36.15	0.42	0.32	1.31	0.22	0.00	0.22
36.20	0.42	0.32	1.31	0.22	0.00	0.22
36.25	0.42	0.32	1.31	0.22	0.00	0.22
36.30	0.42	0.32	1.31	0.22	0.00	0.22
36.35	0.42	0.32	1.31	0.21	0.00	0.21
36.40	0.42	0.32	1.31	0.21	0.00	0.21
36.45	0.42	0.32	1.31	0.21	0.00	0.21
36.50	0.42	0.32	1.31	0.21	0.00	0.21
36.55	0.42	0.32	1.31	0.21	0.00	0.21
36.60	0.42	0.32	1.31	0.21	0.00	0.21
36.65	0.42	0.32	1.31	0.20	0.00	0.20
36.70	0.41	0.32	1.31	0.20	0.00	0.20
36.75	0.41	0.32	1.31	0.20	0.00	0.20
36.80	0.41	0.32	1.31	0.20	0.00	0.20
36.85	0.41	0.32	1.31	0.20	0.00	0.20
36.90	0.41	0.32	1.31	0.19	0.00	0.19
36.95	0.41	0.32	1.31	0.19	0.00	0.19
37.00	0.41	0.32	1.31	0.19	0.00	0.19
37.05	0.41	0.32	1.31	0.19	0.00	0.19
37.10	0.41	0.32	1.31	0.19	0.00	0.19
37.15	0.41	0.32	1.31	0.19	0.00	0.19
37.20	0.41	0.32	1.31	0.18	0.00	0.18
37.25	0.41	0.32	1.31	0.18	0.00	0.18
37.30	0.41	0.32	1.31	0.18	0.00	0.18
37.35	0.41	0.32	1.31	0.18	0.00	0.18
37.40	0.41	0.32	1.31	0.18	0.00	0.18
37.45	0.41	0.32	1.31	0.18	0.00	0.18

37.50	0.41	0.32	1.31	0.17	0.00	0.17
37.55	0.41	0.32	1.31	0.17	0.00	0.17
37.60	0.41	0.32	1.31	0.17	0.00	0.17
37.65	0.41	0.32	1.31	0.17	0.00	0.17
37.70	0.41	0.31	1.31	0.17	0.00	0.17
37.75	0.41	0.31	1.31	0.17	0.00	0.17
37.80	0.41	0.31	1.31	0.16	0.00	0.16
37.85	0.41	0.31	1.31	0.16	0.00	0.16
37.90	0.41	0.31	1.31	0.16	0.00	0.16
37.95	0.41	0.31	1.31	0.16	0.00	0.16
38.00	0.41	0.31	1.31	0.16	0.00	0.16
38.05	0.41	0.31	1.31	0.16	0.00	0.16
38.10	0.41	0.31	1.31	0.15	0.00	0.15
38.15	0.41	0.31	1.31	0.15	0.00	0.15
38.20	0.41	0.31	1.30	0.15	0.00	0.15
38.25	0.41	0.31	1.30	0.15	0.00	0.15
38.30	0.41	0.31	1.30	0.15	0.00	0.15
38.35	0.41	0.31	1.30	0.15	0.00	0.15
38.40	0.41	0.31	1.30	0.14	0.00	0.14
38.45	0.41	0.31	1.30	0.14	0.00	0.14
38.50	0.41	0.31	1.30	0.14	0.00	0.14
38.55	0.41	0.31	1.30	0.14	0.00	0.14
38.60	0.41	0.31	1.30	0.14	0.00	0.14
38.65	0.41	0.31	1.30	0.13	0.00	0.13
38.70	0.41	0.31	1.30	0.13	0.00	0.13
38.75	0.41	0.31	1.30	0.13	0.00	0.13
38.80	0.41	0.31	1.30	0.13	0.00	0.13
38.85	0.41	0.31	1.30	0.13	0.00	0.13
38.90	0.41	0.31	1.30	0.13	0.00	0.13
38.95	0.41	0.31	1.30	0.12	0.00	0.12
39.00	0.41	0.31	1.30	0.12	0.00	0.12
39.05	0.41	0.31	1.30	0.12	0.00	0.12
39.10	0.41	0.31	1.30	0.12	0.00	0.12
39.15	0.41	0.31	1.30	0.12	0.00	0.12
39.20	0.41	0.31	1.30	0.12	0.00	0.12
39.25	0.41	0.31	1.30	0.11	0.00	0.11
39.30	0.41	0.31	1.30	0.11	0.00	0.11
39.35	0.41	0.31	1.30	0.11	0.00	0.11
39.40	0.41	0.31	1.30	0.11	0.00	0.11
39.45	0.41	0.31	1.30	0.11	0.00	0.11
39.50	0.41	0.31	1.30	0.11	0.00	0.11
39.55	0.41	0.31	1.30	0.10	0.00	0.10
39.60	0.40	0.31	1.30	0.10	0.00	0.10
39.65	0.40	0.31	1.30	0.10	0.00	0.10
39.70	0.40	0.31	1.30	0.10	0.00	0.10
39.75	0.40	0.31	1.30	0.10	0.00	0.10
39.80	0.40	0.31	1.30	0.09	0.00	0.09
39.85	0.40	0.31	1.30	0.09	0.00	0.09
39.90	0.40	0.31	1.30	0.09	0.00	0.09
39.95	0.40	0.31	1.30	0.09	0.00	0.09
40.00	0.40	0.31	1.30	0.09	0.00	0.09
40.05	0.50	0.31	1.60	0.09	0.00	0.09
40.10	0.50	0.31	1.60	0.09	0.00	0.09
40.15	0.50	0.31	1.60	0.08	0.00	0.08
40.20	0.50	0.31	1.60	0.08	0.00	0.08
40.25	0.50	0.31	1.60	0.08	0.00	0.08
40.30	0.50	0.31	1.60	0.08	0.00	0.08
40.35	0.50	0.31	1.60	0.08	0.00	0.08
40.40	0.50	0.31	1.60	0.08	0.00	0.08
40.45	0.49	0.31	1.60	0.08	0.00	0.08
40.50	0.49	0.31	1.60	0.08	0.00	0.08
40.55	0.49	0.31	1.60	0.08	0.00	0.08
40.60	0.49	0.31	1.60	0.08	0.00	0.08
40.65	0.49	0.31	1.60	0.08	0.00	0.08
40.70	0.49	0.31	1.60	0.08	0.00	0.08
40.75	0.49	0.31	1.60	0.07	0.00	0.07
40.80	0.49	0.31	1.60	0.07	0.00	0.07
40.85	0.49	0.31	1.60	0.07	0.00	0.07
40.90	0.49	0.31	1.60	0.07	0.00	0.07
40.95	0.49	0.31	1.60	0.07	0.00	0.07
41.00	0.49	0.31	1.60	0.07	0.00	0.07

41.05	0.49	0.31	1.60	0.07	0.00	0.07
41.10	0.49	0.31	1.60	0.07	0.00	0.07
41.15	0.49	0.31	1.60	0.07	0.00	0.07
41.20	0.49	0.31	1.60	0.07	0.00	0.07
41.25	0.49	0.31	1.60	0.07	0.00	0.07
41.30	0.49	0.31	1.60	0.07	0.00	0.07
41.35	0.49	0.31	1.60	0.06	0.00	0.06
41.40	0.49	0.31	1.60	0.06	0.00	0.06
41.45	0.49	0.31	1.60	0.06	0.00	0.06
41.50	0.49	0.31	1.59	0.06	0.00	0.06
41.55	0.49	0.31	1.59	0.06	0.00	0.06
41.60	0.49	0.31	1.59	0.06	0.00	0.06
41.65	0.49	0.31	1.59	0.06	0.00	0.06
41.70	0.49	0.31	1.59	0.06	0.00	0.06
41.75	0.49	0.31	1.59	0.06	0.00	0.06
41.80	0.49	0.31	1.59	0.06	0.00	0.06
41.85	0.49	0.31	1.59	0.06	0.00	0.06
41.90	0.49	0.31	1.59	0.05	0.00	0.05
41.95	0.49	0.31	1.59	0.05	0.00	0.05
42.00	0.49	0.31	1.59	0.05	0.00	0.05
42.05	0.49	0.31	1.59	0.05	0.00	0.05
42.10	0.49	0.31	1.59	0.05	0.00	0.05
42.15	0.49	0.31	1.59	0.05	0.00	0.05
42.20	0.49	0.31	1.59	0.05	0.00	0.05
42.25	0.49	0.31	1.59	0.05	0.00	0.05
42.30	0.49	0.30	1.59	0.05	0.00	0.05
42.35	0.48	0.30	1.59	0.05	0.00	0.05
42.40	0.48	0.30	1.59	0.05	0.00	0.05
42.45	0.48	0.30	1.59	0.05	0.00	0.05
42.50	0.48	0.30	1.59	0.04	0.00	0.04
42.55	0.48	0.30	1.59	0.04	0.00	0.04
42.60	0.48	0.30	1.59	0.04	0.00	0.04
42.65	0.48	0.30	1.59	0.04	0.00	0.04
42.70	0.48	0.30	1.59	0.04	0.00	0.04
42.75	0.48	0.30	1.59	0.04	0.00	0.04
42.80	0.48	0.30	1.59	0.04	0.00	0.04
42.85	0.48	0.30	1.59	0.04	0.00	0.04
42.90	0.48	0.30	1.59	0.04	0.00	0.04
42.95	0.48	0.30	1.59	0.04	0.00	0.04
43.00	0.48	0.30	1.59	0.04	0.00	0.04
43.05	0.48	0.30	1.59	0.04	0.00	0.04
43.10	0.48	0.30	1.59	0.03	0.00	0.03
43.15	0.48	0.30	1.59	0.03	0.00	0.03
43.20	0.48	0.30	1.59	0.03	0.00	0.03
43.25	0.48	0.30	1.59	0.03	0.00	0.03
43.30	0.48	0.30	1.59	0.03	0.00	0.03
43.35	0.48	0.30	1.59	0.03	0.00	0.03
43.40	0.48	0.30	1.59	0.03	0.00	0.03
43.45	0.48	0.30	1.59	0.03	0.00	0.03
43.50	0.48	0.30	1.59	0.03	0.00	0.03
43.55	0.48	0.30	1.59	0.03	0.00	0.03
43.60	0.48	0.30	1.59	0.03	0.00	0.03
43.65	0.48	0.30	1.59	0.02	0.00	0.02
43.70	0.48	0.30	1.59	0.02	0.00	0.02
43.75	0.48	0.30	1.58	0.02	0.00	0.02
43.80	0.48	0.30	1.58	0.02	0.00	0.02
43.85	0.48	0.30	1.58	0.02	0.00	0.02
43.90	0.48	0.30	1.58	0.02	0.00	0.02
43.95	0.48	0.30	1.58	0.02	0.00	0.02
44.00	0.48	0.30	1.58	0.02	0.00	0.02
44.05	0.48	0.30	1.58	0.02	0.00	0.02
44.10	0.48	0.30	1.58	0.02	0.00	0.02
44.15	0.48	0.30	1.58	0.02	0.00	0.02
44.20	0.48	0.30	1.58	0.02	0.00	0.02
44.25	0.48	0.30	1.58	0.01	0.00	0.01
44.30	0.48	0.30	1.58	0.01	0.00	0.01
44.35	0.48	0.30	1.58	0.01	0.00	0.01
44.40	0.48	0.30	1.58	0.01	0.00	0.01
44.45	0.47	0.30	1.58	0.01	0.00	0.01
44.50	0.47	0.30	1.58	0.01	0.00	0.01
44.55	0.47	0.30	1.58	0.01	0.00	0.01

44.60	0.47	0.30	1.58	0.01	0.00	0.01
44.65	0.47	0.30	1.58	0.01	0.00	0.01
44.70	0.47	0.30	1.58	0.01	0.00	0.01
44.75	0.47	0.30	1.58	0.01	0.00	0.01
44.80	0.47	0.30	1.58	0.00	0.00	0.00
44.85	0.47	0.30	1.58	0.00	0.00	0.00
44.90	0.47	0.30	1.58	0.00	0.00	0.00
44.95	0.47	0.30	1.58	0.00	0.00	0.00
45.00	0.47	0.30	1.58	0.00	0.00	0.00
45.05	0.83	0.30	2.78	0.00	0.00	0.00
45.10	0.83	0.30	2.78	0.00	0.00	0.00
45.15	0.83	0.30	2.78	0.00	0.00	0.00
45.20	0.83	0.30	2.79	0.00	0.00	0.00
45.25	0.83	0.30	2.79	0.00	0.00	0.00
45.30	0.83	0.30	2.79	0.00	0.00	0.00
45.35	0.83	0.30	2.79	0.00	0.00	0.00
45.40	0.83	0.30	2.79	0.00	0.00	0.00
45.45	0.83	0.30	2.79	0.00	0.00	0.00
45.50	0.83	0.30	2.79	0.00	0.00	0.00
45.55	0.83	0.30	2.79	0.00	0.00	0.00
45.60	0.83	0.30	2.79	0.00	0.00	0.00
45.65	0.83	0.30	2.80	0.00	0.00	0.00
45.70	0.83	0.30	2.80	0.00	0.00	0.00
45.75	0.83	0.30	2.80	0.00	0.00	0.00
45.80	0.84	0.30	2.82	0.00	0.00	0.00
45.85	0.84	0.30	2.82	0.00	0.00	0.00
45.90	0.84	0.30	2.82	0.00	0.00	0.00
45.95	0.84	0.30	2.82	0.00	0.00	0.00
46.00	0.84	0.30	2.82	0.00	0.00	0.00
46.05	0.84	0.30	2.82	0.00	0.00	0.00
46.10	0.84	0.30	2.82	0.00	0.00	0.00
46.15	0.84	0.30	2.82	0.00	0.00	0.00
46.20	0.83	0.30	2.82	0.00	0.00	0.00
46.25	0.83	0.30	2.82	0.00	0.00	0.00
46.30	0.83	0.30	2.82	0.00	0.00	0.00
46.35	0.83	0.30	2.82	0.00	0.00	0.00
46.40	0.83	0.30	2.82	0.00	0.00	0.00
46.45	0.83	0.30	2.83	0.00	0.00	0.00
46.50	0.83	0.30	2.83	0.00	0.00	0.00
46.55	0.83	0.30	2.83	0.00	0.00	0.00
46.60	0.83	0.29	2.83	0.00	0.00	0.00
46.65	0.83	0.29	2.83	0.00	0.00	0.00
46.70	0.83	0.29	2.83	0.00	0.00	0.00
46.75	0.83	0.29	2.83	0.00	0.00	0.00
46.80	0.83	0.29	2.83	0.00	0.00	0.00
46.85	0.83	0.29	2.83	0.00	0.00	0.00
46.90	0.83	0.29	2.83	0.00	0.00	0.00
46.95	0.83	0.29	2.83	0.00	0.00	0.00
47.00	0.83	0.29	2.83	0.00	0.00	0.00
47.05	0.83	0.29	2.83	0.00	0.00	0.00
47.10	0.83	0.29	2.84	0.00	0.00	0.00
47.15	0.83	0.29	2.84	0.00	0.00	0.00
47.20	0.83	0.29	2.84	0.00	0.00	0.00
47.25	0.83	0.29	2.84	0.00	0.00	0.00
47.30	0.83	0.29	2.84	0.00	0.00	0.00
47.35	0.83	0.29	2.84	0.00	0.00	0.00
47.40	0.83	0.29	2.84	0.00	0.00	0.00
47.45	0.83	0.29	2.84	0.00	0.00	0.00
47.50	0.83	0.29	2.84	0.00	0.00	0.00
47.55	0.83	0.29	2.84	0.00	0.00	0.00
47.60	0.83	0.29	2.84	0.00	0.00	0.00
47.65	0.83	0.29	2.84	0.00	0.00	0.00
47.70	0.83	0.29	2.84	0.00	0.00	0.00
47.75	0.83	0.29	2.85	0.00	0.00	0.00
47.80	0.83	0.29	2.85	0.00	0.00	0.00
47.85	0.83	0.29	2.85	0.00	0.00	0.00
47.90	0.83	0.29	2.85	0.00	0.00	0.00
47.95	0.83	0.29	2.85	0.00	0.00	0.00
48.00	0.83	0.29	2.85	0.00	0.00	0.00
48.05	0.83	0.29	2.85	0.00	0.00	0.00
48.10	0.83	0.29	2.85	0.00	0.00	0.00

48.15	0.83	0.29	2.85	0.00	0.00	0.00
48.20	0.83	0.29	2.85	0.00	0.00	0.00
48.25	0.83	0.29	2.85	0.00	0.00	0.00
48.30	0.83	0.29	2.85	0.00	0.00	0.00
48.35	0.83	0.29	2.85	0.00	0.00	0.00
48.40	0.83	0.29	2.86	0.00	0.00	0.00
48.45	0.83	0.29	2.86	0.00	0.00	0.00
48.50	0.83	0.29	2.86	0.00	0.00	0.00
48.55	0.83	0.29	2.86	0.00	0.00	0.00
48.60	0.83	0.29	2.86	0.00	0.00	0.00
48.65	0.83	0.29	2.86	0.00	0.00	0.00
48.70	0.83	0.29	2.86	0.00	0.00	0.00
48.75	0.83	0.29	2.86	0.00	0.00	0.00
48.80	0.83	0.29	2.86	0.00	0.00	0.00
48.85	0.83	0.29	2.86	0.00	0.00	0.00
48.90	0.83	0.29	2.86	0.00	0.00	0.00
48.95	0.83	0.29	2.86	0.00	0.00	0.00
49.00	0.83	0.29	2.87	0.00	0.00	0.00
49.05	0.83	0.29	2.87	0.00	0.00	0.00
49.10	0.83	0.29	2.87	0.00	0.00	0.00
49.15	0.83	0.29	2.87	0.00	0.00	0.00
49.20	0.83	0.29	2.87	0.00	0.00	0.00
49.25	0.83	0.29	2.87	0.00	0.00	0.00
49.30	0.83	0.29	2.87	0.00	0.00	0.00
49.35	0.83	0.29	2.87	0.00	0.00	0.00
49.40	0.83	0.29	2.87	0.00	0.00	0.00
49.45	0.83	0.29	2.87	0.00	0.00	0.00
49.50	0.83	0.29	2.87	0.00	0.00	0.00
49.55	0.83	0.29	2.87	0.00	0.00	0.00
49.60	0.83	0.29	2.88	0.00	0.00	0.00
49.65	0.83	0.29	2.88	0.00	0.00	0.00
49.70	0.83	0.29	2.88	0.00	0.00	0.00
49.75	0.83	0.29	2.88	0.00	0.00	0.00
49.80	0.83	0.29	2.88	0.00	0.00	0.00
49.85	0.83	0.29	2.88	0.00	0.00	0.00
49.90	0.83	0.29	2.88	0.00	0.00	0.00
49.95	0.83	0.29	2.88	0.00	0.00	0.00
50.00	0.83	0.29	2.88	0.00	0.00	0.00

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* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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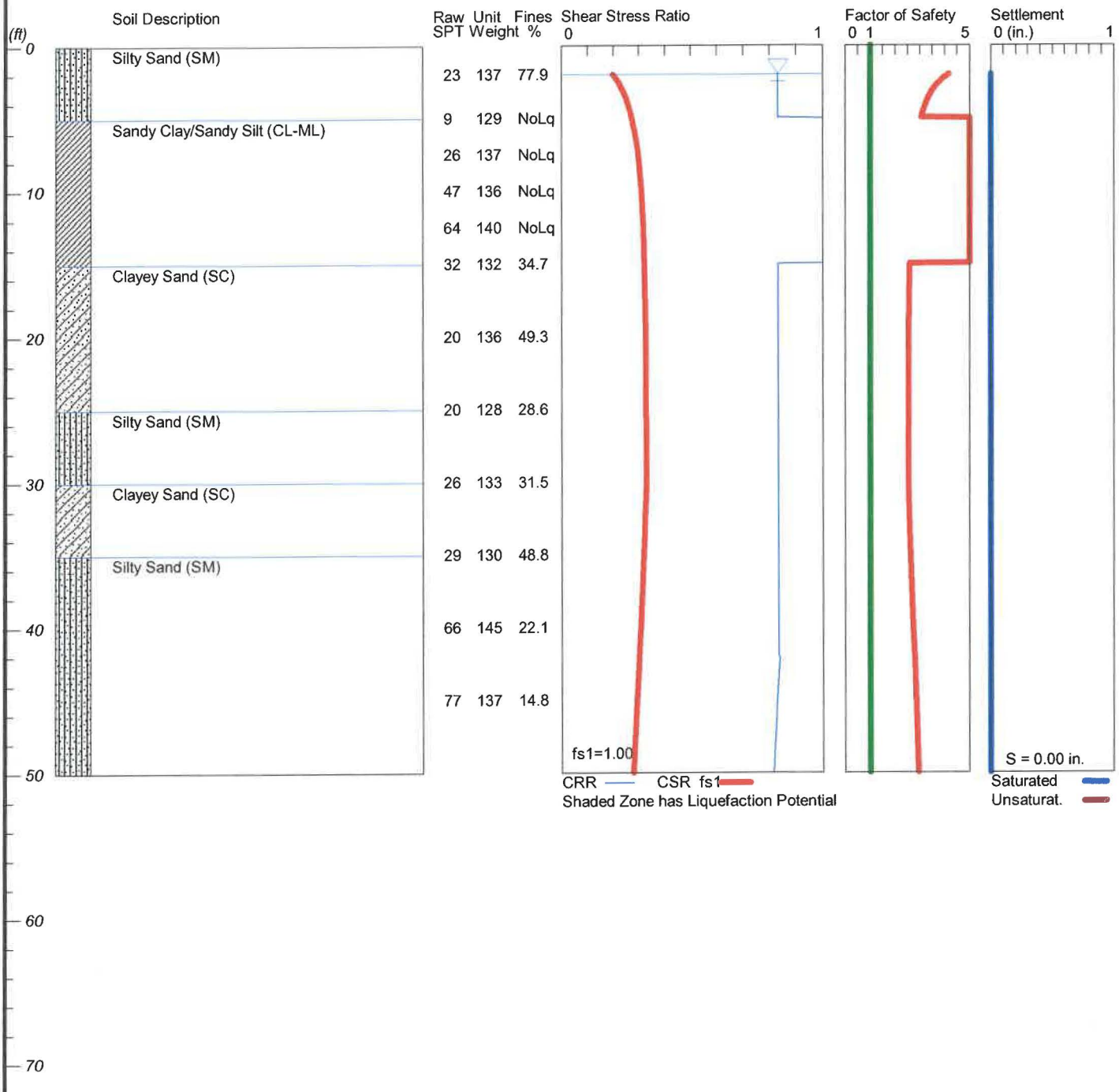
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat Settlement from saturated sands
S_dry Settlement from Unsaturated Sands
S_all Total Settlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B19 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B19\B19 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-22165

Surface Elev.=
Hole No.=B19
Depth of Hole= 50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 4.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B19
Depth of Hole=50.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 4.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.4
7. Borehole Diameter, Cb= 1.05
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	23.00	137.00	77.90
5.00	9.00	129.00	NoLiq
7.50	26.00	137.00	NoLiq
10.00	47.00	136.00	NoLiq
12.50	64.00	140.00	NoLiq
15.00	32.00	132.00	34.70
20.00	20.00	136.00	49.30
25.00	20.00	128.00	28.60
30.00	26.00	133.00	31.50
35.00	29.00	130.00	48.80
40.00	66.00	145.00	22.10
45.00	77.00	137.00	14.80

Output Results:
Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.00 in.
Differential Settlement=0.000 to 0.000 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.

2.00	0.83	0.20	4.18	0.00	0.00	0.00
2.05	0.83	0.20	4.14	0.00	0.00	0.00
2.10	0.83	0.20	4.09	0.00	0.00	0.00
2.15	0.83	0.21	4.05	0.00	0.00	0.00
2.20	0.83	0.21	4.01	0.00	0.00	0.00
2.25	0.83	0.21	3.97	0.00	0.00	0.00
2.30	0.83	0.21	3.94	0.00	0.00	0.00
2.35	0.83	0.21	3.90	0.00	0.00	0.00
2.40	0.83	0.21	3.87	0.00	0.00	0.00
2.45	0.83	0.22	3.84	0.00	0.00	0.00
2.50	0.83	0.22	3.81	0.00	0.00	0.00
2.55	0.83	0.22	3.78	0.00	0.00	0.00
2.60	0.83	0.22	3.75	0.00	0.00	0.00
2.65	0.83	0.22	3.72	0.00	0.00	0.00
2.70	0.83	0.22	3.69	0.00	0.00	0.00
2.75	0.83	0.23	3.67	0.00	0.00	0.00
2.80	0.83	0.23	3.64	0.00	0.00	0.00
2.85	0.83	0.23	3.62	0.00	0.00	0.00
2.90	0.83	0.23	3.60	0.00	0.00	0.00
2.95	0.83	0.23	3.58	0.00	0.00	0.00
3.00	0.83	0.23	3.56	0.00	0.00	0.00
3.05	0.83	0.23	3.54	0.00	0.00	0.00
3.10	0.83	0.24	3.52	0.00	0.00	0.00
3.15	0.83	0.24	3.50	0.00	0.00	0.00
3.20	0.83	0.24	3.48	0.00	0.00	0.00
3.25	0.83	0.24	3.46	0.00	0.00	0.00
3.30	0.83	0.24	3.44	0.00	0.00	0.00
3.35	0.83	0.24	3.43	0.00	0.00	0.00
3.40	0.83	0.24	3.41	0.00	0.00	0.00
3.45	0.83	0.24	3.39	0.00	0.00	0.00
3.50	0.83	0.25	3.38	0.00	0.00	0.00
3.55	0.83	0.25	3.36	0.00	0.00	0.00
3.60	0.83	0.25	3.35	0.00	0.00	0.00
3.65	0.83	0.25	3.33	0.00	0.00	0.00
3.70	0.83	0.25	3.32	0.00	0.00	0.00
3.75	0.83	0.25	3.31	0.00	0.00	0.00
3.80	0.83	0.25	3.29	0.00	0.00	0.00
3.85	0.83	0.25	3.28	0.00	0.00	0.00
3.90	0.83	0.25	3.27	0.00	0.00	0.00
3.95	0.83	0.26	3.26	0.00	0.00	0.00
4.00	0.83	0.26	3.25	0.00	0.00	0.00
4.05	0.83	0.26	3.23	0.00	0.00	0.00
4.10	0.83	0.26	3.22	0.00	0.00	0.00
4.15	0.83	0.26	3.21	0.00	0.00	0.00
4.20	0.83	0.26	3.20	0.00	0.00	0.00
4.25	0.83	0.26	3.19	0.00	0.00	0.00
4.30	0.83	0.26	3.18	0.00	0.00	0.00
4.35	0.83	0.26	3.17	0.00	0.00	0.00
4.40	0.83	0.26	3.16	0.00	0.00	0.00
4.45	0.83	0.26	3.15	0.00	0.00	0.00
4.50	0.83	0.26	3.14	0.00	0.00	0.00
4.55	0.83	0.27	3.13	0.00	0.00	0.00
4.60	0.83	0.27	3.12	0.00	0.00	0.00
4.65	0.83	0.27	3.12	0.00	0.00	0.00
4.70	0.83	0.27	3.11	0.00	0.00	0.00
4.75	0.83	0.27	3.10	0.00	0.00	0.00
4.80	0.83	0.27	3.09	0.00	0.00	0.00
4.85	0.83	0.27	3.08	0.00	0.00	0.00
4.90	0.83	0.27	3.08	0.00	0.00	0.00
4.95	0.83	0.27	3.07	0.00	0.00	0.00
5.00	2.00	0.27	5.00	0.00	0.00	0.00
5.05	2.00	0.27	5.00	0.00	0.00	0.00
5.10	2.00	0.27	5.00	0.00	0.00	0.00
5.15	2.00	0.27	5.00	0.00	0.00	0.00
5.20	2.00	0.27	5.00	0.00	0.00	0.00
5.25	2.00	0.27	5.00	0.00	0.00	0.00
5.30	2.00	0.28	5.00	0.00	0.00	0.00
5.35	2.00	0.28	5.00	0.00	0.00	0.00
5.40	2.00	0.28	5.00	0.00	0.00	0.00
5.45	2.00	0.28	5.00	0.00	0.00	0.00
5.50	2.00	0.28	5.00	0.00	0.00	0.00

5.55	2.00	0.28	5.00	0.00	0.00	0.00
5.60	2.00	0.28	5.00	0.00	0.00	0.00
5.65	2.00	0.28	5.00	0.00	0.00	0.00
5.70	2.00	0.28	5.00	0.00	0.00	0.00
5.75	2.00	0.28	5.00	0.00	0.00	0.00
5.80	2.00	0.28	5.00	0.00	0.00	0.00
5.85	2.00	0.28	5.00	0.00	0.00	0.00
5.90	2.00	0.28	5.00	0.00	0.00	0.00
5.95	2.00	0.28	5.00	0.00	0.00	0.00
6.00	2.00	0.28	5.00	0.00	0.00	0.00
6.05	2.00	0.28	5.00	0.00	0.00	0.00
6.10	2.00	0.28	5.00	0.00	0.00	0.00
6.15	2.00	0.29	5.00	0.00	0.00	0.00
6.20	2.00	0.29	5.00	0.00	0.00	0.00
6.25	2.00	0.29	5.00	0.00	0.00	0.00
6.30	2.00	0.29	5.00	0.00	0.00	0.00
6.35	2.00	0.29	5.00	0.00	0.00	0.00
6.40	2.00	0.29	5.00	0.00	0.00	0.00
6.45	2.00	0.29	5.00	0.00	0.00	0.00
6.50	2.00	0.29	5.00	0.00	0.00	0.00
6.55	2.00	0.29	5.00	0.00	0.00	0.00
6.60	2.00	0.29	5.00	0.00	0.00	0.00
6.65	2.00	0.29	5.00	0.00	0.00	0.00
6.70	2.00	0.29	5.00	0.00	0.00	0.00
6.75	2.00	0.29	5.00	0.00	0.00	0.00
6.80	2.00	0.29	5.00	0.00	0.00	0.00
6.85	2.00	0.29	5.00	0.00	0.00	0.00
6.90	2.00	0.29	5.00	0.00	0.00	0.00
6.95	2.00	0.29	5.00	0.00	0.00	0.00
7.00	2.00	0.29	5.00	0.00	0.00	0.00
7.05	2.00	0.29	5.00	0.00	0.00	0.00
7.10	2.00	0.29	5.00	0.00	0.00	0.00
7.15	2.00	0.29	5.00	0.00	0.00	0.00
7.20	2.00	0.30	5.00	0.00	0.00	0.00
7.25	2.00	0.30	5.00	0.00	0.00	0.00
7.30	2.00	0.30	5.00	0.00	0.00	0.00
7.35	2.00	0.30	5.00	0.00	0.00	0.00
7.40	2.00	0.30	5.00	0.00	0.00	0.00
7.45	2.00	0.30	5.00	0.00	0.00	0.00
7.50	2.00	0.30	5.00	0.00	0.00	0.00
7.55	2.00	0.30	5.00	0.00	0.00	0.00
7.60	2.00	0.30	5.00	0.00	0.00	0.00
7.65	2.00	0.30	5.00	0.00	0.00	0.00
7.70	2.00	0.30	5.00	0.00	0.00	0.00
7.75	2.00	0.30	5.00	0.00	0.00	0.00
7.80	2.00	0.30	5.00	0.00	0.00	0.00
7.85	2.00	0.30	5.00	0.00	0.00	0.00
7.90	2.00	0.30	5.00	0.00	0.00	0.00
7.95	2.00	0.30	5.00	0.00	0.00	0.00
8.00	2.00	0.30	5.00	0.00	0.00	0.00
8.05	2.00	0.30	5.00	0.00	0.00	0.00
8.10	2.00	0.30	5.00	0.00	0.00	0.00
8.15	2.00	0.30	5.00	0.00	0.00	0.00
8.20	2.00	0.30	5.00	0.00	0.00	0.00
8.25	2.00	0.30	5.00	0.00	0.00	0.00
8.30	2.00	0.30	5.00	0.00	0.00	0.00
8.35	2.00	0.30	5.00	0.00	0.00	0.00
8.40	2.00	0.30	5.00	0.00	0.00	0.00
8.45	2.00	0.30	5.00	0.00	0.00	0.00
8.50	2.00	0.30	5.00	0.00	0.00	0.00
8.55	2.00	0.30	5.00	0.00	0.00	0.00
8.60	2.00	0.30	5.00	0.00	0.00	0.00
8.65	2.00	0.30	5.00	0.00	0.00	0.00
8.70	2.00	0.30	5.00	0.00	0.00	0.00
8.75	2.00	0.30	5.00	0.00	0.00	0.00
8.80	2.00	0.30	5.00	0.00	0.00	0.00
8.85	2.00	0.30	5.00	0.00	0.00	0.00
8.90	2.00	0.30	5.00	0.00	0.00	0.00
8.95	2.00	0.31	5.00	0.00	0.00	0.00
9.00	2.00	0.31	5.00	0.00	0.00	0.00
9.05	2.00	0.31	5.00	0.00	0.00	0.00

9.10	2.00	0.31	5.00	0.00	0.00	0.00
9.15	2.00	0.31	5.00	0.00	0.00	0.00
9.20	2.00	0.31	5.00	0.00	0.00	0.00
9.25	2.00	0.31	5.00	0.00	0.00	0.00
9.30	2.00	0.31	5.00	0.00	0.00	0.00
9.35	2.00	0.31	5.00	0.00	0.00	0.00
9.40	2.00	0.31	5.00	0.00	0.00	0.00
9.45	2.00	0.31	5.00	0.00	0.00	0.00
9.50	2.00	0.31	5.00	0.00	0.00	0.00
9.55	2.00	0.31	5.00	0.00	0.00	0.00
9.60	2.00	0.31	5.00	0.00	0.00	0.00
9.65	2.00	0.31	5.00	0.00	0.00	0.00
9.70	2.00	0.31	5.00	0.00	0.00	0.00
9.75	2.00	0.31	5.00	0.00	0.00	0.00
9.80	2.00	0.31	5.00	0.00	0.00	0.00
9.85	2.00	0.31	5.00	0.00	0.00	0.00
9.90	2.00	0.31	5.00	0.00	0.00	0.00
9.95	2.00	0.31	5.00	0.00	0.00	0.00
10.00	2.00	0.31	5.00	0.00	0.00	0.00
10.05	2.00	0.31	5.00	0.00	0.00	0.00
10.10	2.00	0.31	5.00	0.00	0.00	0.00
10.15	2.00	0.31	5.00	0.00	0.00	0.00
10.20	2.00	0.31	5.00	0.00	0.00	0.00
10.25	2.00	0.31	5.00	0.00	0.00	0.00
10.30	2.00	0.31	5.00	0.00	0.00	0.00
10.35	2.00	0.31	5.00	0.00	0.00	0.00
10.40	2.00	0.31	5.00	0.00	0.00	0.00
10.45	2.00	0.31	5.00	0.00	0.00	0.00
10.50	2.00	0.31	5.00	0.00	0.00	0.00
10.55	2.00	0.31	5.00	0.00	0.00	0.00
10.60	2.00	0.31	5.00	0.00	0.00	0.00
10.65	2.00	0.31	5.00	0.00	0.00	0.00
10.70	2.00	0.31	5.00	0.00	0.00	0.00
10.75	2.00	0.31	5.00	0.00	0.00	0.00
10.80	2.00	0.31	5.00	0.00	0.00	0.00
10.85	2.00	0.31	5.00	0.00	0.00	0.00
10.90	2.00	0.31	5.00	0.00	0.00	0.00
10.95	2.00	0.31	5.00	0.00	0.00	0.00
11.00	2.00	0.31	5.00	0.00	0.00	0.00
11.05	2.00	0.31	5.00	0.00	0.00	0.00
11.10	2.00	0.31	5.00	0.00	0.00	0.00
11.15	2.00	0.31	5.00	0.00	0.00	0.00
11.20	2.00	0.31	5.00	0.00	0.00	0.00
11.25	2.00	0.31	5.00	0.00	0.00	0.00
11.30	2.00	0.31	5.00	0.00	0.00	0.00
11.35	2.00	0.31	5.00	0.00	0.00	0.00
11.40	2.00	0.31	5.00	0.00	0.00	0.00
11.45	2.00	0.31	5.00	0.00	0.00	0.00
11.50	2.00	0.31	5.00	0.00	0.00	0.00
11.55	2.00	0.31	5.00	0.00	0.00	0.00
11.60	2.00	0.31	5.00	0.00	0.00	0.00
11.65	2.00	0.31	5.00	0.00	0.00	0.00
11.70	2.00	0.31	5.00	0.00	0.00	0.00
11.75	2.00	0.31	5.00	0.00	0.00	0.00
11.80	2.00	0.31	5.00	0.00	0.00	0.00
11.85	2.00	0.31	5.00	0.00	0.00	0.00
11.90	2.00	0.31	5.00	0.00	0.00	0.00
11.95	2.00	0.32	5.00	0.00	0.00	0.00
12.00	2.00	0.32	5.00	0.00	0.00	0.00
12.05	2.00	0.32	5.00	0.00	0.00	0.00
12.10	2.00	0.32	5.00	0.00	0.00	0.00
12.15	2.00	0.32	5.00	0.00	0.00	0.00
12.20	2.00	0.32	5.00	0.00	0.00	0.00
12.25	2.00	0.32	5.00	0.00	0.00	0.00
12.30	2.00	0.32	5.00	0.00	0.00	0.00
12.35	2.00	0.32	5.00	0.00	0.00	0.00
12.40	2.00	0.32	5.00	0.00	0.00	0.00
12.45	2.00	0.32	5.00	0.00	0.00	0.00
12.50	2.00	0.32	5.00	0.00	0.00	0.00
12.55	2.00	0.32	5.00	0.00	0.00	0.00
12.60	2.00	0.32	5.00	0.00	0.00	0.00

12.65	2.00	0.32	5.00	0.00	0.00	0.00
12.70	2.00	0.32	5.00	0.00	0.00	0.00
12.75	2.00	0.32	5.00	0.00	0.00	0.00
12.80	2.00	0.32	5.00	0.00	0.00	0.00
12.85	2.00	0.32	5.00	0.00	0.00	0.00
12.90	2.00	0.32	5.00	0.00	0.00	0.00
12.95	2.00	0.32	5.00	0.00	0.00	0.00
13.00	2.00	0.32	5.00	0.00	0.00	0.00
13.05	2.00	0.32	5.00	0.00	0.00	0.00
13.10	2.00	0.32	5.00	0.00	0.00	0.00
13.15	2.00	0.32	5.00	0.00	0.00	0.00
13.20	2.00	0.32	5.00	0.00	0.00	0.00
13.25	2.00	0.32	5.00	0.00	0.00	0.00
13.30	2.00	0.32	5.00	0.00	0.00	0.00
13.35	2.00	0.32	5.00	0.00	0.00	0.00
13.40	2.00	0.32	5.00	0.00	0.00	0.00
13.45	2.00	0.32	5.00	0.00	0.00	0.00
13.50	2.00	0.32	5.00	0.00	0.00	0.00
13.55	2.00	0.32	5.00	0.00	0.00	0.00
13.60	2.00	0.32	5.00	0.00	0.00	0.00
13.65	2.00	0.32	5.00	0.00	0.00	0.00
13.70	2.00	0.32	5.00	0.00	0.00	0.00
13.75	2.00	0.32	5.00	0.00	0.00	0.00
13.80	2.00	0.32	5.00	0.00	0.00	0.00
13.85	2.00	0.32	5.00	0.00	0.00	0.00
13.90	2.00	0.32	5.00	0.00	0.00	0.00
13.95	2.00	0.32	5.00	0.00	0.00	0.00
14.00	2.00	0.32	5.00	0.00	0.00	0.00
14.05	2.00	0.32	5.00	0.00	0.00	0.00
14.10	2.00	0.32	5.00	0.00	0.00	0.00
14.15	2.00	0.32	5.00	0.00	0.00	0.00
14.20	2.00	0.32	5.00	0.00	0.00	0.00
14.25	2.00	0.32	5.00	0.00	0.00	0.00
14.30	2.00	0.32	5.00	0.00	0.00	0.00
14.35	2.00	0.32	5.00	0.00	0.00	0.00
14.40	2.00	0.32	5.00	0.00	0.00	0.00
14.45	2.00	0.32	5.00	0.00	0.00	0.00
14.50	2.00	0.32	5.00	0.00	0.00	0.00
14.55	2.00	0.32	5.00	0.00	0.00	0.00
14.60	2.00	0.32	5.00	0.00	0.00	0.00
14.65	2.00	0.32	5.00	0.00	0.00	0.00
14.70	2.00	0.32	5.00	0.00	0.00	0.00
14.75	2.00	0.32	5.00	0.00	0.00	0.00
14.80	2.00	0.32	5.00	0.00	0.00	0.00
14.85	2.00	0.32	5.00	0.00	0.00	0.00
14.90	2.00	0.32	5.00	0.00	0.00	0.00
14.95	2.00	0.32	5.00	0.00	0.00	0.00
15.00	0.83	0.32	2.60	0.00	0.00	0.00
15.05	0.83	0.32	2.60	0.00	0.00	0.00
15.10	0.83	0.32	2.60	0.00	0.00	0.00
15.15	0.83	0.32	2.60	0.00	0.00	0.00
15.20	0.83	0.32	2.60	0.00	0.00	0.00
15.25	0.83	0.32	2.59	0.00	0.00	0.00
15.30	0.83	0.32	2.59	0.00	0.00	0.00
15.35	0.83	0.32	2.59	0.00	0.00	0.00
15.40	0.83	0.32	2.59	0.00	0.00	0.00
15.45	0.83	0.32	2.59	0.00	0.00	0.00
15.50	0.83	0.32	2.59	0.00	0.00	0.00
15.55	0.83	0.32	2.59	0.00	0.00	0.00
15.60	0.83	0.32	2.59	0.00	0.00	0.00
15.65	0.83	0.32	2.59	0.00	0.00	0.00
15.70	0.83	0.32	2.59	0.00	0.00	0.00
15.75	0.83	0.32	2.59	0.00	0.00	0.00
15.80	0.83	0.32	2.59	0.00	0.00	0.00
15.85	0.83	0.32	2.59	0.00	0.00	0.00
15.90	0.83	0.32	2.59	0.00	0.00	0.00
15.95	0.83	0.32	2.59	0.00	0.00	0.00
16.00	0.83	0.32	2.58	0.00	0.00	0.00
16.05	0.83	0.32	2.58	0.00	0.00	0.00
16.10	0.83	0.32	2.58	0.00	0.00	0.00
16.15	0.83	0.32	2.58	0.00	0.00	0.00

16.20	0.83	0.32	2.58	0.00	0.00	0.00
16.25	0.83	0.32	2.58	0.00	0.00	0.00
16.30	0.83	0.32	2.58	0.00	0.00	0.00
16.35	0.83	0.32	2.58	0.00	0.00	0.00
16.40	0.83	0.32	2.58	0.00	0.00	0.00
16.45	0.83	0.32	2.58	0.00	0.00	0.00
16.50	0.83	0.32	2.58	0.00	0.00	0.00
16.55	0.83	0.32	2.58	0.00	0.00	0.00
16.60	0.83	0.32	2.58	0.00	0.00	0.00
16.65	0.83	0.32	2.58	0.00	0.00	0.00
16.70	0.83	0.32	2.58	0.00	0.00	0.00
16.75	0.83	0.32	2.58	0.00	0.00	0.00
16.80	0.83	0.32	2.58	0.00	0.00	0.00
16.85	0.83	0.32	2.58	0.00	0.00	0.00
16.90	0.83	0.32	2.57	0.00	0.00	0.00
16.95	0.83	0.32	2.57	0.00	0.00	0.00
17.00	0.83	0.32	2.57	0.00	0.00	0.00
17.05	0.83	0.32	2.57	0.00	0.00	0.00
17.10	0.83	0.32	2.57	0.00	0.00	0.00
17.15	0.83	0.32	2.57	0.00	0.00	0.00
17.20	0.83	0.32	2.57	0.00	0.00	0.00
17.25	0.83	0.32	2.57	0.00	0.00	0.00
17.30	0.83	0.32	2.57	0.00	0.00	0.00
17.35	0.83	0.32	2.57	0.00	0.00	0.00
17.40	0.83	0.32	2.57	0.00	0.00	0.00
17.45	0.83	0.32	2.57	0.00	0.00	0.00
17.50	0.83	0.32	2.57	0.00	0.00	0.00
17.55	0.83	0.32	2.57	0.00	0.00	0.00
17.60	0.83	0.32	2.57	0.00	0.00	0.00
17.65	0.83	0.32	2.57	0.00	0.00	0.00
17.70	0.83	0.32	2.57	0.00	0.00	0.00
17.75	0.83	0.32	2.57	0.00	0.00	0.00
17.80	0.83	0.32	2.57	0.00	0.00	0.00
17.85	0.83	0.32	2.57	0.00	0.00	0.00
17.90	0.83	0.32	2.57	0.00	0.00	0.00
17.95	0.83	0.32	2.56	0.00	0.00	0.00
18.00	0.83	0.32	2.56	0.00	0.00	0.00
18.05	0.83	0.32	2.56	0.00	0.00	0.00
18.10	0.83	0.32	2.56	0.00	0.00	0.00
18.15	0.83	0.32	2.56	0.00	0.00	0.00
18.20	0.83	0.32	2.56	0.00	0.00	0.00
18.25	0.83	0.32	2.56	0.00	0.00	0.00
18.30	0.83	0.32	2.56	0.00	0.00	0.00
18.35	0.83	0.32	2.56	0.00	0.00	0.00
18.40	0.83	0.32	2.56	0.00	0.00	0.00
18.45	0.83	0.32	2.56	0.00	0.00	0.00
18.50	0.83	0.32	2.56	0.00	0.00	0.00
18.55	0.83	0.32	2.56	0.00	0.00	0.00
18.60	0.83	0.32	2.56	0.00	0.00	0.00
18.65	0.83	0.32	2.56	0.00	0.00	0.00
18.70	0.83	0.32	2.56	0.00	0.00	0.00
18.75	0.83	0.32	2.56	0.00	0.00	0.00
18.80	0.83	0.32	2.56	0.00	0.00	0.00
18.85	0.83	0.32	2.56	0.00	0.00	0.00
18.90	0.83	0.32	2.56	0.00	0.00	0.00
18.95	0.83	0.32	2.56	0.00	0.00	0.00
19.00	0.83	0.32	2.56	0.00	0.00	0.00
19.05	0.83	0.32	2.56	0.00	0.00	0.00
19.10	0.83	0.33	2.56	0.00	0.00	0.00
19.15	0.83	0.33	2.56	0.00	0.00	0.00
19.20	0.83	0.33	2.56	0.00	0.00	0.00
19.25	0.83	0.33	2.55	0.00	0.00	0.00
19.30	0.83	0.33	2.55	0.00	0.00	0.00
19.35	0.83	0.33	2.55	0.00	0.00	0.00
19.40	0.83	0.33	2.55	0.00	0.00	0.00
19.45	0.83	0.33	2.55	0.00	0.00	0.00
19.50	0.83	0.33	2.55	0.00	0.00	0.00
19.55	0.83	0.33	2.55	0.00	0.00	0.00
19.60	0.83	0.33	2.55	0.00	0.00	0.00
19.65	0.83	0.33	2.55	0.00	0.00	0.00
19.70	0.83	0.33	2.55	0.00	0.00	0.00

19.75	0.83	0.33	2.55	0.00	0.00	0.00
19.80	0.83	0.33	2.55	0.00	0.00	0.00
19.85	0.83	0.33	2.55	0.00	0.00	0.00
19.90	0.83	0.33	2.55	0.00	0.00	0.00
19.95	0.83	0.33	2.55	0.00	0.00	0.00
20.00	0.83	0.33	2.55	0.00	0.00	0.00
20.05	0.83	0.33	2.55	0.00	0.00	0.00
20.10	0.83	0.33	2.55	0.00	0.00	0.00
20.15	0.83	0.33	2.55	0.00	0.00	0.00
20.20	0.83	0.33	2.55	0.00	0.00	0.00
20.25	0.83	0.33	2.55	0.00	0.00	0.00
20.30	0.83	0.33	2.55	0.00	0.00	0.00
20.35	0.83	0.33	2.55	0.00	0.00	0.00
20.40	0.83	0.33	2.55	0.00	0.00	0.00
20.45	0.83	0.33	2.55	0.00	0.00	0.00
20.50	0.83	0.33	2.55	0.00	0.00	0.00
20.55	0.83	0.33	2.55	0.00	0.00	0.00
20.60	0.83	0.33	2.55	0.00	0.00	0.00
20.65	0.83	0.33	2.55	0.00	0.00	0.00
20.70	0.83	0.33	2.55	0.00	0.00	0.00
20.75	0.83	0.33	2.55	0.00	0.00	0.00
20.80	0.83	0.33	2.55	0.00	0.00	0.00
20.85	0.83	0.33	2.55	0.00	0.00	0.00
20.90	0.83	0.33	2.55	0.00	0.00	0.00
20.95	0.83	0.33	2.55	0.00	0.00	0.00
21.00	0.83	0.33	2.55	0.00	0.00	0.00
21.05	0.83	0.33	2.55	0.00	0.00	0.00
21.10	0.83	0.33	2.55	0.00	0.00	0.00
21.15	0.83	0.33	2.55	0.00	0.00	0.00
21.20	0.83	0.33	2.55	0.00	0.00	0.00
21.25	0.83	0.33	2.55	0.00	0.00	0.00
21.30	0.83	0.33	2.55	0.00	0.00	0.00
21.35	0.83	0.33	2.55	0.00	0.00	0.00
21.40	0.83	0.33	2.55	0.00	0.00	0.00
21.45	0.83	0.33	2.55	0.00	0.00	0.00
21.50	0.83	0.33	2.55	0.00	0.00	0.00
21.55	0.83	0.33	2.55	0.00	0.00	0.00
21.60	0.83	0.33	2.55	0.00	0.00	0.00
21.65	0.83	0.33	2.55	0.00	0.00	0.00
21.70	0.83	0.33	2.55	0.00	0.00	0.00
21.75	0.83	0.33	2.55	0.00	0.00	0.00
21.80	0.83	0.33	2.55	0.00	0.00	0.00
21.85	0.83	0.33	2.55	0.00	0.00	0.00
21.90	0.83	0.33	2.55	0.00	0.00	0.00
21.95	0.83	0.33	2.55	0.00	0.00	0.00
22.00	0.83	0.33	2.55	0.00	0.00	0.00
22.05	0.83	0.33	2.55	0.00	0.00	0.00
22.10	0.83	0.33	2.55	0.00	0.00	0.00
22.15	0.83	0.33	2.55	0.00	0.00	0.00
22.20	0.83	0.33	2.54	0.00	0.00	0.00
22.25	0.83	0.33	2.54	0.00	0.00	0.00
22.30	0.83	0.33	2.54	0.00	0.00	0.00
22.35	0.83	0.33	2.54	0.00	0.00	0.00
22.40	0.83	0.33	2.54	0.00	0.00	0.00
22.45	0.83	0.33	2.54	0.00	0.00	0.00
22.50	0.83	0.33	2.54	0.00	0.00	0.00
22.55	0.83	0.33	2.54	0.00	0.00	0.00
22.60	0.83	0.33	2.54	0.00	0.00	0.00
22.65	0.83	0.33	2.54	0.00	0.00	0.00
22.70	0.83	0.33	2.54	0.00	0.00	0.00
22.75	0.83	0.33	2.54	0.00	0.00	0.00
22.80	0.83	0.33	2.54	0.00	0.00	0.00
22.85	0.83	0.33	2.54	0.00	0.00	0.00
22.90	0.83	0.33	2.54	0.00	0.00	0.00
22.95	0.83	0.33	2.54	0.00	0.00	0.00
23.00	0.83	0.33	2.54	0.00	0.00	0.00
23.05	0.83	0.33	2.54	0.00	0.00	0.00
23.10	0.83	0.33	2.54	0.00	0.00	0.00
23.15	0.83	0.33	2.54	0.00	0.00	0.00
23.20	0.83	0.33	2.54	0.00	0.00	0.00
23.25	0.83	0.33	2.54	0.00	0.00	0.00

23.30	0.83	0.33	2.54	0.00	0.00	0.00
23.35	0.83	0.33	2.54	0.00	0.00	0.00
23.40	0.83	0.33	2.54	0.00	0.00	0.00
23.45	0.83	0.33	2.54	0.00	0.00	0.00
23.50	0.83	0.33	2.54	0.00	0.00	0.00
23.55	0.83	0.33	2.54	0.00	0.00	0.00
23.60	0.83	0.33	2.54	0.00	0.00	0.00
23.65	0.83	0.33	2.54	0.00	0.00	0.00
23.70	0.83	0.33	2.54	0.00	0.00	0.00
23.75	0.83	0.33	2.54	0.00	0.00	0.00
23.80	0.83	0.33	2.54	0.00	0.00	0.00
23.85	0.83	0.33	2.54	0.00	0.00	0.00
23.90	0.83	0.33	2.54	0.00	0.00	0.00
23.95	0.83	0.33	2.54	0.00	0.00	0.00
24.00	0.83	0.33	2.54	0.00	0.00	0.00
24.05	0.83	0.33	2.54	0.00	0.00	0.00
24.10	0.83	0.33	2.54	0.00	0.00	0.00
24.15	0.83	0.33	2.54	0.00	0.00	0.00
24.20	0.83	0.33	2.54	0.00	0.00	0.00
24.25	0.83	0.33	2.54	0.00	0.00	0.00
24.30	0.83	0.33	2.54	0.00	0.00	0.00
24.35	0.83	0.33	2.54	0.00	0.00	0.00
24.40	0.83	0.33	2.54	0.00	0.00	0.00
24.45	0.83	0.33	2.54	0.00	0.00	0.00
24.50	0.83	0.33	2.54	0.00	0.00	0.00
24.55	0.83	0.33	2.54	0.00	0.00	0.00
24.60	0.83	0.33	2.54	0.00	0.00	0.00
24.65	0.83	0.33	2.54	0.00	0.00	0.00
24.70	0.83	0.33	2.54	0.00	0.00	0.00
24.75	0.83	0.33	2.54	0.00	0.00	0.00
24.80	0.83	0.33	2.54	0.00	0.00	0.00
24.85	0.83	0.33	2.54	0.00	0.00	0.00
24.90	0.83	0.33	2.54	0.00	0.00	0.00
24.95	0.83	0.33	2.54	0.00	0.00	0.00
25.00	0.83	0.33	2.54	0.00	0.00	0.00
25.05	0.83	0.33	2.54	0.00	0.00	0.00
25.10	0.83	0.33	2.54	0.00	0.00	0.00
25.15	0.83	0.33	2.54	0.00	0.00	0.00
25.20	0.83	0.33	2.54	0.00	0.00	0.00
25.25	0.83	0.33	2.54	0.00	0.00	0.00
25.30	0.83	0.33	2.54	0.00	0.00	0.00
25.35	0.83	0.33	2.54	0.00	0.00	0.00
25.40	0.83	0.33	2.54	0.00	0.00	0.00
25.45	0.83	0.33	2.54	0.00	0.00	0.00
25.50	0.83	0.33	2.54	0.00	0.00	0.00
25.55	0.83	0.33	2.54	0.00	0.00	0.00
25.60	0.83	0.33	2.54	0.00	0.00	0.00
25.65	0.83	0.33	2.54	0.00	0.00	0.00
25.70	0.83	0.33	2.54	0.00	0.00	0.00
25.75	0.83	0.33	2.54	0.00	0.00	0.00
25.80	0.83	0.33	2.54	0.00	0.00	0.00
25.85	0.83	0.33	2.54	0.00	0.00	0.00
25.90	0.83	0.33	2.54	0.00	0.00	0.00
25.95	0.83	0.33	2.54	0.00	0.00	0.00
26.00	0.83	0.33	2.54	0.00	0.00	0.00
26.05	0.83	0.33	2.54	0.00	0.00	0.00
26.10	0.83	0.33	2.54	0.00	0.00	0.00
26.15	0.83	0.33	2.54	0.00	0.00	0.00
26.20	0.83	0.33	2.54	0.00	0.00	0.00
26.25	0.83	0.33	2.54	0.00	0.00	0.00
26.30	0.83	0.33	2.54	0.00	0.00	0.00
26.35	0.83	0.33	2.54	0.00	0.00	0.00
26.40	0.83	0.33	2.54	0.00	0.00	0.00
26.45	0.83	0.33	2.54	0.00	0.00	0.00
26.50	0.83	0.33	2.54	0.00	0.00	0.00
26.55	0.83	0.33	2.54	0.00	0.00	0.00
26.60	0.83	0.33	2.54	0.00	0.00	0.00
26.65	0.83	0.33	2.54	0.00	0.00	0.00
26.70	0.83	0.33	2.54	0.00	0.00	0.00
26.75	0.83	0.33	2.54	0.00	0.00	0.00
26.80	0.83	0.33	2.54	0.00	0.00	0.00

26.85	0.83	0.33	2.54	0.00	0.00	0.00
26.90	0.83	0.33	2.54	0.00	0.00	0.00
26.95	0.83	0.33	2.54	0.00	0.00	0.00
27.00	0.83	0.33	2.54	0.00	0.00	0.00
27.05	0.83	0.33	2.54	0.00	0.00	0.00
27.10	0.83	0.33	2.54	0.00	0.00	0.00
27.15	0.83	0.33	2.54	0.00	0.00	0.00
27.20	0.83	0.33	2.54	0.00	0.00	0.00
27.25	0.83	0.33	2.54	0.00	0.00	0.00
27.30	0.83	0.33	2.54	0.00	0.00	0.00
27.35	0.83	0.33	2.54	0.00	0.00	0.00
27.40	0.83	0.33	2.54	0.00	0.00	0.00
27.45	0.83	0.33	2.54	0.00	0.00	0.00
27.50	0.83	0.33	2.54	0.00	0.00	0.00
27.55	0.83	0.33	2.54	0.00	0.00	0.00
27.60	0.83	0.33	2.54	0.00	0.00	0.00
27.65	0.83	0.33	2.53	0.00	0.00	0.00
27.70	0.83	0.33	2.53	0.00	0.00	0.00
27.75	0.83	0.33	2.53	0.00	0.00	0.00
27.80	0.83	0.33	2.53	0.00	0.00	0.00
27.85	0.83	0.33	2.53	0.00	0.00	0.00
27.90	0.83	0.33	2.53	0.00	0.00	0.00
27.95	0.83	0.33	2.53	0.00	0.00	0.00
28.00	0.83	0.33	2.53	0.00	0.00	0.00
28.05	0.83	0.33	2.53	0.00	0.00	0.00
28.10	0.83	0.33	2.53	0.00	0.00	0.00
28.15	0.83	0.33	2.53	0.00	0.00	0.00
28.20	0.83	0.33	2.53	0.00	0.00	0.00
28.25	0.83	0.33	2.53	0.00	0.00	0.00
28.30	0.83	0.33	2.53	0.00	0.00	0.00
28.35	0.83	0.33	2.53	0.00	0.00	0.00
28.40	0.83	0.33	2.53	0.00	0.00	0.00
28.45	0.83	0.33	2.53	0.00	0.00	0.00
28.50	0.83	0.33	2.53	0.00	0.00	0.00
28.55	0.83	0.33	2.53	0.00	0.00	0.00
28.60	0.83	0.33	2.53	0.00	0.00	0.00
28.65	0.83	0.33	2.53	0.00	0.00	0.00
28.70	0.83	0.33	2.53	0.00	0.00	0.00
28.75	0.83	0.33	2.53	0.00	0.00	0.00
28.80	0.83	0.33	2.53	0.00	0.00	0.00
28.85	0.83	0.33	2.53	0.00	0.00	0.00
28.90	0.83	0.33	2.53	0.00	0.00	0.00
28.95	0.83	0.33	2.53	0.00	0.00	0.00
29.00	0.83	0.33	2.53	0.00	0.00	0.00
29.05	0.83	0.33	2.53	0.00	0.00	0.00
29.10	0.83	0.33	2.53	0.00	0.00	0.00
29.15	0.83	0.33	2.53	0.00	0.00	0.00
29.20	0.83	0.33	2.53	0.00	0.00	0.00
29.25	0.83	0.33	2.53	0.00	0.00	0.00
29.30	0.83	0.33	2.53	0.00	0.00	0.00
29.35	0.83	0.33	2.53	0.00	0.00	0.00
29.40	0.83	0.33	2.53	0.00	0.00	0.00
29.45	0.83	0.33	2.53	0.00	0.00	0.00
29.50	0.83	0.33	2.53	0.00	0.00	0.00
29.55	0.83	0.33	2.53	0.00	0.00	0.00
29.60	0.83	0.33	2.53	0.00	0.00	0.00
29.65	0.83	0.33	2.53	0.00	0.00	0.00
29.70	0.83	0.33	2.53	0.00	0.00	0.00
29.75	0.83	0.33	2.53	0.00	0.00	0.00
29.80	0.83	0.33	2.53	0.00	0.00	0.00
29.85	0.83	0.33	2.53	0.00	0.00	0.00
29.90	0.83	0.33	2.53	0.00	0.00	0.00
29.95	0.83	0.33	2.53	0.00	0.00	0.00
30.00	0.83	0.33	2.53	0.00	0.00	0.00
30.05	0.83	0.33	2.53	0.00	0.00	0.00
30.10	0.83	0.33	2.53	0.00	0.00	0.00
30.15	0.83	0.33	2.53	0.00	0.00	0.00
30.20	0.83	0.33	2.53	0.00	0.00	0.00
30.25	0.83	0.33	2.54	0.00	0.00	0.00
30.30	0.83	0.33	2.54	0.00	0.00	0.00
30.35	0.83	0.33	2.54	0.00	0.00	0.00

30.40	0.83	0.33	2.54	0.00	0.00	0.00
30.45	0.83	0.33	2.54	0.00	0.00	0.00
30.50	0.83	0.33	2.54	0.00	0.00	0.00
30.55	0.83	0.33	2.54	0.00	0.00	0.00
30.60	0.83	0.33	2.54	0.00	0.00	0.00
30.65	0.83	0.33	2.54	0.00	0.00	0.00
30.70	0.83	0.33	2.54	0.00	0.00	0.00
30.75	0.83	0.33	2.54	0.00	0.00	0.00
30.80	0.83	0.33	2.54	0.00	0.00	0.00
30.85	0.83	0.33	2.55	0.00	0.00	0.00
30.90	0.83	0.33	2.55	0.00	0.00	0.00
30.95	0.83	0.33	2.55	0.00	0.00	0.00
31.00	0.83	0.33	2.55	0.00	0.00	0.00
31.05	0.83	0.33	2.55	0.00	0.00	0.00
31.10	0.83	0.33	2.55	0.00	0.00	0.00
31.15	0.83	0.33	2.55	0.00	0.00	0.00
31.20	0.83	0.33	2.55	0.00	0.00	0.00
31.25	0.83	0.33	2.55	0.00	0.00	0.00
31.30	0.83	0.33	2.55	0.00	0.00	0.00
31.35	0.83	0.33	2.55	0.00	0.00	0.00
31.40	0.83	0.33	2.56	0.00	0.00	0.00
31.45	0.83	0.32	2.56	0.00	0.00	0.00
31.50	0.83	0.32	2.56	0.00	0.00	0.00
31.55	0.83	0.32	2.56	0.00	0.00	0.00
31.60	0.83	0.32	2.56	0.00	0.00	0.00
31.65	0.83	0.32	2.56	0.00	0.00	0.00
31.70	0.83	0.32	2.56	0.00	0.00	0.00
31.75	0.83	0.32	2.56	0.00	0.00	0.00
31.80	0.83	0.32	2.56	0.00	0.00	0.00
31.85	0.83	0.32	2.56	0.00	0.00	0.00
31.90	0.83	0.32	2.56	0.00	0.00	0.00
31.95	0.83	0.32	2.57	0.00	0.00	0.00
32.00	0.83	0.32	2.57	0.00	0.00	0.00
32.05	0.83	0.32	2.57	0.00	0.00	0.00
32.10	0.83	0.32	2.57	0.00	0.00	0.00
32.15	0.83	0.32	2.57	0.00	0.00	0.00
32.20	0.83	0.32	2.57	0.00	0.00	0.00
32.25	0.83	0.32	2.57	0.00	0.00	0.00
32.30	0.83	0.32	2.57	0.00	0.00	0.00
32.35	0.83	0.32	2.57	0.00	0.00	0.00
32.40	0.83	0.32	2.57	0.00	0.00	0.00
32.45	0.83	0.32	2.57	0.00	0.00	0.00
32.50	0.83	0.32	2.58	0.00	0.00	0.00
32.55	0.83	0.32	2.58	0.00	0.00	0.00
32.60	0.83	0.32	2.58	0.00	0.00	0.00
32.65	0.83	0.32	2.58	0.00	0.00	0.00
32.70	0.83	0.32	2.58	0.00	0.00	0.00
32.75	0.83	0.32	2.58	0.00	0.00	0.00
32.80	0.83	0.32	2.58	0.00	0.00	0.00
32.85	0.83	0.32	2.58	0.00	0.00	0.00
32.90	0.83	0.32	2.58	0.00	0.00	0.00
32.95	0.83	0.32	2.58	0.00	0.00	0.00
33.00	0.83	0.32	2.58	0.00	0.00	0.00
33.05	0.83	0.32	2.59	0.00	0.00	0.00
33.10	0.83	0.32	2.59	0.00	0.00	0.00
33.15	0.83	0.32	2.59	0.00	0.00	0.00
33.20	0.83	0.32	2.59	0.00	0.00	0.00
33.25	0.83	0.32	2.59	0.00	0.00	0.00
33.30	0.83	0.32	2.59	0.00	0.00	0.00
33.35	0.83	0.32	2.59	0.00	0.00	0.00
33.40	0.83	0.32	2.59	0.00	0.00	0.00
33.45	0.83	0.32	2.59	0.00	0.00	0.00
33.50	0.83	0.32	2.59	0.00	0.00	0.00
33.55	0.83	0.32	2.60	0.00	0.00	0.00
33.60	0.83	0.32	2.60	0.00	0.00	0.00
33.65	0.83	0.32	2.60	0.00	0.00	0.00
33.70	0.83	0.32	2.60	0.00	0.00	0.00
33.75	0.83	0.32	2.60	0.00	0.00	0.00
33.80	0.83	0.32	2.60	0.00	0.00	0.00
33.85	0.83	0.32	2.60	0.00	0.00	0.00
33.90	0.83	0.32	2.60	0.00	0.00	0.00

33.95	0.83	0.32	2.60	0.00	0.00	0.00
34.00	0.83	0.32	2.60	0.00	0.00	0.00
34.05	0.83	0.32	2.61	0.00	0.00	0.00
34.10	0.83	0.32	2.61	0.00	0.00	0.00
34.15	0.83	0.32	2.61	0.00	0.00	0.00
34.20	0.83	0.32	2.61	0.00	0.00	0.00
34.25	0.83	0.32	2.61	0.00	0.00	0.00
34.30	0.83	0.32	2.61	0.00	0.00	0.00
34.35	0.83	0.32	2.61	0.00	0.00	0.00
34.40	0.83	0.32	2.61	0.00	0.00	0.00
34.45	0.83	0.32	2.61	0.00	0.00	0.00
34.50	0.83	0.32	2.61	0.00	0.00	0.00
34.55	0.83	0.32	2.61	0.00	0.00	0.00
34.60	0.83	0.32	2.62	0.00	0.00	0.00
34.65	0.83	0.32	2.62	0.00	0.00	0.00
34.70	0.83	0.32	2.62	0.00	0.00	0.00
34.75	0.83	0.32	2.62	0.00	0.00	0.00
34.80	0.83	0.32	2.62	0.00	0.00	0.00
34.85	0.83	0.32	2.62	0.00	0.00	0.00
34.90	0.83	0.32	2.62	0.00	0.00	0.00
34.95	0.83	0.32	2.62	0.00	0.00	0.00
35.00	0.83	0.32	2.62	0.00	0.00	0.00
35.05	0.83	0.32	2.62	0.00	0.00	0.00
35.10	0.83	0.32	2.63	0.00	0.00	0.00
35.15	0.83	0.32	2.63	0.00	0.00	0.00
35.20	0.83	0.32	2.63	0.00	0.00	0.00
35.25	0.83	0.32	2.63	0.00	0.00	0.00
35.30	0.83	0.32	2.63	0.00	0.00	0.00
35.35	0.83	0.32	2.63	0.00	0.00	0.00
35.40	0.83	0.32	2.63	0.00	0.00	0.00
35.45	0.83	0.32	2.63	0.00	0.00	0.00
35.50	0.83	0.32	2.63	0.00	0.00	0.00
35.55	0.83	0.32	2.63	0.00	0.00	0.00
35.60	0.83	0.32	2.64	0.00	0.00	0.00
35.65	0.83	0.32	2.64	0.00	0.00	0.00
35.70	0.83	0.31	2.64	0.00	0.00	0.00
35.75	0.83	0.31	2.64	0.00	0.00	0.00
35.80	0.83	0.31	2.64	0.00	0.00	0.00
35.85	0.83	0.31	2.64	0.00	0.00	0.00
35.90	0.83	0.31	2.64	0.00	0.00	0.00
35.95	0.83	0.31	2.64	0.00	0.00	0.00
36.00	0.83	0.31	2.64	0.00	0.00	0.00
36.05	0.83	0.31	2.64	0.00	0.00	0.00
36.10	0.83	0.31	2.65	0.00	0.00	0.00
36.15	0.83	0.31	2.65	0.00	0.00	0.00
36.20	0.83	0.31	2.65	0.00	0.00	0.00
36.25	0.83	0.31	2.65	0.00	0.00	0.00
36.30	0.83	0.31	2.65	0.00	0.00	0.00
36.35	0.83	0.31	2.65	0.00	0.00	0.00
36.40	0.83	0.31	2.65	0.00	0.00	0.00
36.45	0.83	0.31	2.65	0.00	0.00	0.00
36.50	0.83	0.31	2.65	0.00	0.00	0.00
36.55	0.83	0.31	2.65	0.00	0.00	0.00
36.60	0.83	0.31	2.65	0.00	0.00	0.00
36.65	0.83	0.31	2.66	0.00	0.00	0.00
36.70	0.83	0.31	2.66	0.00	0.00	0.00
36.75	0.83	0.31	2.66	0.00	0.00	0.00
36.80	0.83	0.31	2.66	0.00	0.00	0.00
36.85	0.83	0.31	2.66	0.00	0.00	0.00
36.90	0.83	0.31	2.66	0.00	0.00	0.00
36.95	0.83	0.31	2.66	0.00	0.00	0.00
37.00	0.83	0.31	2.66	0.00	0.00	0.00
37.05	0.83	0.31	2.66	0.00	0.00	0.00
37.10	0.83	0.31	2.66	0.00	0.00	0.00
37.15	0.83	0.31	2.67	0.00	0.00	0.00
37.20	0.83	0.31	2.67	0.00	0.00	0.00
37.25	0.83	0.31	2.67	0.00	0.00	0.00
37.30	0.83	0.31	2.67	0.00	0.00	0.00
37.35	0.83	0.31	2.67	0.00	0.00	0.00
37.40	0.83	0.31	2.67	0.00	0.00	0.00
37.45	0.83	0.31	2.67	0.00	0.00	0.00

37.50	0.83	0.31	2.67	0.00	0.00	0.00
37.55	0.83	0.31	2.67	0.00	0.00	0.00
37.60	0.83	0.31	2.67	0.00	0.00	0.00
37.65	0.83	0.31	2.68	0.00	0.00	0.00
37.70	0.83	0.31	2.68	0.00	0.00	0.00
37.75	0.83	0.31	2.68	0.00	0.00	0.00
37.80	0.83	0.31	2.68	0.00	0.00	0.00
37.85	0.83	0.31	2.68	0.00	0.00	0.00
37.90	0.83	0.31	2.68	0.00	0.00	0.00
37.95	0.83	0.31	2.68	0.00	0.00	0.00
38.00	0.83	0.31	2.68	0.00	0.00	0.00
38.05	0.83	0.31	2.68	0.00	0.00	0.00
38.10	0.83	0.31	2.69	0.00	0.00	0.00
38.15	0.83	0.31	2.69	0.00	0.00	0.00
38.20	0.83	0.31	2.69	0.00	0.00	0.00
38.25	0.83	0.31	2.69	0.00	0.00	0.00
38.30	0.83	0.31	2.69	0.00	0.00	0.00
38.35	0.83	0.31	2.69	0.00	0.00	0.00
38.40	0.83	0.31	2.69	0.00	0.00	0.00
38.45	0.83	0.31	2.69	0.00	0.00	0.00
38.50	0.83	0.31	2.69	0.00	0.00	0.00
38.55	0.83	0.31	2.69	0.00	0.00	0.00
38.60	0.83	0.31	2.70	0.00	0.00	0.00
38.65	0.83	0.31	2.70	0.00	0.00	0.00
38.70	0.83	0.31	2.70	0.00	0.00	0.00
38.75	0.83	0.31	2.70	0.00	0.00	0.00
38.80	0.83	0.31	2.70	0.00	0.00	0.00
38.85	0.83	0.31	2.70	0.00	0.00	0.00
38.90	0.83	0.31	2.70	0.00	0.00	0.00
38.95	0.83	0.31	2.70	0.00	0.00	0.00
39.00	0.83	0.31	2.70	0.00	0.00	0.00
39.05	0.83	0.31	2.71	0.00	0.00	0.00
39.10	0.83	0.31	2.71	0.00	0.00	0.00
39.15	0.83	0.31	2.71	0.00	0.00	0.00
39.20	0.83	0.31	2.71	0.00	0.00	0.00
39.25	0.83	0.31	2.71	0.00	0.00	0.00
39.30	0.83	0.31	2.71	0.00	0.00	0.00
39.35	0.83	0.31	2.71	0.00	0.00	0.00
39.40	0.83	0.31	2.71	0.00	0.00	0.00
39.45	0.83	0.31	2.71	0.00	0.00	0.00
39.50	0.83	0.31	2.71	0.00	0.00	0.00
39.55	0.83	0.31	2.72	0.00	0.00	0.00
39.60	0.83	0.31	2.72	0.00	0.00	0.00
39.65	0.83	0.31	2.72	0.00	0.00	0.00
39.70	0.83	0.31	2.72	0.00	0.00	0.00
39.75	0.83	0.31	2.72	0.00	0.00	0.00
39.80	0.83	0.31	2.72	0.00	0.00	0.00
39.85	0.83	0.31	2.72	0.00	0.00	0.00
39.90	0.83	0.31	2.72	0.00	0.00	0.00
39.95	0.83	0.30	2.72	0.00	0.00	0.00
40.00	0.83	0.30	2.73	0.00	0.00	0.00
40.05	0.83	0.30	2.73	0.00	0.00	0.00
40.10	0.83	0.30	2.73	0.00	0.00	0.00
40.15	0.83	0.30	2.73	0.00	0.00	0.00
40.20	0.83	0.30	2.73	0.00	0.00	0.00
40.25	0.83	0.30	2.73	0.00	0.00	0.00
40.30	0.83	0.30	2.73	0.00	0.00	0.00
40.35	0.83	0.30	2.74	0.00	0.00	0.00
40.40	0.83	0.30	2.74	0.00	0.00	0.00
40.45	0.83	0.30	2.74	0.00	0.00	0.00
40.50	0.83	0.30	2.74	0.00	0.00	0.00
40.55	0.83	0.30	2.74	0.00	0.00	0.00
40.60	0.83	0.30	2.74	0.00	0.00	0.00
40.65	0.83	0.30	2.74	0.00	0.00	0.00
40.70	0.83	0.30	2.75	0.00	0.00	0.00
40.75	0.83	0.30	2.75	0.00	0.00	0.00
40.80	0.83	0.30	2.75	0.00	0.00	0.00
40.85	0.83	0.30	2.75	0.00	0.00	0.00
40.90	0.83	0.30	2.75	0.00	0.00	0.00
40.95	0.83	0.30	2.75	0.00	0.00	0.00
41.00	0.83	0.30	2.75	0.00	0.00	0.00

41.05	0.83	0.30	2.76	0.00	0.00	0.00
41.10	0.83	0.30	2.76	0.00	0.00	0.00
41.15	0.83	0.30	2.76	0.00	0.00	0.00
41.20	0.83	0.30	2.76	0.00	0.00	0.00
41.25	0.83	0.30	2.76	0.00	0.00	0.00
41.30	0.83	0.30	2.76	0.00	0.00	0.00
41.35	0.83	0.30	2.76	0.00	0.00	0.00
41.40	0.83	0.30	2.77	0.00	0.00	0.00
41.45	0.83	0.30	2.77	0.00	0.00	0.00
41.50	0.83	0.30	2.77	0.00	0.00	0.00
41.55	0.83	0.30	2.77	0.00	0.00	0.00
41.60	0.83	0.30	2.77	0.00	0.00	0.00
41.65	0.83	0.30	2.77	0.00	0.00	0.00
41.70	0.83	0.30	2.77	0.00	0.00	0.00
41.75	0.83	0.30	2.78	0.00	0.00	0.00
41.80	0.83	0.30	2.78	0.00	0.00	0.00
41.85	0.83	0.30	2.78	0.00	0.00	0.00
41.90	0.83	0.30	2.78	0.00	0.00	0.00
41.95	0.83	0.30	2.78	0.00	0.00	0.00
42.00	0.84	0.30	2.80	0.00	0.00	0.00
42.05	0.84	0.30	2.80	0.00	0.00	0.00
42.10	0.84	0.30	2.80	0.00	0.00	0.00
42.15	0.84	0.30	2.80	0.00	0.00	0.00
42.20	0.84	0.30	2.80	0.00	0.00	0.00
42.25	0.84	0.30	2.80	0.00	0.00	0.00
42.30	0.83	0.30	2.80	0.00	0.00	0.00
42.35	0.83	0.30	2.81	0.00	0.00	0.00
42.40	0.83	0.30	2.81	0.00	0.00	0.00
42.45	0.83	0.30	2.81	0.00	0.00	0.00
42.50	0.83	0.30	2.81	0.00	0.00	0.00
42.55	0.83	0.30	2.81	0.00	0.00	0.00
42.60	0.83	0.30	2.81	0.00	0.00	0.00
42.65	0.83	0.30	2.81	0.00	0.00	0.00
42.70	0.83	0.30	2.81	0.00	0.00	0.00
42.75	0.83	0.30	2.81	0.00	0.00	0.00
42.80	0.83	0.30	2.81	0.00	0.00	0.00
42.85	0.83	0.30	2.81	0.00	0.00	0.00
42.90	0.83	0.30	2.82	0.00	0.00	0.00
42.95	0.83	0.30	2.82	0.00	0.00	0.00
43.00	0.83	0.30	2.82	0.00	0.00	0.00
43.05	0.83	0.30	2.82	0.00	0.00	0.00
43.10	0.83	0.30	2.82	0.00	0.00	0.00
43.15	0.83	0.30	2.82	0.00	0.00	0.00
43.20	0.83	0.29	2.82	0.00	0.00	0.00
43.25	0.83	0.29	2.82	0.00	0.00	0.00
43.30	0.83	0.29	2.82	0.00	0.00	0.00
43.35	0.83	0.29	2.82	0.00	0.00	0.00
43.40	0.83	0.29	2.82	0.00	0.00	0.00
43.45	0.83	0.29	2.83	0.00	0.00	0.00
43.50	0.83	0.29	2.83	0.00	0.00	0.00
43.55	0.83	0.29	2.83	0.00	0.00	0.00
43.60	0.83	0.29	2.83	0.00	0.00	0.00
43.65	0.83	0.29	2.83	0.00	0.00	0.00
43.70	0.83	0.29	2.83	0.00	0.00	0.00
43.75	0.83	0.29	2.83	0.00	0.00	0.00
43.80	0.83	0.29	2.83	0.00	0.00	0.00
43.85	0.83	0.29	2.83	0.00	0.00	0.00
43.90	0.83	0.29	2.83	0.00	0.00	0.00
43.95	0.83	0.29	2.83	0.00	0.00	0.00
44.00	0.83	0.29	2.84	0.00	0.00	0.00
44.05	0.83	0.29	2.84	0.00	0.00	0.00
44.10	0.83	0.29	2.84	0.00	0.00	0.00
44.15	0.83	0.29	2.84	0.00	0.00	0.00
44.20	0.83	0.29	2.84	0.00	0.00	0.00
44.25	0.83	0.29	2.84	0.00	0.00	0.00
44.30	0.83	0.29	2.84	0.00	0.00	0.00
44.35	0.83	0.29	2.84	0.00	0.00	0.00
44.40	0.83	0.29	2.84	0.00	0.00	0.00
44.45	0.83	0.29	2.84	0.00	0.00	0.00
44.50	0.83	0.29	2.85	0.00	0.00	0.00
44.55	0.83	0.29	2.85	0.00	0.00	0.00

44.60	0.83	0.29	2.85	0.00	0.00	0.00
44.65	0.83	0.29	2.85	0.00	0.00	0.00
44.70	0.83	0.29	2.85	0.00	0.00	0.00
44.75	0.83	0.29	2.85	0.00	0.00	0.00
44.80	0.83	0.29	2.85	0.00	0.00	0.00
44.85	0.83	0.29	2.85	0.00	0.00	0.00
44.90	0.83	0.29	2.85	0.00	0.00	0.00
44.95	0.83	0.29	2.85	0.00	0.00	0.00
45.00	0.83	0.29	2.85	0.00	0.00	0.00
45.05	0.83	0.29	2.86	0.00	0.00	0.00
45.10	0.83	0.29	2.86	0.00	0.00	0.00
45.15	0.83	0.29	2.86	0.00	0.00	0.00
45.20	0.83	0.29	2.86	0.00	0.00	0.00
45.25	0.83	0.29	2.86	0.00	0.00	0.00
45.30	0.82	0.29	2.86	0.00	0.00	0.00
45.35	0.82	0.29	2.86	0.00	0.00	0.00
45.40	0.82	0.29	2.86	0.00	0.00	0.00
45.45	0.82	0.29	2.86	0.00	0.00	0.00
45.50	0.82	0.29	2.86	0.00	0.00	0.00
45.55	0.82	0.29	2.86	0.00	0.00	0.00
45.60	0.82	0.29	2.86	0.00	0.00	0.00
45.65	0.82	0.29	2.87	0.00	0.00	0.00
45.70	0.82	0.29	2.87	0.00	0.00	0.00
45.75	0.82	0.29	2.87	0.00	0.00	0.00
45.80	0.82	0.29	2.87	0.00	0.00	0.00
45.85	0.82	0.29	2.87	0.00	0.00	0.00
45.90	0.82	0.29	2.87	0.00	0.00	0.00
45.95	0.82	0.29	2.87	0.00	0.00	0.00
46.00	0.82	0.29	2.87	0.00	0.00	0.00
46.05	0.82	0.29	2.87	0.00	0.00	0.00
46.10	0.82	0.29	2.87	0.00	0.00	0.00
46.15	0.82	0.29	2.87	0.00	0.00	0.00
46.20	0.82	0.29	2.88	0.00	0.00	0.00
46.25	0.82	0.29	2.88	0.00	0.00	0.00
46.30	0.82	0.29	2.88	0.00	0.00	0.00
46.35	0.82	0.29	2.88	0.00	0.00	0.00
46.40	0.82	0.29	2.88	0.00	0.00	0.00
46.45	0.82	0.29	2.88	0.00	0.00	0.00
46.50	0.82	0.29	2.88	0.00	0.00	0.00
46.55	0.82	0.28	2.88	0.00	0.00	0.00
46.60	0.82	0.28	2.88	0.00	0.00	0.00
46.65	0.82	0.28	2.88	0.00	0.00	0.00
46.70	0.82	0.28	2.88	0.00	0.00	0.00
46.75	0.82	0.28	2.89	0.00	0.00	0.00
46.80	0.82	0.28	2.89	0.00	0.00	0.00
46.85	0.82	0.28	2.89	0.00	0.00	0.00
46.90	0.82	0.28	2.89	0.00	0.00	0.00
46.95	0.82	0.28	2.89	0.00	0.00	0.00
47.00	0.82	0.28	2.89	0.00	0.00	0.00
47.05	0.82	0.28	2.89	0.00	0.00	0.00
47.10	0.82	0.28	2.89	0.00	0.00	0.00
47.15	0.82	0.28	2.89	0.00	0.00	0.00
47.20	0.82	0.28	2.89	0.00	0.00	0.00
47.25	0.82	0.28	2.89	0.00	0.00	0.00
47.30	0.82	0.28	2.90	0.00	0.00	0.00
47.35	0.82	0.28	2.90	0.00	0.00	0.00
47.40	0.82	0.28	2.90	0.00	0.00	0.00
47.45	0.82	0.28	2.90	0.00	0.00	0.00
47.50	0.82	0.28	2.90	0.00	0.00	0.00
47.55	0.82	0.28	2.90	0.00	0.00	0.00
47.60	0.82	0.28	2.90	0.00	0.00	0.00
47.65	0.82	0.28	2.90	0.00	0.00	0.00
47.70	0.82	0.28	2.90	0.00	0.00	0.00
47.75	0.82	0.28	2.90	0.00	0.00	0.00
47.80	0.82	0.28	2.90	0.00	0.00	0.00
47.85	0.82	0.28	2.91	0.00	0.00	0.00
47.90	0.82	0.28	2.91	0.00	0.00	0.00
47.95	0.82	0.28	2.91	0.00	0.00	0.00
48.00	0.82	0.28	2.91	0.00	0.00	0.00
48.05	0.82	0.28	2.91	0.00	0.00	0.00
48.10	0.82	0.28	2.91	0.00	0.00	0.00

48.15	0.82	0.28	2.91	0.00	0.00	0.00
48.20	0.82	0.28	2.91	0.00	0.00	0.00
48.25	0.82	0.28	2.91	0.00	0.00	0.00
48.30	0.82	0.28	2.91	0.00	0.00	0.00
48.35	0.82	0.28	2.91	0.00	0.00	0.00
48.40	0.82	0.28	2.92	0.00	0.00	0.00
48.45	0.82	0.28	2.92	0.00	0.00	0.00
48.50	0.82	0.28	2.92	0.00	0.00	0.00
48.55	0.82	0.28	2.92	0.00	0.00	0.00
48.60	0.82	0.28	2.92	0.00	0.00	0.00
48.65	0.82	0.28	2.92	0.00	0.00	0.00
48.70	0.82	0.28	2.92	0.00	0.00	0.00
48.75	0.81	0.28	2.92	0.00	0.00	0.00
48.80	0.81	0.28	2.92	0.00	0.00	0.00
48.85	0.81	0.28	2.92	0.00	0.00	0.00
48.90	0.81	0.28	2.92	0.00	0.00	0.00
48.95	0.81	0.28	2.93	0.00	0.00	0.00
49.00	0.81	0.28	2.93	0.00	0.00	0.00
49.05	0.81	0.28	2.93	0.00	0.00	0.00
49.10	0.81	0.28	2.93	0.00	0.00	0.00
49.15	0.81	0.28	2.93	0.00	0.00	0.00
49.20	0.81	0.28	2.93	0.00	0.00	0.00
49.25	0.81	0.28	2.93	0.00	0.00	0.00
49.30	0.81	0.28	2.93	0.00	0.00	0.00
49.35	0.81	0.28	2.93	0.00	0.00	0.00
49.40	0.81	0.28	2.93	0.00	0.00	0.00
49.45	0.81	0.28	2.94	0.00	0.00	0.00
49.50	0.81	0.28	2.94	0.00	0.00	0.00
49.55	0.81	0.28	2.94	0.00	0.00	0.00
49.60	0.81	0.28	2.94	0.00	0.00	0.00
49.65	0.81	0.28	2.94	0.00	0.00	0.00
49.70	0.81	0.28	2.94	0.00	0.00	0.00
49.75	0.81	0.28	2.94	0.00	0.00	0.00
49.80	0.81	0.28	2.94	0.00	0.00	0.00
49.85	0.81	0.28	2.94	0.00	0.00	0.00
49.90	0.81	0.28	2.94	0.00	0.00	0.00
49.95	0.81	0.28	2.95	0.00	0.00	0.00
50.00	0.81	0.28	2.95	0.00	0.00	0.00

---

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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1 atm (atmosphere) = 1 tsf (ton/ft2)

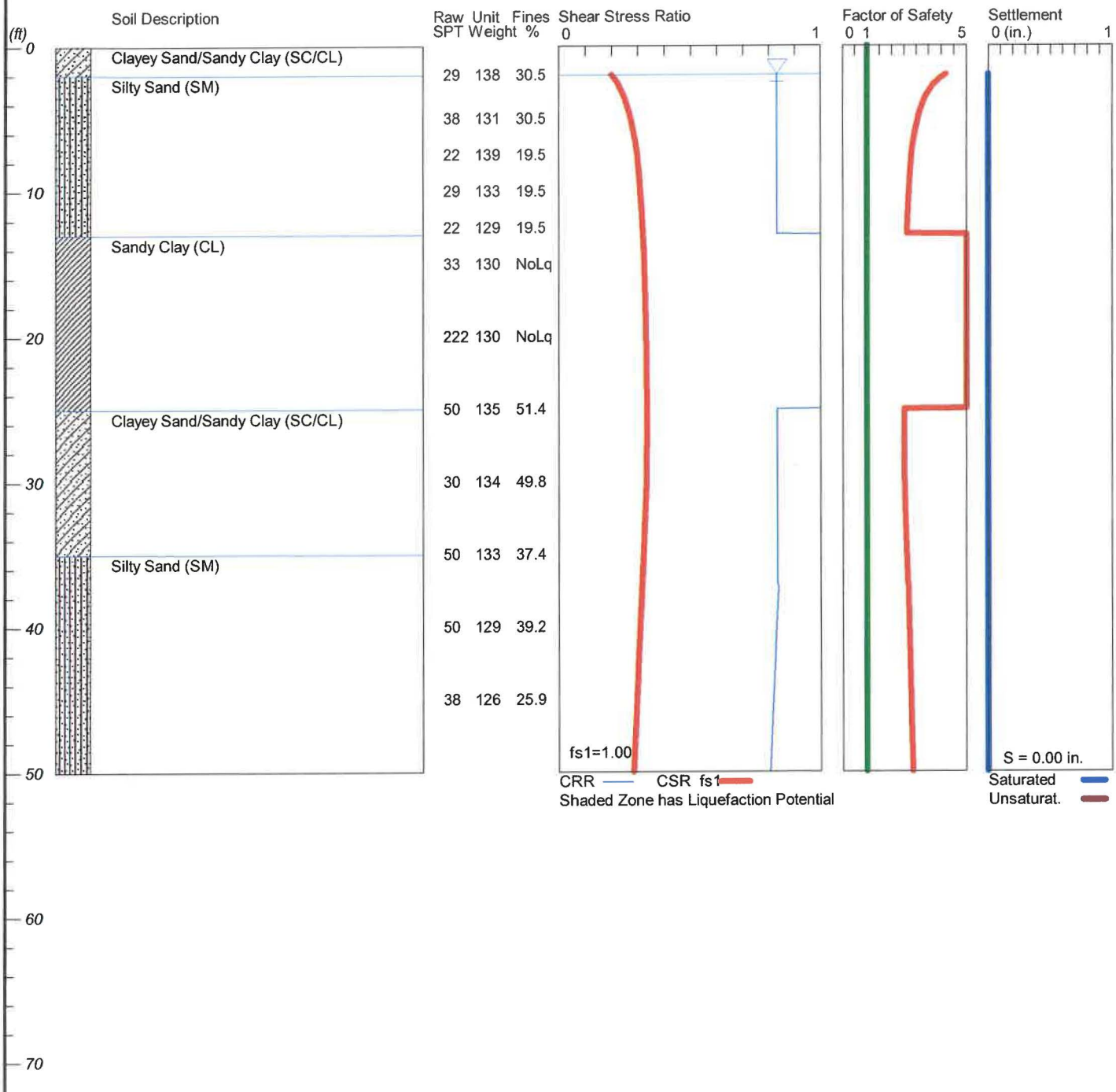
CRRm	Cyclic resistance ratio from soils
CSRsf	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S.	Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat	Settlement from saturated sands
S_dry	Settlement from Unsaturated Sands
S_all	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B20 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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Krazan

012-22165

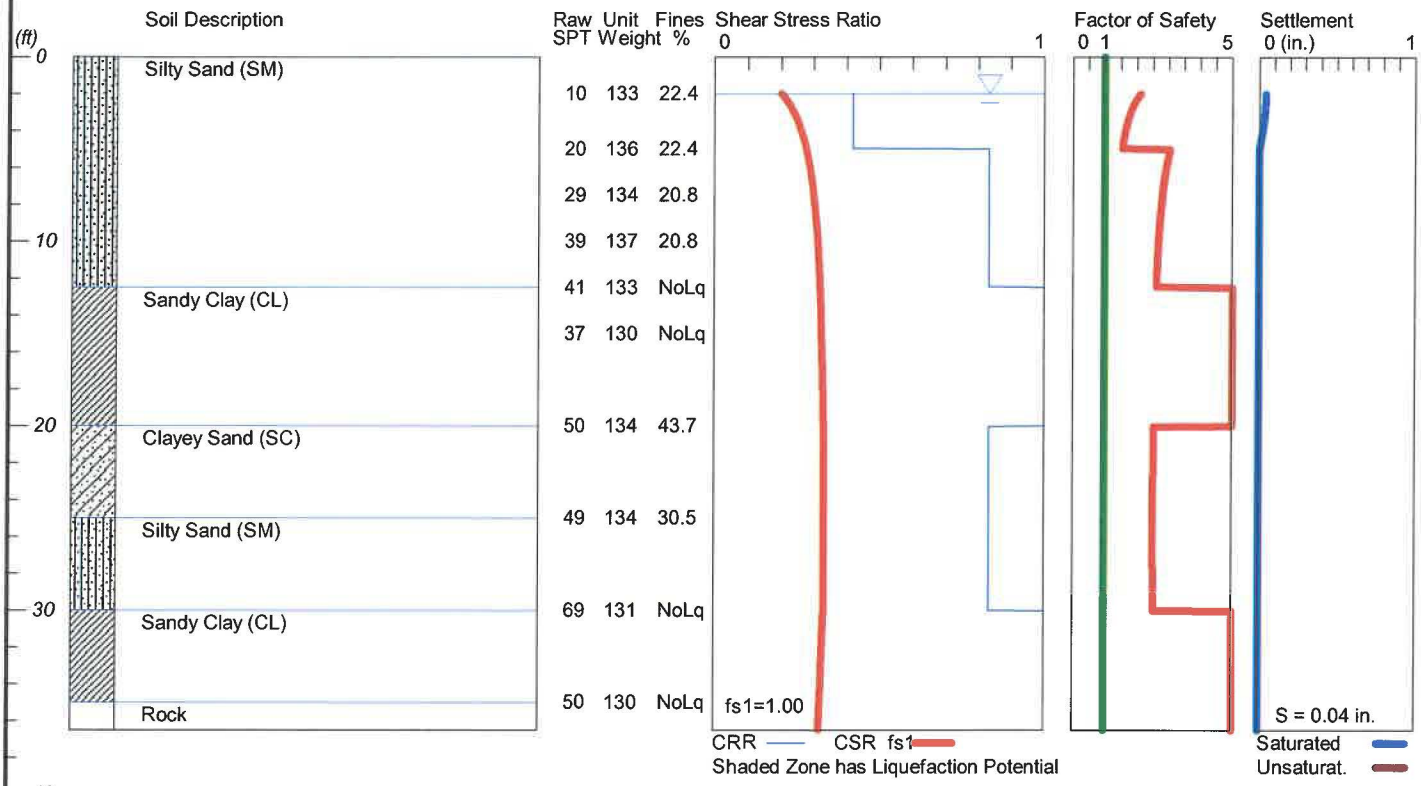
Plate A-1

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B21 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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*****************************************************************************************************
                                    LIQUEFACTION ANALY5I5 5UMMARY
                                  Copyright by CivilTech Software
                                       www.civiltech.com
*****************************************************************************************************
    Font: Courier New, Regular, 5ize 8 is recommended for this report.
    Licensed to ,   8/9/2023       3:52:06 PM

    Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\16S Triangle Development\B21\B21
Liquefaction.liq
    Title:  Triangle Development
    5ubtitle:  012-2216S

    5urface Elev.=
    Hole No.=B21
    Depth of Hole= 36.50 ft
    Water Table during Earthquake= 2.00 ft
    Water Table during In-Situ Testing= 3.00 ft
    Max. Acceleration= 0.31 g
    Earthquake Magnitude= 6.15

 Input Data:
    Surface Elev.=
    Hole No.=B21
    Depth of Hole=36.50 ft
    Water Table during Earthquake= 2.00 ft
    Water Table during In-Situ Testing= 3.00 ft
    Max. Acceleration=0.31 g
    Earthquake Magnitude=6.15
    No-Liquefiable Soils:   CL, OL are Non-Liq. Soil

    1. SPT or BPT Calculation.
    2. 5ettlement Analysis Method: Ishihara / Yoshimine
    3. Fines Correction for Liquefaction: Stark/Olson et al.*
    4. Fine Correction for 5ettlement: During Liquefaction*
    5. 5ettlement Calculation in: All zones*
    6. Hammer Energy Ratio,                                  Ce = 1.4
    7. Borehole Diameter,                                        Cb= 1.05
    8. Sampling Method,                                        Cs= 1
    9. User request factor of safety (apply to CSR) ,   User= 1
       Plot one CSR curve (fs1=User)
    10. Use Curve 5moothing: No
    * Recommended Options

    In-Situ Test Data:
    Depth   SPT     gamma   Fines
    ft              pcf     %
    ____________________________________
    2.00    10.00   133.00  22.40
    S.00    20.00   136.00  22.40
    7.50    29.00   134.00  20.80
    10.00   39.00   137.00  20.80
    12.50   41.00   133.00  NoLiq
    15.00   37.00   130.00  NoLiq
    20.00   50.00   134.00  43.70
    2S.00   49.00   134.00  30.50
    30.00   69.00   131.00  NoLiq
    35.00   50.00   130.00  NoLiq
    ____________________________________

Output Results:
    Settlement of 5aturated 5ands=0.04 in.
    5ettlement of Unsaturated Sands=0.00 in.
    Total Settlement of 5aturated and Unsaturated Sands=0.04 in.
    Differential 5ettlement=0.019 to 0.025 in.

    Depth   CRRm    C5Rfs   F.5.    5_sat.  5_dry   5_all
    ft                              in.     in.     in.
    ____________________________________________________
    2.00    0.42    0.20    2.11    0.04    0.00    0.04
    2.05    0.42    0.20    2.08    0.04    0.00    0.04
```

2.10	0.42	0.20	2.06	0.04	0.00	0.04
2.15	0.42	0.21	2.04	0.04	0.00	0.04
2.20	0.42	0.21	2.02	0.04	0.00	0.04
2.25	0.42	0.21	2.00	0.04	0.00	0.04
2.30	0.42	0.21	1.98	0.04	0.00	0.04
2.35	0.42	0.21	1.96	0.04	0.00	0.04
2.40	0.42	0.22	1.95	0.04	0.00	0.04
2.45	0.42	0.22	1.93	0.04	0.00	0.04
2.50	0.42	0.22	1.91	0.04	0.00	0.04
2.55	0.42	0.22	1.90	0.04	0.00	0.04
2.60	0.42	0.22	1.88	0.04	0.00	0.04
2.65	0.42	0.22	1.87	0.04	0.00	0.04
2.70	0.42	0.23	1.85	0.04	0.00	0.04
2.75	0.42	0.23	1.84	0.04	0.00	0.04
2.80	0.42	0.23	1.83	0.04	0.00	0.04
2.85	0.42	0.23	1.82	0.04	0.00	0.04
2.90	0.42	0.23	1.81	0.04	0.00	0.04
2.95	0.42	0.23	1.79	0.03	0.00	0.03
3.00	0.42	0.23	1.78	0.03	0.00	0.03
3.05	0.42	0.24	1.77	0.03	0.00	0.03
3.10	0.42	0.24	1.76	0.03	0.00	0.03
3.15	0.42	0.24	1.75	0.03	0.00	0.03
3.20	0.42	0.24	1.74	0.03	0.00	0.03
3.25	0.42	0.24	1.73	0.03	0.00	0.03
3.30	0.42	0.24	1.72	0.03	0.00	0.03
3.35	0.42	0.24	1.72	0.03	0.00	0.03
3.40	0.42	0.25	1.71	0.03	0.00	0.03
3.45	0.42	0.25	1.70	0.03	0.00	0.03
3.50	0.42	0.25	1.69	0.03	0.00	0.03
3.55	0.42	0.25	1.68	0.03	0.00	0.03
3.60	0.42	0.25	1.67	0.03	0.00	0.03
3.65	0.42	0.25	1.67	0.03	0.00	0.03
3.70	0.42	0.25	1.66	0.02	0.00	0.02
3.75	0.42	0.25	1.65	0.02	0.00	0.02
3.80	0.42	0.25	1.65	0.02	0.00	0.02
3.85	0.42	0.26	1.64	0.02	0.00	0.02
3.90	0.42	0.26	1.63	0.02	0.00	0.02
3.95	0.42	0.26	1.63	0.02	0.00	0.02
4.00	0.42	0.26	1.62	0.02	0.00	0.02
4.05	0.42	0.26	1.62	0.02	0.00	0.02
4.10	0.42	0.26	1.61	0.02	0.00	0.02
4.15	0.42	0.26	1.60	0.02	0.00	0.02
4.20	0.42	0.26	1.60	0.02	0.00	0.02
4.25	0.42	0.26	1.59	0.02	0.00	0.02
4.30	0.42	0.26	1.59	0.01	0.00	0.01
4.35	0.42	0.26	1.58	0.01	0.00	0.01
4.40	0.42	0.27	1.58	0.01	0.00	0.01
4.45	0.42	0.27	1.57	0.01	0.00	0.01
4.50	0.42	0.27	1.57	0.01	0.00	0.01
4.55	0.42	0.27	1.56	0.01	0.00	0.01
4.60	0.42	0.27	1.56	0.01	0.00	0.01
4.65	0.42	0.27	1.55	0.01	0.00	0.01
4.70	0.42	0.27	1.55	0.01	0.00	0.01
4.75	0.42	0.27	1.55	0.01	0.00	0.01
4.80	0.42	0.27	1.54	0.00	0.00	0.00
4.85	0.42	0.27	1.54	0.00	0.00	0.00
4.90	0.42	0.27	1.53	0.00	0.00	0.00
4.95	0.42	0.27	1.53	0.00	0.00	0.00
5.00	0.83	0.27	3.03	0.00	0.00	0.00
5.05	0.83	0.28	3.02	0.00	0.00	0.00
5.10	0.83	0.28	3.01	0.00	0.00	0.00
5.15	0.83	0.28	3.01	0.00	0.00	0.00
5.20	0.83	0.28	3.00	0.00	0.00	0.00
5.25	0.83	0.28	2.99	0.00	0.00	0.00
5.30	0.83	0.28	2.99	0.00	0.00	0.00
5.35	0.83	0.28	2.98	0.00	0.00	0.00
5.40	0.83	0.28	2.97	0.00	0.00	0.00
5.45	0.83	0.28	2.97	0.00	0.00	0.00
5.50	0.83	0.28	2.96	0.00	0.00	0.00
5.55	0.83	0.28	2.95	0.00	0.00	0.00
5.60	0.83	0.28	2.95	0.00	0.00	0.00

5.65	0.83	0.28	2.94	0.00	0.00	0.00
5.70	0.83	0.28	2.94	0.00	0.00	0.00
5.75	0.83	0.28	2.93	0.00	0.00	0.00
5.80	0.83	0.28	2.93	0.00	0.00	0.00
5.85	0.83	0.28	2.92	0.00	0.00	0.00
5.90	0.83	0.28	2.92	0.00	0.00	0.00
5.95	0.83	0.29	2.91	0.00	0.00	0.00
6.00	0.83	0.29	2.91	0.00	0.00	0.00
6.05	0.83	0.29	2.90	0.00	0.00	0.00
6.10	0.83	0.29	2.90	0.00	0.00	0.00
6.15	0.83	0.29	2.89	0.00	0.00	0.00
6.20	0.83	0.29	2.89	0.00	0.00	0.00
6.25	0.83	0.29	2.88	0.00	0.00	0.00
6.30	0.83	0.29	2.88	0.00	0.00	0.00
6.35	0.83	0.29	2.87	0.00	0.00	0.00
6.40	0.83	0.29	2.87	0.00	0.00	0.00
6.45	0.83	0.29	2.87	0.00	0.00	0.00
6.50	0.83	0.29	2.86	0.00	0.00	0.00
6.55	0.83	0.29	2.86	0.00	0.00	0.00
6.60	0.83	0.29	2.85	0.00	0.00	0.00
6.65	0.83	0.29	2.85	0.00	0.00	0.00
6.70	0.83	0.29	2.85	0.00	0.00	0.00
6.75	0.83	0.29	2.84	0.00	0.00	0.00
6.80	0.83	0.29	2.84	0.00	0.00	0.00
6.85	0.83	0.29	2.83	0.00	0.00	0.00
6.90	0.83	0.29	2.83	0.00	0.00	0.00
6.95	0.83	0.29	2.83	0.00	0.00	0.00
7.00	0.83	0.29	2.82	0.00	0.00	0.00
7.05	0.83	0.29	2.82	0.00	0.00	0.00
7.10	0.83	0.30	2.82	0.00	0.00	0.00
7.15	0.83	0.30	2.81	0.00	0.00	0.00
7.20	0.83	0.30	2.81	0.00	0.00	0.00
7.25	0.83	0.30	2.81	0.00	0.00	0.00
7.30	0.83	0.30	2.80	0.00	0.00	0.00
7.35	0.83	0.30	2.80	0.00	0.00	0.00
7.40	0.83	0.30	2.80	0.00	0.00	0.00
7.45	0.83	0.30	2.79	0.00	0.00	0.00
7.50	0.83	0.30	2.79	0.00	0.00	0.00
7.55	0.83	0.30	2.79	0.00	0.00	0.00
7.60	0.83	0.30	2.78	0.00	0.00	0.00
7.65	0.83	0.30	2.78	0.00	0.00	0.00
7.70	0.83	0.30	2.78	0.00	0.00	0.00
7.75	0.83	0.30	2.77	0.00	0.00	0.00
7.80	0.83	0.30	2.77	0.00	0.00	0.00
7.85	0.83	0.30	2.77	0.00	0.00	0.00
7.90	0.83	0.30	2.77	0.00	0.00	0.00
7.95	0.83	0.30	2.76	0.00	0.00	0.00
8.00	0.83	0.30	2.76	0.00	0.00	0.00
8.05	0.83	0.30	2.76	0.00	0.00	0.00
8.10	0.83	0.30	2.76	0.00	0.00	0.00
8.15	0.83	0.30	2.75	0.00	0.00	0.00
8.20	0.83	0.30	2.75	0.00	0.00	0.00
8.25	0.83	0.30	2.75	0.00	0.00	0.00
8.30	0.83	0.30	2.74	0.00	0.00	0.00
8.35	0.83	0.30	2.74	0.00	0.00	0.00
8.40	0.83	0.30	2.74	0.00	0.00	0.00
8.45	0.83	0.30	2.74	0.00	0.00	0.00
8.50	0.83	0.30	2.73	0.00	0.00	0.00
8.55	0.83	0.30	2.73	0.00	0.00	0.00
8.60	0.83	0.30	2.73	0.00	0.00	0.00
8.65	0.83	0.30	2.73	0.00	0.00	0.00
8.70	0.83	0.30	2.73	0.00	0.00	0.00
8.75	0.83	0.31	2.72	0.00	0.00	0.00
8.80	0.83	0.31	2.72	0.00	0.00	0.00
8.85	0.83	0.31	2.72	0.00	0.00	0.00
8.90	0.83	0.31	2.72	0.00	0.00	0.00
8.95	0.83	0.31	2.71	0.00	0.00	0.00
9.00	0.83	0.31	2.71	0.00	0.00	0.00
9.05	0.83	0.31	2.71	0.00	0.00	0.00
9.10	0.83	0.31	2.71	0.00	0.00	0.00
9.15	0.83	0.31	2.71	0.00	0.00	0.00

9.20	0.83	0.31	2.70	0.00	0.00	0.00
9.25	0.83	0.31	2.70	0.00	0.00	0.00
9.30	0.83	0.31	2.70	0.00	0.00	0.00
9.35	0.83	0.31	2.70	0.00	0.00	0.00
9.40	0.83	0.31	2.70	0.00	0.00	0.00
9.45	0.83	0.31	2.69	0.00	0.00	0.00
9.50	0.83	0.31	2.69	0.00	0.00	0.00
9.55	0.83	0.31	2.69	0.00	0.00	0.00
9.60	0.83	0.31	2.69	0.00	0.00	0.00
9.65	0.83	0.31	2.69	0.00	0.00	0.00
9.70	0.83	0.31	2.68	0.00	0.00	0.00
9.75	0.83	0.31	2.68	0.00	0.00	0.00
9.80	0.83	0.31	2.68	0.00	0.00	0.00
9.85	0.83	0.31	2.68	0.00	0.00	0.00
9.90	0.83	0.31	2.68	0.00	0.00	0.00
9.95	0.83	0.31	2.68	0.00	0.00	0.00
10.00	0.83	0.31	2.67	0.00	0.00	0.00
10.05	0.83	0.31	2.67	0.00	0.00	0.00
10.10	0.83	0.31	2.67	0.00	0.00	0.00
10.15	0.83	0.31	2.67	0.00	0.00	0.00
10.20	0.83	0.31	2.67	0.00	0.00	0.00
10.25	0.83	0.31	2.67	0.00	0.00	0.00
10.30	0.83	0.31	2.67	0.00	0.00	0.00
10.35	0.83	0.31	2.66	0.00	0.00	0.00
10.40	0.83	0.31	2.66	0.00	0.00	0.00
10.45	0.83	0.31	2.66	0.00	0.00	0.00
10.50	0.83	0.31	2.66	0.00	0.00	0.00
10.55	0.83	0.31	2.66	0.00	0.00	0.00
10.60	0.83	0.31	2.66	0.00	0.00	0.00
10.65	0.83	0.31	2.66	0.00	0.00	0.00
10.70	0.83	0.31	2.66	0.00	0.00	0.00
10.75	0.83	0.31	2.65	0.00	0.00	0.00
10.80	0.83	0.31	2.65	0.00	0.00	0.00
10.85	0.83	0.31	2.65	0.00	0.00	0.00
10.90	0.83	0.31	2.65	0.00	0.00	0.00
10.95	0.83	0.31	2.65	0.00	0.00	0.00
11.00	0.83	0.31	2.65	0.00	0.00	0.00
11.05	0.83	0.31	2.65	0.00	0.00	0.00
11.10	0.83	0.31	2.65	0.00	0.00	0.00
11.15	0.83	0.31	2.64	0.00	0.00	0.00
11.20	0.83	0.31	2.64	0.00	0.00	0.00
11.25	0.83	0.31	2.64	0.00	0.00	0.00
11.30	0.83	0.31	2.64	0.00	0.00	0.00
11.35	0.83	0.31	2.64	0.00	0.00	0.00
11.40	0.83	0.31	2.64	0.00	0.00	0.00
11.45	0.83	0.31	2.64	0.00	0.00	0.00
11.50	0.83	0.32	2.64	0.00	0.00	0.00
11.55	0.83	0.32	2.64	0.00	0.00	0.00
11.60	0.83	0.32	2.63	0.00	0.00	0.00
11.65	0.83	0.32	2.63	0.00	0.00	0.00
11.70	0.83	0.32	2.63	0.00	0.00	0.00
11.75	0.83	0.32	2.63	0.00	0.00	0.00
11.80	0.83	0.32	2.63	0.00	0.00	0.00
11.85	0.83	0.32	2.63	0.00	0.00	0.00
11.90	0.83	0.32	2.63	0.00	0.00	0.00
11.95	0.83	0.32	2.63	0.00	0.00	0.00
12.00	0.83	0.32	2.63	0.00	0.00	0.00
12.05	0.83	0.32	2.63	0.00	0.00	0.00
12.10	0.83	0.32	2.63	0.00	0.00	0.00
12.15	0.83	0.32	2.62	0.00	0.00	0.00
12.20	0.83	0.32	2.62	0.00	0.00	0.00
12.25	0.83	0.32	2.62	0.00	0.00	0.00
12.30	0.83	0.32	2.62	0.00	0.00	0.00
12.35	0.83	0.32	2.62	0.00	0.00	0.00
12.40	0.83	0.32	2.62	0.00	0.00	0.00
12.45	0.83	0.32	2.62	0.00	0.00	0.00
12.50	2.00	0.32	5.00	0.00	0.00	0.00
12.55	2.00	0.32	5.00	0.00	0.00	0.00
12.60	2.00	0.32	5.00	0.00	0.00	0.00
12.65	2.00	0.32	5.00	0.00	0.00	0.00
12.70	2.00	0.32	5.00	0.00	0.00	0.00

12.75	2.00	0.32	5.00	0.00	0.00	0.00
12.80	2.00	0.32	5.00	0.00	0.00	0.00
12.85	2.00	0.32	5.00	0.00	0.00	0.00
12.90	2.00	0.32	5.00	0.00	0.00	0.00
12.95	2.00	0.32	5.00	0.00	0.00	0.00
13.00	2.00	0.32	5.00	0.00	0.00	0.00
13.05	2.00	0.32	5.00	0.00	0.00	0.00
13.10	2.00	0.32	5.00	0.00	0.00	0.00
13.15	2.00	0.32	5.00	0.00	0.00	0.00
13.20	2.00	0.32	5.00	0.00	0.00	0.00
13.25	2.00	0.32	5.00	0.00	0.00	0.00
13.30	2.00	0.32	5.00	0.00	0.00	0.00
13.35	2.00	0.32	5.00	0.00	0.00	0.00
13.40	2.00	0.32	5.00	0.00	0.00	0.00
13.45	2.00	0.32	5.00	0.00	0.00	0.00
13.50	2.00	0.32	5.00	0.00	0.00	0.00
13.55	2.00	0.32	5.00	0.00	0.00	0.00
13.60	2.00	0.32	5.00	0.00	0.00	0.00
13.65	2.00	0.32	5.00	0.00	0.00	0.00
13.70	2.00	0.32	5.00	0.00	0.00	0.00
13.75	2.00	0.32	5.00	0.00	0.00	0.00
13.80	2.00	0.32	5.00	0.00	0.00	0.00
13.85	2.00	0.32	5.00	0.00	0.00	0.00
13.90	2.00	0.32	5.00	0.00	0.00	0.00
13.95	2.00	0.32	5.00	0.00	0.00	0.00
14.00	2.00	0.32	5.00	0.00	0.00	0.00
14.05	2.00	0.32	5.00	0.00	0.00	0.00
14.10	2.00	0.32	5.00	0.00	0.00	0.00
14.15	2.00	0.32	5.00	0.00	0.00	0.00
14.20	2.00	0.32	5.00	0.00	0.00	0.00
14.25	2.00	0.32	5.00	0.00	0.00	0.00
14.30	2.00	0.32	5.00	0.00	0.00	0.00
14.35	2.00	0.32	5.00	0.00	0.00	0.00
14.40	2.00	0.32	5.00	0.00	0.00	0.00
14.45	2.00	0.32	5.00	0.00	0.00	0.00
14.50	2.00	0.32	5.00	0.00	0.00	0.00
14.55	2.00	0.32	5.00	0.00	0.00	0.00
14.60	2.00	0.32	5.00	0.00	0.00	0.00
14.65	2.00	0.32	5.00	0.00	0.00	0.00
14.70	2.00	0.32	5.00	0.00	0.00	0.00
14.75	2.00	0.32	5.00	0.00	0.00	0.00
14.80	2.00	0.32	5.00	0.00	0.00	0.00
14.85	2.00	0.32	5.00	0.00	0.00	0.00
14.90	2.00	0.32	5.00	0.00	0.00	0.00
14.95	2.00	0.32	5.00	0.00	0.00	0.00
15.00	2.00	0.32	5.00	0.00	0.00	0.00
15.05	2.00	0.32	5.00	0.00	0.00	0.00
15.10	2.00	0.32	5.00	0.00	0.00	0.00
15.15	2.00	0.32	5.00	0.00	0.00	0.00
15.20	2.00	0.32	5.00	0.00	0.00	0.00
15.25	2.00	0.32	5.00	0.00	0.00	0.00
15.30	2.00	0.32	5.00	0.00	0.00	0.00
15.35	2.00	0.32	5.00	0.00	0.00	0.00
15.40	2.00	0.32	5.00	0.00	0.00	0.00
15.45	2.00	0.32	5.00	0.00	0.00	0.00
15.50	2.00	0.32	5.00	0.00	0.00	0.00
15.55	2.00	0.32	5.00	0.00	0.00	0.00
15.60	2.00	0.32	5.00	0.00	0.00	0.00
15.65	2.00	0.32	5.00	0.00	0.00	0.00
15.70	2.00	0.32	5.00	0.00	0.00	0.00
15.75	2.00	0.32	5.00	0.00	0.00	0.00
15.80	2.00	0.32	5.00	0.00	0.00	0.00
15.85	2.00	0.32	5.00	0.00	0.00	0.00
15.90	2.00	0.32	5.00	0.00	0.00	0.00
15.95	2.00	0.32	5.00	0.00	0.00	0.00
16.00	2.00	0.32	5.00	0.00	0.00	0.00
16.05	2.00	0.32	5.00	0.00	0.00	0.00
16.10	2.00	0.32	5.00	0.00	0.00	0.00
16.15	2.00	0.32	5.00	0.00	0.00	0.00
16.20	2.00	0.32	5.00	0.00	0.00	0.00
16.25	2.00	0.32	5.00	0.00	0.00	0.00

16.30	2.00	0.32	5.00	0.00	0.00	0.00
16.35	2.00	0.32	5.00	0.00	0.00	0.00
16.40	2.00	0.32	5.00	0.00	0.00	0.00
16.45	2.00	0.32	5.00	0.00	0.00	0.00
16.50	2.00	0.32	5.00	0.00	0.00	0.00
16.55	2.00	0.32	5.00	0.00	0.00	0.00
16.60	2.00	0.33	5.00	0.00	0.00	0.00
16.65	2.00	0.33	5.00	0.00	0.00	0.00
16.70	2.00	0.33	5.00	0.00	0.00	0.00
16.75	2.00	0.33	5.00	0.00	0.00	0.00
16.80	2.00	0.33	5.00	0.00	0.00	0.00
16.85	2.00	0.33	5.00	0.00	0.00	0.00
16.90	2.00	0.33	5.00	0.00	0.00	0.00
16.95	2.00	0.33	5.00	0.00	0.00	0.00
17.00	2.00	0.33	5.00	0.00	0.00	0.00
17.05	2.00	0.33	5.00	0.00	0.00	0.00
17.10	2.00	0.33	5.00	0.00	0.00	0.00
17.15	2.00	0.33	5.00	0.00	0.00	0.00
17.20	2.00	0.33	5.00	0.00	0.00	0.00
17.25	2.00	0.33	5.00	0.00	0.00	0.00
17.30	2.00	0.33	5.00	0.00	0.00	0.00
17.35	2.00	0.33	5.00	0.00	0.00	0.00
17.40	2.00	0.33	5.00	0.00	0.00	0.00
17.45	2.00	0.33	5.00	0.00	0.00	0.00
17.50	2.00	0.33	5.00	0.00	0.00	0.00
17.55	2.00	0.33	5.00	0.00	0.00	0.00
17.60	2.00	0.33	5.00	0.00	0.00	0.00
17.65	2.00	0.33	5.00	0.00	0.00	0.00
17.70	2.00	0.33	5.00	0.00	0.00	0.00
17.75	2.00	0.33	5.00	0.00	0.00	0.00
17.80	2.00	0.33	5.00	0.00	0.00	0.00
17.85	2.00	0.33	5.00	0.00	0.00	0.00
17.90	2.00	0.33	5.00	0.00	0.00	0.00
17.95	2.00	0.33	5.00	0.00	0.00	0.00
18.00	2.00	0.33	5.00	0.00	0.00	0.00
18.05	2.00	0.33	5.00	0.00	0.00	0.00
18.10	2.00	0.33	5.00	0.00	0.00	0.00
18.15	2.00	0.33	5.00	0.00	0.00	0.00
18.20	2.00	0.33	5.00	0.00	0.00	0.00
18.25	2.00	0.33	5.00	0.00	0.00	0.00
18.30	2.00	0.33	5.00	0.00	0.00	0.00
18.35	2.00	0.33	5.00	0.00	0.00	0.00
18.40	2.00	0.33	5.00	0.00	0.00	0.00
18.45	2.00	0.33	5.00	0.00	0.00	0.00
18.50	2.00	0.33	5.00	0.00	0.00	0.00
18.55	2.00	0.33	5.00	0.00	0.00	0.00
18.60	2.00	0.33	5.00	0.00	0.00	0.00
18.65	2.00	0.33	5.00	0.00	0.00	0.00
18.70	2.00	0.33	5.00	0.00	0.00	0.00
18.75	2.00	0.33	5.00	0.00	0.00	0.00
18.80	2.00	0.33	5.00	0.00	0.00	0.00
18.85	2.00	0.33	5.00	0.00	0.00	0.00
18.90	2.00	0.33	5.00	0.00	0.00	0.00
18.95	2.00	0.33	5.00	0.00	0.00	0.00
19.00	2.00	0.33	5.00	0.00	0.00	0.00
19.05	2.00	0.33	5.00	0.00	0.00	0.00
19.10	2.00	0.33	5.00	0.00	0.00	0.00
19.15	2.00	0.33	5.00	0.00	0.00	0.00
19.20	2.00	0.33	5.00	0.00	0.00	0.00
19.25	2.00	0.33	5.00	0.00	0.00	0.00
19.30	2.00	0.33	5.00	0.00	0.00	0.00
19.35	2.00	0.33	5.00	0.00	0.00	0.00
19.40	2.00	0.33	5.00	0.00	0.00	0.00
19.45	2.00	0.33	5.00	0.00	0.00	0.00
19.50	2.00	0.33	5.00	0.00	0.00	0.00
19.55	2.00	0.33	5.00	0.00	0.00	0.00
19.60	2.00	0.33	5.00	0.00	0.00	0.00
19.65	2.00	0.33	5.00	0.00	0.00	0.00
19.70	2.00	0.33	5.00	0.00	0.00	0.00
19.75	2.00	0.33	5.00	0.00	0.00	0.00
19.80	2.00	0.33	5.00	0.00	0.00	0.00

19.85	2.00	0.33	5.00	0.00	0.00	0.00
19.90	2.00	0.33	5.00	0.00	0.00	0.00
19.95	2.00	0.33	5.00	0.00	0.00	0.00
20.00	2.00	0.33	5.00	0.00	0.00	0.00
20.05	0.83	0.33	2.53	0.00	0.00	0.00
20.10	0.83	0.33	2.53	0.00	0.00	0.00
20.15	0.83	0.33	2.53	0.00	0.00	0.00
20.20	0.83	0.33	2.53	0.00	0.00	0.00
20.25	0.83	0.33	2.53	0.00	0.00	0.00
20.30	0.83	0.33	2.53	0.00	0.00	0.00
20.35	0.83	0.33	2.52	0.00	0.00	0.00
20.40	0.83	0.33	2.52	0.00	0.00	0.00
20.45	0.83	0.33	2.52	0.00	0.00	0.00
20.50	0.83	0.33	2.52	0.00	0.00	0.00
20.55	0.83	0.33	2.52	0.00	0.00	0.00
20.60	0.83	0.33	2.52	0.00	0.00	0.00
20.65	0.83	0.33	2.52	0.00	0.00	0.00
20.70	0.83	0.33	2.52	0.00	0.00	0.00
20.75	0.83	0.33	2.52	0.00	0.00	0.00
20.80	0.83	0.33	2.52	0.00	0.00	0.00
20.85	0.83	0.33	2.52	0.00	0.00	0.00
20.90	0.83	0.33	2.52	0.00	0.00	0.00
20.95	0.83	0.33	2.52	0.00	0.00	0.00
21.00	0.83	0.33	2.52	0.00	0.00	0.00
21.05	0.83	0.33	2.52	0.00	0.00	0.00
21.10	0.83	0.33	2.52	0.00	0.00	0.00
21.15	0.83	0.33	2.52	0.00	0.00	0.00
21.20	0.83	0.33	2.52	0.00	0.00	0.00
21.25	0.83	0.33	2.52	0.00	0.00	0.00
21.30	0.83	0.33	2.52	0.00	0.00	0.00
21.35	0.83	0.33	2.52	0.00	0.00	0.00
21.40	0.83	0.33	2.52	0.00	0.00	0.00
21.45	0.83	0.33	2.52	0.00	0.00	0.00
21.50	0.83	0.33	2.52	0.00	0.00	0.00
21.55	0.83	0.33	2.52	0.00	0.00	0.00
21.60	0.83	0.33	2.52	0.00	0.00	0.00
21.65	0.83	0.33	2.52	0.00	0.00	0.00
21.70	0.83	0.33	2.52	0.00	0.00	0.00
21.75	0.83	0.33	2.52	0.00	0.00	0.00
21.80	0.83	0.33	2.52	0.00	0.00	0.00
21.85	0.83	0.33	2.52	0.00	0.00	0.00
21.90	0.83	0.33	2.52	0.00	0.00	0.00
21.95	0.83	0.33	2.52	0.00	0.00	0.00
22.00	0.83	0.33	2.52	0.00	0.00	0.00
22.05	0.83	0.33	2.52	0.00	0.00	0.00
22.10	0.83	0.33	2.52	0.00	0.00	0.00
22.15	0.83	0.33	2.52	0.00	0.00	0.00
22.20	0.83	0.33	2.52	0.00	0.00	0.00
22.25	0.83	0.33	2.52	0.00	0.00	0.00
22.30	0.83	0.33	2.52	0.00	0.00	0.00
22.35	0.83	0.33	2.52	0.00	0.00	0.00
22.40	0.83	0.33	2.52	0.00	0.00	0.00
22.45	0.83	0.33	2.52	0.00	0.00	0.00
22.50	0.83	0.33	2.52	0.00	0.00	0.00
22.55	0.83	0.33	2.52	0.00	0.00	0.00
22.60	0.83	0.33	2.52	0.00	0.00	0.00
22.65	0.83	0.33	2.52	0.00	0.00	0.00
22.70	0.83	0.33	2.52	0.00	0.00	0.00
22.75	0.83	0.33	2.52	0.00	0.00	0.00
22.80	0.83	0.33	2.52	0.00	0.00	0.00
22.85	0.83	0.33	2.52	0.00	0.00	0.00
22.90	0.83	0.33	2.52	0.00	0.00	0.00
22.95	0.83	0.33	2.52	0.00	0.00	0.00
23.00	0.83	0.33	2.52	0.00	0.00	0.00
23.05	0.83	0.33	2.52	0.00	0.00	0.00
23.10	0.83	0.33	2.52	0.00	0.00	0.00
23.15	0.83	0.33	2.52	0.00	0.00	0.00
23.20	0.83	0.33	2.52	0.00	0.00	0.00
23.25	0.83	0.33	2.52	0.00	0.00	0.00
23.30	0.83	0.33	2.52	0.00	0.00	0.00
23.35	0.83	0.33	2.52	0.00	0.00	0.00

23.40	0.83	0.33	2.52	0.00	0.00	0.00
23.45	0.83	0.33	2.52	0.00	0.00	0.00
23.50	0.83	0.33	2.52	0.00	0.00	0.00
23.55	0.83	0.33	2.52	0.00	0.00	0.00
23.60	0.83	0.33	2.52	0.00	0.00	0.00
23.65	0.83	0.33	2.52	0.00	0.00	0.00
23.70	0.83	0.33	2.52	0.00	0.00	0.00
23.75	0.83	0.33	2.52	0.00	0.00	0.00
23.80	0.83	0.33	2.52	0.00	0.00	0.00
23.85	0.83	0.33	2.52	0.00	0.00	0.00
23.90	0.83	0.33	2.52	0.00	0.00	0.00
23.95	0.83	0.33	2.52	0.00	0.00	0.00
24.00	0.83	0.33	2.52	0.00	0.00	0.00
24.05	0.83	0.33	2.52	0.00	0.00	0.00
24.10	0.83	0.33	2.52	0.00	0.00	0.00
24.15	0.83	0.33	2.52	0.00	0.00	0.00
24.20	0.83	0.33	2.52	0.00	0.00	0.00
24.25	0.83	0.33	2.52	0.00	0.00	0.00
24.30	0.83	0.33	2.52	0.00	0.00	0.00
24.35	0.83	0.33	2.52	0.00	0.00	0.00
24.40	0.83	0.33	2.52	0.00	0.00	0.00
24.45	0.83	0.33	2.52	0.00	0.00	0.00
24.50	0.83	0.33	2.52	0.00	0.00	0.00
24.55	0.83	0.33	2.52	0.00	0.00	0.00
24.60	0.83	0.33	2.52	0.00	0.00	0.00
24.65	0.83	0.33	2.52	0.00	0.00	0.00
24.70	0.83	0.33	2.52	0.00	0.00	0.00
24.75	0.83	0.33	2.52	0.00	0.00	0.00
24.80	0.83	0.33	2.52	0.00	0.00	0.00
24.85	0.83	0.33	2.52	0.00	0.00	0.00
24.90	0.83	0.33	2.52	0.00	0.00	0.00
24.95	0.83	0.33	2.52	0.00	0.00	0.00
25.00	0.83	0.33	2.52	0.00	0.00	0.00
25.05	0.83	0.33	2.52	0.00	0.00	0.00
25.10	0.83	0.33	2.52	0.00	0.00	0.00
25.15	0.83	0.33	2.52	0.00	0.00	0.00
25.20	0.83	0.33	2.52	0.00	0.00	0.00
25.25	0.83	0.33	2.52	0.00	0.00	0.00
25.30	0.83	0.33	2.52	0.00	0.00	0.00
25.35	0.83	0.33	2.52	0.00	0.00	0.00
25.40	0.83	0.33	2.52	0.00	0.00	0.00
25.45	0.83	0.33	2.52	0.00	0.00	0.00
25.50	0.83	0.33	2.52	0.00	0.00	0.00
25.55	0.83	0.33	2.52	0.00	0.00	0.00
25.60	0.83	0.33	2.52	0.00	0.00	0.00
25.65	0.83	0.33	2.52	0.00	0.00	0.00
25.70	0.83	0.33	2.52	0.00	0.00	0.00
25.75	0.83	0.33	2.52	0.00	0.00	0.00
25.80	0.83	0.33	2.52	0.00	0.00	0.00
25.85	0.83	0.33	2.52	0.00	0.00	0.00
25.90	0.83	0.33	2.52	0.00	0.00	0.00
25.95	0.83	0.33	2.52	0.00	0.00	0.00
26.00	0.83	0.33	2.52	0.00	0.00	0.00
26.05	0.83	0.33	2.52	0.00	0.00	0.00
26.10	0.83	0.33	2.52	0.00	0.00	0.00
26.15	0.83	0.33	2.52	0.00	0.00	0.00
26.20	0.83	0.33	2.52	0.00	0.00	0.00
26.25	0.83	0.33	2.52	0.00	0.00	0.00
26.30	0.83	0.33	2.52	0.00	0.00	0.00
26.35	0.83	0.33	2.52	0.00	0.00	0.00
26.40	0.83	0.33	2.52	0.00	0.00	0.00
26.45	0.83	0.33	2.52	0.00	0.00	0.00
26.50	0.83	0.33	2.52	0.00	0.00	0.00
26.55	0.83	0.33	2.52	0.00	0.00	0.00
26.60	0.83	0.33	2.52	0.00	0.00	0.00
26.65	0.83	0.33	2.52	0.00	0.00	0.00
26.70	0.83	0.33	2.52	0.00	0.00	0.00
26.75	0.83	0.33	2.52	0.00	0.00	0.00
26.80	0.83	0.33	2.52	0.00	0.00	0.00
26.85	0.83	0.33	2.52	0.00	0.00	0.00
26.90	0.83	0.33	2.52	0.00	0.00	0.00

26.95	0.83	0.33	2.52	0.00	0.00	0.00
27.00	0.83	0.33	2.52	0.00	0.00	0.00
27.05	0.83	0.33	2.52	0.00	0.00	0.00
27.10	0.83	0.33	2.52	0.00	0.00	0.00
27.15	0.83	0.33	2.52	0.00	0.00	0.00
27.20	0.83	0.33	2.52	0.00	0.00	0.00
27.25	0.83	0.33	2.52	0.00	0.00	0.00
27.30	0.83	0.33	2.52	0.00	0.00	0.00
27.35	0.83	0.33	2.52	0.00	0.00	0.00
27.40	0.83	0.33	2.52	0.00	0.00	0.00
27.45	0.83	0.33	2.52	0.00	0.00	0.00
27.50	0.83	0.33	2.52	0.00	0.00	0.00
27.55	0.83	0.33	2.52	0.00	0.00	0.00
27.60	0.83	0.33	2.52	0.00	0.00	0.00
27.65	0.83	0.33	2.52	0.00	0.00	0.00
27.70	0.83	0.33	2.52	0.00	0.00	0.00
27.75	0.83	0.33	2.52	0.00	0.00	0.00
27.80	0.83	0.33	2.52	0.00	0.00	0.00
27.85	0.83	0.33	2.52	0.00	0.00	0.00
27.90	0.83	0.33	2.52	0.00	0.00	0.00
27.95	0.83	0.33	2.52	0.00	0.00	0.00
28.00	0.83	0.33	2.52	0.00	0.00	0.00
28.05	0.83	0.33	2.52	0.00	0.00	0.00
28.10	0.83	0.33	2.52	0.00	0.00	0.00
28.15	0.83	0.33	2.52	0.00	0.00	0.00
28.20	0.83	0.33	2.52	0.00	0.00	0.00
28.25	0.83	0.33	2.52	0.00	0.00	0.00
28.30	0.83	0.33	2.52	0.00	0.00	0.00
28.35	0.83	0.33	2.52	0.00	0.00	0.00
28.40	0.83	0.33	2.52	0.00	0.00	0.00
28.45	0.83	0.33	2.52	0.00	0.00	0.00
28.50	0.83	0.33	2.52	0.00	0.00	0.00
28.55	0.83	0.33	2.52	0.00	0.00	0.00
28.60	0.83	0.33	2.52	0.00	0.00	0.00
28.65	0.83	0.33	2.52	0.00	0.00	0.00
28.70	0.83	0.33	2.52	0.00	0.00	0.00
28.75	0.83	0.33	2.52	0.00	0.00	0.00
28.80	0.83	0.33	2.52	0.00	0.00	0.00
28.85	0.83	0.33	2.52	0.00	0.00	0.00
28.90	0.83	0.33	2.52	0.00	0.00	0.00
28.95	0.83	0.33	2.52	0.00	0.00	0.00
29.00	0.83	0.33	2.52	0.00	0.00	0.00
29.05	0.83	0.33	2.52	0.00	0.00	0.00
29.10	0.83	0.33	2.52	0.00	0.00	0.00
29.15	0.83	0.33	2.52	0.00	0.00	0.00
29.20	0.83	0.33	2.52	0.00	0.00	0.00
29.25	0.83	0.33	2.52	0.00	0.00	0.00
29.30	0.83	0.33	2.52	0.00	0.00	0.00
29.35	0.83	0.33	2.52	0.00	0.00	0.00
29.40	0.83	0.33	2.52	0.00	0.00	0.00
29.45	0.83	0.33	2.52	0.00	0.00	0.00
29.50	0.83	0.33	2.52	0.00	0.00	0.00
29.55	0.83	0.33	2.52	0.00	0.00	0.00
29.60	0.83	0.33	2.52	0.00	0.00	0.00
29.65	0.83	0.33	2.52	0.00	0.00	0.00
29.70	0.83	0.33	2.52	0.00	0.00	0.00
29.75	0.83	0.33	2.52	0.00	0.00	0.00
29.80	0.83	0.33	2.52	0.00	0.00	0.00
29.85	0.83	0.33	2.52	0.00	0.00	0.00
29.90	0.83	0.33	2.52	0.00	0.00	0.00
29.95	0.83	0.33	2.52	0.00	0.00	0.00
30.00	0.83	0.33	2.52	0.00	0.00	0.00
30.05	2.00	0.33	5.00	0.00	0.00	0.00
30.10	2.00	0.33	5.00	0.00	0.00	0.00
30.15	2.00	0.33	5.00	0.00	0.00	0.00
30.20	2.00	0.33	5.00	0.00	0.00	0.00
30.25	2.00	0.33	5.00	0.00	0.00	0.00
30.30	2.00	0.33	5.00	0.00	0.00	0.00
30.35	2.00	0.33	5.00	0.00	0.00	0.00
30.40	2.00	0.33	5.00	0.00	0.00	0.00
30.45	2.00	0.33	5.00	0.00	0.00	0.00

30.50	2.00	0.33	5.00	0.00	0.00	0.00
30.55	2.00	0.33	5.00	0.00	0.00	0.00
30.60	2.00	0.33	5.00	0.00	0.00	0.00
30.65	2.00	0.33	5.00	0.00	0.00	0.00
30.70	2.00	0.33	5.00	0.00	0.00	0.00
30.75	2.00	0.33	5.00	0.00	0.00	0.00
30.80	2.00	0.33	5.00	0.00	0.00	0.00
30.85	2.00	0.33	5.00	0.00	0.00	0.00
30.90	2.00	0.33	5.00	0.00	0.00	0.00
30.95	2.00	0.33	5.00	0.00	0.00	0.00
31.00	2.00	0.33	5.00	0.00	0.00	0.00
31.05	2.00	0.33	5.00	0.00	0.00	0.00
31.10	2.00	0.33	5.00	0.00	0.00	0.00
31.15	2.00	0.33	5.00	0.00	0.00	0.00
31.20	2.00	0.33	5.00	0.00	0.00	0.00
31.25	2.00	0.33	5.00	0.00	0.00	0.00
31.30	2.00	0.33	5.00	0.00	0.00	0.00
31.35	2.00	0.33	5.00	0.00	0.00	0.00
31.40	2.00	0.33	5.00	0.00	0.00	0.00
31.45	2.00	0.33	5.00	0.00	0.00	0.00
31.50	2.00	0.33	5.00	0.00	0.00	0.00
31.55	2.00	0.33	5.00	0.00	0.00	0.00
31.60	2.00	0.33	5.00	0.00	0.00	0.00
31.65	2.00	0.33	5.00	0.00	0.00	0.00
31.70	2.00	0.33	5.00	0.00	0.00	0.00
31.75	2.00	0.33	5.00	0.00	0.00	0.00
31.80	2.00	0.33	5.00	0.00	0.00	0.00
31.85	2.00	0.33	5.00	0.00	0.00	0.00
31.90	2.00	0.33	5.00	0.00	0.00	0.00
31.95	2.00	0.32	5.00	0.00	0.00	0.00
32.00	2.00	0.32	5.00	0.00	0.00	0.00
32.05	2.00	0.32	5.00	0.00	0.00	0.00
32.10	2.00	0.32	5.00	0.00	0.00	0.00
32.15	2.00	0.32	5.00	0.00	0.00	0.00
32.20	2.00	0.32	5.00	0.00	0.00	0.00
32.25	2.00	0.32	5.00	0.00	0.00	0.00
32.30	2.00	0.32	5.00	0.00	0.00	0.00
32.35	2.00	0.32	5.00	0.00	0.00	0.00
32.40	2.00	0.32	5.00	0.00	0.00	0.00
32.45	2.00	0.32	5.00	0.00	0.00	0.00
32.50	2.00	0.32	5.00	0.00	0.00	0.00
32.55	2.00	0.32	5.00	0.00	0.00	0.00
32.60	2.00	0.32	5.00	0.00	0.00	0.00
32.65	2.00	0.32	5.00	0.00	0.00	0.00
32.70	2.00	0.32	5.00	0.00	0.00	0.00
32.75	2.00	0.32	5.00	0.00	0.00	0.00
32.80	2.00	0.32	5.00	0.00	0.00	0.00
32.85	2.00	0.32	5.00	0.00	0.00	0.00
32.90	2.00	0.32	5.00	0.00	0.00	0.00
32.95	2.00	0.32	5.00	0.00	0.00	0.00
33.00	2.00	0.32	5.00	0.00	0.00	0.00
33.05	2.00	0.32	5.00	0.00	0.00	0.00
33.10	2.00	0.32	5.00	0.00	0.00	0.00
33.15	2.00	0.32	5.00	0.00	0.00	0.00
33.20	2.00	0.32	5.00	0.00	0.00	0.00
33.25	2.00	0.32	5.00	0.00	0.00	0.00
33.30	2.00	0.32	5.00	0.00	0.00	0.00
33.35	2.00	0.32	5.00	0.00	0.00	0.00
33.40	2.00	0.32	5.00	0.00	0.00	0.00
33.45	2.00	0.32	5.00	0.00	0.00	0.00
33.50	2.00	0.32	5.00	0.00	0.00	0.00
33.55	2.00	0.32	5.00	0.00	0.00	0.00
33.60	2.00	0.32	5.00	0.00	0.00	0.00
33.65	2.00	0.32	5.00	0.00	0.00	0.00
33.70	2.00	0.32	5.00	0.00	0.00	0.00
33.75	2.00	0.32	5.00	0.00	0.00	0.00
33.80	2.00	0.32	5.00	0.00	0.00	0.00
33.85	2.00	0.32	5.00	0.00	0.00	0.00
33.90	2.00	0.32	5.00	0.00	0.00	0.00
33.95	2.00	0.32	5.00	0.00	0.00	0.00
34.00	2.00	0.32	5.00	0.00	0.00	0.00

34.05	2.00	0.32	5.00	0.00	0.00	0.00
34.10	2.00	0.32	5.00	0.00	0.00	0.00
34.15	2.00	0.32	5.00	0.00	0.00	0.00
34.20	2.00	0.32	5.00	0.00	0.00	0.00
34.25	2.00	0.32	5.00	0.00	0.00	0.00
34.30	2.00	0.32	5.00	0.00	0.00	0.00
34.35	2.00	0.32	5.00	0.00	0.00	0.00
34.40	2.00	0.32	5.00	0.00	0.00	0.00
34.45	2.00	0.32	5.00	0.00	0.00	0.00
34.50	2.00	0.32	5.00	0.00	0.00	0.00
34.55	2.00	0.32	5.00	0.00	0.00	0.00
34.60	2.00	0.32	5.00	0.00	0.00	0.00
34.65	2.00	0.32	5.00	0.00	0.00	0.00
34.70	2.00	0.32	5.00	0.00	0.00	0.00
34.75	2.00	0.32	5.00	0.00	0.00	0.00
34.80	2.00	0.32	5.00	0.00	0.00	0.00
34.85	2.00	0.32	5.00	0.00	0.00	0.00
34.90	2.00	0.32	5.00	0.00	0.00	0.00
34.95	2.00	0.32	5.00	0.00	0.00	0.00
35.00	2.00	0.32	5.00	0.00	0.00	0.00
35.05	2.00	0.32	5.00	0.00	0.00	0.00
35.10	2.00	0.32	5.00	0.00	0.00	0.00
35.15	2.00	0.32	5.00	0.00	0.00	0.00
35.20	2.00	0.32	5.00	0.00	0.00	0.00
35.25	2.00	0.32	5.00	0.00	0.00	0.00
35.30	2.00	0.32	5.00	0.00	0.00	0.00
35.35	2.00	0.32	5.00	0.00	0.00	0.00
35.40	2.00	0.32	5.00	0.00	0.00	0.00
35.45	2.00	0.32	5.00	0.00	0.00	0.00
35.50	2.00	0.32	5.00	0.00	0.00	0.00
35.55	2.00	0.32	5.00	0.00	0.00	0.00
35.60	2.00	0.32	5.00	0.00	0.00	0.00
35.65	2.00	0.32	5.00	0.00	0.00	0.00
35.70	2.00	0.32	5.00	0.00	0.00	0.00
35.75	2.00	0.32	5.00	0.00	0.00	0.00
35.80	2.00	0.32	5.00	0.00	0.00	0.00
35.85	2.00	0.32	5.00	0.00	0.00	0.00
35.90	2.00	0.32	5.00	0.00	0.00	0.00
35.95	2.00	0.32	5.00	0.00	0.00	0.00
36.00	2.00	0.32	5.00	0.00	0.00	0.00
36.05	2.00	0.32	5.00	0.00	0.00	0.00
36.10	2.00	0.32	5.00	0.00	0.00	0.00
36.15	2.00	0.32	5.00	0.00	0.00	0.00
36.20	2.00	0.32	5.00	0.00	0.00	0.00
36.25	2.00	0.32	5.00	0.00	0.00	0.00
36.30	2.00	0.31	5.00	0.00	0.00	0.00
36.35	2.00	0.31	5.00	0.00	0.00	0.00
36.40	2.00	0.31	5.00	0.00	0.00	0.00
36.45	2.00	0.31	5.00	0.00	0.00	0.00
36.50	2.00	0.31	5.00	0.00	0.00	0.00

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* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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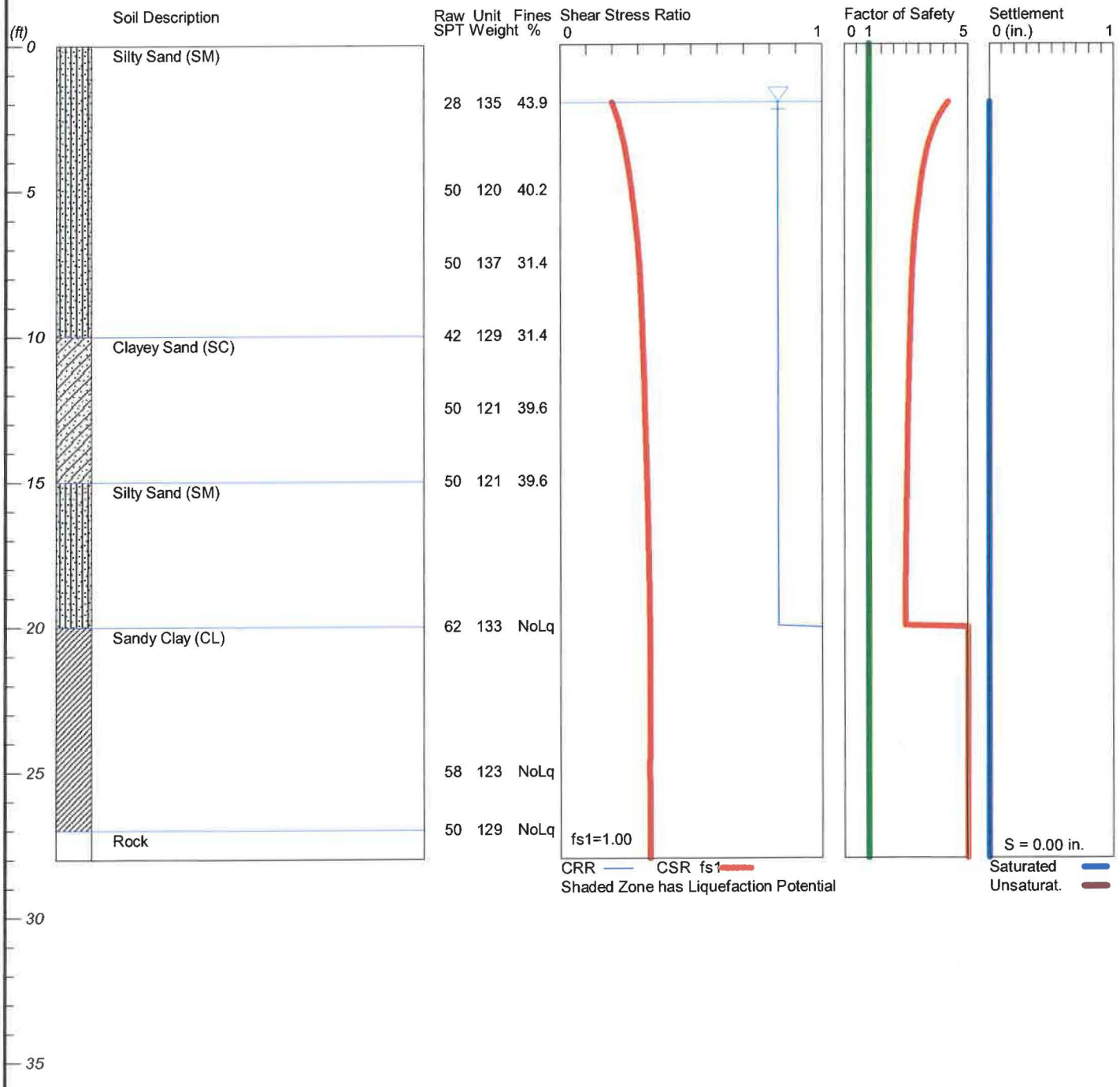
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat Settlement from saturated sands
S_dry Settlement from Unsaturated Sands
S_all Total Settlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B22 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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Krazan

012-22165

Plate A-1

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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\B22\B22 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-22165

Surface Elev.=
Hole No.=B22
Depth of Hole= 28.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 4.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=B22
Depth of Hole=28.00 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 4.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.4
7. Borehole Diameter, Cb= 1.05
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	28.00	135.00	43.90
5.00	50.00	120.00	40.20
7.50	S0.00	137.00	31.40
10.00	42.00	129.00	31.40
12.50	50.00	121.00	39.60
15.00	50.00	121.00	39.60
20.00	62.00	133.00	NoLiq
25.00	58.00	123.00	NoLiq
27.00	S0.00	129.00	NoLiq

Output Results:
Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.00 in.
Differential Settlement=0.000 to 0.000 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
2.00	0.83	0.20	4.18	0.00	0.00	0.00
2.05	0.83	0.20	4.14	0.00	0.00	0.00
2.10	0.83	0.20	4.09	0.00	0.00	0.00

2.15	0.83	0.21	4.05	0.00	0.00	0.00
2.20	0.83	0.21	4.01	0.00	0.00	0.00
2.25	0.83	0.21	3.97	0.00	0.00	0.00
2.30	0.83	0.21	3.93	0.00	0.00	0.00
2.35	0.83	0.21	3.90	0.00	0.00	0.00
2.40	0.83	0.21	3.86	0.00	0.00	0.00
2.45	0.83	0.22	3.83	0.00	0.00	0.00
2.50	0.83	0.22	3.80	0.00	0.00	0.00
2.55	0.83	0.22	3.77	0.00	0.00	0.00
2.60	0.83	0.22	3.74	0.00	0.00	0.00
2.65	0.83	0.22	3.71	0.00	0.00	0.00
2.70	0.83	0.23	3.69	0.00	0.00	0.00
2.75	0.83	0.23	3.66	0.00	0.00	0.00
2.80	0.83	0.23	3.64	0.00	0.00	0.00
2.85	0.83	0.23	3.61	0.00	0.00	0.00
2.90	0.83	0.23	3.59	0.00	0.00	0.00
2.95	0.83	0.23	3.57	0.00	0.00	0.00
3.00	0.83	0.23	3.55	0.00	0.00	0.00
3.05	0.83	0.24	3.53	0.00	0.00	0.00
3.10	0.83	0.24	3.51	0.00	0.00	0.00
3.15	0.83	0.24	3.49	0.00	0.00	0.00
3.20	0.83	0.24	3.47	0.00	0.00	0.00
3.25	0.83	0.24	3.45	0.00	0.00	0.00
3.30	0.83	0.24	3.43	0.00	0.00	0.00
3.35	0.83	0.24	3.41	0.00	0.00	0.00
3.40	0.83	0.24	3.40	0.00	0.00	0.00
3.45	0.83	0.25	3.38	0.00	0.00	0.00
3.50	0.83	0.25	3.37	0.00	0.00	0.00
3.55	0.83	0.25	3.35	0.00	0.00	0.00
3.60	0.83	0.25	3.34	0.00	0.00	0.00
3.65	0.83	0.25	3.32	0.00	0.00	0.00
3.70	0.83	0.25	3.31	0.00	0.00	0.00
3.75	0.83	0.25	3.29	0.00	0.00	0.00
3.80	0.83	0.25	3.28	0.00	0.00	0.00
3.85	0.83	0.25	3.27	0.00	0.00	0.00
3.90	0.83	0.26	3.26	0.00	0.00	0.00
3.95	0.83	0.26	3.24	0.00	0.00	0.00
4.00	0.83	0.26	3.23	0.00	0.00	0.00
4.05	0.83	0.26	3.22	0.00	0.00	0.00
4.10	0.83	0.26	3.21	0.00	0.00	0.00
4.15	0.83	0.26	3.20	0.00	0.00	0.00
4.20	0.83	0.26	3.19	0.00	0.00	0.00
4.25	0.83	0.26	3.18	0.00	0.00	0.00
4.30	0.83	0.26	3.17	0.00	0.00	0.00
4.35	0.83	0.26	3.16	0.00	0.00	0.00
4.40	0.83	0.26	3.15	0.00	0.00	0.00
4.45	0.83	0.26	3.14	0.00	0.00	0.00
4.50	0.83	0.27	3.13	0.00	0.00	0.00
4.55	0.83	0.27	3.12	0.00	0.00	0.00
4.60	0.83	0.27	3.11	0.00	0.00	0.00
4.65	0.83	0.27	3.10	0.00	0.00	0.00
4.70	0.83	0.27	3.09	0.00	0.00	0.00
4.75	0.83	0.27	3.08	0.00	0.00	0.00
4.80	0.83	0.27	3.07	0.00	0.00	0.00
4.85	0.83	0.27	3.07	0.00	0.00	0.00
4.90	0.83	0.27	3.06	0.00	0.00	0.00
4.95	0.83	0.27	3.05	0.00	0.00	0.00
5.00	0.83	0.27	3.04	0.00	0.00	0.00
5.05	0.83	0.27	3.04	0.00	0.00	0.00
5.10	0.83	0.27	3.03	0.00	0.00	0.00
5.15	0.83	0.28	3.02	0.00	0.00	0.00
5.20	0.83	0.28	3.01	0.00	0.00	0.00
5.25	0.83	0.28	3.00	0.00	0.00	0.00
5.30	0.83	0.28	2.99	0.00	0.00	0.00
5.35	0.83	0.28	2.99	0.00	0.00	0.00
5.40	0.83	0.28	2.98	0.00	0.00	0.00
5.45	0.83	0.28	2.97	0.00	0.00	0.00
5.50	0.83	0.28	2.96	0.00	0.00	0.00
5.55	0.83	0.28	2.96	0.00	0.00	0.00
5.60	0.83	0.28	2.95	0.00	0.00	0.00
5.65	0.83	0.28	2.94	0.00	0.00	0.00

5.70	0.83	0.28	2.94	0.00	0.00	0.00
5.75	0.83	0.28	2.93	0.00	0.00	0.00
5.80	0.83	0.28	2.92	0.00	0.00	0.00
5.85	0.83	0.28	2.92	0.00	0.00	0.00
5.90	0.83	0.29	2.91	0.00	0.00	0.00
5.95	0.83	0.29	2.90	0.00	0.00	0.00
6.00	0.83	0.29	2.90	0.00	0.00	0.00
6.05	0.83	0.29	2.89	0.00	0.00	0.00
6.10	0.83	0.29	2.88	0.00	0.00	0.00
6.15	0.83	0.29	2.88	0.00	0.00	0.00
6.20	0.83	0.29	2.87	0.00	0.00	0.00
6.25	0.83	0.29	2.87	0.00	0.00	0.00
6.30	0.83	0.29	2.86	0.00	0.00	0.00
6.35	0.83	0.29	2.86	0.00	0.00	0.00
6.40	0.83	0.29	2.85	0.00	0.00	0.00
6.45	0.83	0.29	2.84	0.00	0.00	0.00
6.50	0.83	0.29	2.84	0.00	0.00	0.00
6.55	0.83	0.29	2.83	0.00	0.00	0.00
6.60	0.83	0.29	2.83	0.00	0.00	0.00
6.65	0.83	0.29	2.82	0.00	0.00	0.00
6.70	0.83	0.29	2.82	0.00	0.00	0.00
6.75	0.83	0.30	2.81	0.00	0.00	0.00
6.80	0.83	0.30	2.81	0.00	0.00	0.00
6.85	0.83	0.30	2.80	0.00	0.00	0.00
6.90	0.83	0.30	2.80	0.00	0.00	0.00
6.95	0.83	0.30	2.79	0.00	0.00	0.00
7.00	0.83	0.30	2.79	0.00	0.00	0.00
7.05	0.83	0.30	2.78	0.00	0.00	0.00
7.10	0.83	0.30	2.78	0.00	0.00	0.00
7.15	0.83	0.30	2.78	0.00	0.00	0.00
7.20	0.83	0.30	2.77	0.00	0.00	0.00
7.25	0.83	0.30	2.77	0.00	0.00	0.00
7.30	0.83	0.30	2.76	0.00	0.00	0.00
7.35	0.83	0.30	2.76	0.00	0.00	0.00
7.40	0.83	0.30	2.75	0.00	0.00	0.00
7.45	0.83	0.30	2.75	0.00	0.00	0.00
7.50	0.83	0.30	2.75	0.00	0.00	0.00
7.55	0.83	0.30	2.74	0.00	0.00	0.00
7.60	0.83	0.30	2.74	0.00	0.00	0.00
7.65	0.83	0.30	2.74	0.00	0.00	0.00
7.70	0.83	0.30	2.73	0.00	0.00	0.00
7.75	0.83	0.30	2.73	0.00	0.00	0.00
7.80	0.83	0.30	2.73	0.00	0.00	0.00
7.85	0.83	0.30	2.73	0.00	0.00	0.00
7.90	0.83	0.30	2.72	0.00	0.00	0.00
7.95	0.83	0.31	2.72	0.00	0.00	0.00
8.00	0.83	0.31	2.72	0.00	0.00	0.00
8.05	0.83	0.31	2.72	0.00	0.00	0.00
8.10	0.83	0.31	2.72	0.00	0.00	0.00
8.15	0.83	0.31	2.71	0.00	0.00	0.00
8.20	0.83	0.31	2.71	0.00	0.00	0.00
8.25	0.83	0.31	2.71	0.00	0.00	0.00
8.30	0.83	0.31	2.71	0.00	0.00	0.00
8.35	0.83	0.31	2.70	0.00	0.00	0.00
8.40	0.83	0.31	2.70	0.00	0.00	0.00
8.45	0.83	0.31	2.70	0.00	0.00	0.00
8.50	0.83	0.31	2.70	0.00	0.00	0.00
8.55	0.83	0.31	2.70	0.00	0.00	0.00
8.60	0.83	0.31	2.69	0.00	0.00	0.00
8.65	0.83	0.31	2.69	0.00	0.00	0.00
8.70	0.83	0.31	2.69	0.00	0.00	0.00
8.75	0.83	0.31	2.69	0.00	0.00	0.00
8.80	0.83	0.31	2.69	0.00	0.00	0.00
8.85	0.83	0.31	2.68	0.00	0.00	0.00
8.90	0.83	0.31	2.68	0.00	0.00	0.00
8.95	0.83	0.31	2.68	0.00	0.00	0.00
9.00	0.83	0.31	2.68	0.00	0.00	0.00
9.05	0.83	0.31	2.68	0.00	0.00	0.00
9.10	0.83	0.31	2.68	0.00	0.00	0.00
9.15	0.83	0.31	2.67	0.00	0.00	0.00
9.20	0.83	0.31	2.67	0.00	0.00	0.00

9.25	0.83	0.31	2.67	0.00	0.00	0.00
9.30	0.83	0.31	2.67	0.00	0.00	0.00
9.35	0.83	0.31	2.67	0.00	0.00	0.00
9.40	0.83	0.31	2.67	0.00	0.00	0.00
9.45	0.83	0.31	2.66	0.00	0.00	0.00
9.50	0.83	0.31	2.66	0.00	0.00	0.00
9.55	0.83	0.31	2.66	0.00	0.00	0.00
9.60	0.83	0.31	2.66	0.00	0.00	0.00
9.65	0.83	0.31	2.66	0.00	0.00	0.00
9.70	0.83	0.31	2.66	0.00	0.00	0.00
9.75	0.83	0.31	2.65	0.00	0.00	0.00
9.80	0.83	0.31	2.65	0.00	0.00	0.00
9.85	0.83	0.31	2.65	0.00	0.00	0.00
9.90	0.83	0.31	2.65	0.00	0.00	0.00
9.95	0.83	0.31	2.65	0.00	0.00	0.00
10.00	0.83	0.31	2.65	0.00	0.00	0.00
10.05	0.83	0.31	2.65	0.00	0.00	0.00
10.10	0.83	0.31	2.64	0.00	0.00	0.00
10.15	0.83	0.31	2.64	0.00	0.00	0.00
10.20	0.83	0.31	2.64	0.00	0.00	0.00
10.25	0.83	0.31	2.64	0.00	0.00	0.00
10.30	0.83	0.32	2.64	0.00	0.00	0.00
10.35	0.83	0.32	2.63	0.00	0.00	0.00
10.40	0.83	0.32	2.63	0.00	0.00	0.00
10.45	0.83	0.32	2.63	0.00	0.00	0.00
10.50	0.83	0.32	2.63	0.00	0.00	0.00
10.55	0.83	0.32	2.63	0.00	0.00	0.00
10.60	0.83	0.32	2.63	0.00	0.00	0.00
10.65	0.83	0.32	2.62	0.00	0.00	0.00
10.70	0.83	0.32	2.62	0.00	0.00	0.00
10.75	0.83	0.32	2.62	0.00	0.00	0.00
10.80	0.83	0.32	2.62	0.00	0.00	0.00
10.85	0.83	0.32	2.62	0.00	0.00	0.00
10.90	0.83	0.32	2.62	0.00	0.00	0.00
10.95	0.83	0.32	2.62	0.00	0.00	0.00
11.00	0.83	0.32	2.61	0.00	0.00	0.00
11.05	0.83	0.32	2.61	0.00	0.00	0.00
11.10	0.83	0.32	2.61	0.00	0.00	0.00
11.15	0.83	0.32	2.61	0.00	0.00	0.00
11.20	0.83	0.32	2.61	0.00	0.00	0.00
11.25	0.83	0.32	2.61	0.00	0.00	0.00
11.30	0.83	0.32	2.60	0.00	0.00	0.00
11.35	0.83	0.32	2.60	0.00	0.00	0.00
11.40	0.83	0.32	2.60	0.00	0.00	0.00
11.45	0.83	0.32	2.60	0.00	0.00	0.00
11.50	0.83	0.32	2.60	0.00	0.00	0.00
11.55	0.83	0.32	2.60	0.00	0.00	0.00
11.60	0.83	0.32	2.60	0.00	0.00	0.00
11.65	0.83	0.32	2.60	0.00	0.00	0.00
11.70	0.83	0.32	2.59	0.00	0.00	0.00
11.75	0.83	0.32	2.59	0.00	0.00	0.00
11.80	0.83	0.32	2.59	0.00	0.00	0.00
11.85	0.83	0.32	2.59	0.00	0.00	0.00
11.90	0.83	0.32	2.59	0.00	0.00	0.00
11.95	0.83	0.32	2.59	0.00	0.00	0.00
12.00	0.83	0.32	2.59	0.00	0.00	0.00
12.05	0.83	0.32	2.59	0.00	0.00	0.00
12.10	0.83	0.32	2.58	0.00	0.00	0.00
12.15	0.83	0.32	2.58	0.00	0.00	0.00
12.20	0.83	0.32	2.58	0.00	0.00	0.00
12.25	0.83	0.32	2.58	0.00	0.00	0.00
12.30	0.83	0.32	2.58	0.00	0.00	0.00
12.35	0.83	0.32	2.58	0.00	0.00	0.00
12.40	0.83	0.32	2.58	0.00	0.00	0.00
12.45	0.83	0.32	2.58	0.00	0.00	0.00
12.50	0.83	0.32	2.57	0.00	0.00	0.00
12.55	0.83	0.32	2.57	0.00	0.00	0.00
12.60	0.83	0.32	2.57	0.00	0.00	0.00
12.65	0.83	0.32	2.57	0.00	0.00	0.00
12.70	0.83	0.32	2.57	0.00	0.00	0.00
12.75	0.83	0.32	2.57	0.00	0.00	0.00

12.80	0.83	0.32	2.57	0.00	0.00	0.00
12.85	0.83	0.32	2.56	0.00	0.00	0.00
12.90	0.83	0.32	2.56	0.00	0.00	0.00
12.95	0.83	0.32	2.56	0.00	0.00	0.00
13.00	0.83	0.32	2.56	0.00	0.00	0.00
13.05	0.83	0.32	2.56	0.00	0.00	0.00
13.10	0.83	0.32	2.56	0.00	0.00	0.00
13.15	0.83	0.33	2.56	0.00	0.00	0.00
13.20	0.83	0.33	2.55	0.00	0.00	0.00
13.25	0.83	0.33	2.55	0.00	0.00	0.00
13.30	0.83	0.33	2.55	0.00	0.00	0.00
13.35	0.83	0.33	2.55	0.00	0.00	0.00
13.40	0.83	0.33	2.55	0.00	0.00	0.00
13.45	0.83	0.33	2.55	0.00	0.00	0.00
13.50	0.83	0.33	2.55	0.00	0.00	0.00
13.55	0.83	0.33	2.55	0.00	0.00	0.00
13.60	0.83	0.33	2.54	0.00	0.00	0.00
13.65	0.83	0.33	2.54	0.00	0.00	0.00
13.70	0.83	0.33	2.54	0.00	0.00	0.00
13.75	0.83	0.33	2.54	0.00	0.00	0.00
13.80	0.83	0.33	2.54	0.00	0.00	0.00
13.85	0.83	0.33	2.54	0.00	0.00	0.00
13.90	0.83	0.33	2.54	0.00	0.00	0.00
13.95	0.83	0.33	2.54	0.00	0.00	0.00
14.00	0.83	0.33	2.53	0.00	0.00	0.00
14.05	0.83	0.33	2.53	0.00	0.00	0.00
14.10	0.83	0.33	2.53	0.00	0.00	0.00
14.15	0.83	0.33	2.53	0.00	0.00	0.00
14.20	0.83	0.33	2.53	0.00	0.00	0.00
14.25	0.83	0.33	2.53	0.00	0.00	0.00
14.30	0.83	0.33	2.53	0.00	0.00	0.00
14.35	0.83	0.33	2.53	0.00	0.00	0.00
14.40	0.83	0.33	2.53	0.00	0.00	0.00
14.45	0.83	0.33	2.52	0.00	0.00	0.00
14.50	0.83	0.33	2.52	0.00	0.00	0.00
14.55	0.83	0.33	2.52	0.00	0.00	0.00
14.60	0.83	0.33	2.52	0.00	0.00	0.00
14.65	0.83	0.33	2.52	0.00	0.00	0.00
14.70	0.83	0.33	2.52	0.00	0.00	0.00
14.75	0.83	0.33	2.52	0.00	0.00	0.00
14.80	0.83	0.33	2.52	0.00	0.00	0.00
14.85	0.83	0.33	2.52	0.00	0.00	0.00
14.90	0.83	0.33	2.51	0.00	0.00	0.00
14.95	0.83	0.33	2.51	0.00	0.00	0.00
15.00	0.83	0.33	2.51	0.00	0.00	0.00
15.05	0.83	0.33	2.51	0.00	0.00	0.00
15.10	0.83	0.33	2.51	0.00	0.00	0.00
15.15	0.83	0.33	2.51	0.00	0.00	0.00
15.20	0.83	0.33	2.51	0.00	0.00	0.00
15.25	0.83	0.33	2.51	0.00	0.00	0.00
15.30	0.83	0.33	2.51	0.00	0.00	0.00
15.35	0.83	0.33	2.51	0.00	0.00	0.00
15.40	0.83	0.33	2.50	0.00	0.00	0.00
15.45	0.83	0.33	2.50	0.00	0.00	0.00
15.50	0.83	0.33	2.50	0.00	0.00	0.00
15.55	0.83	0.33	2.50	0.00	0.00	0.00
15.60	0.83	0.33	2.50	0.00	0.00	0.00
15.65	0.83	0.33	2.50	0.00	0.00	0.00
15.70	0.83	0.33	2.50	0.00	0.00	0.00
15.75	0.83	0.33	2.50	0.00	0.00	0.00
15.80	0.83	0.33	2.50	0.00	0.00	0.00
15.85	0.83	0.33	2.50	0.00	0.00	0.00
15.90	0.83	0.33	2.50	0.00	0.00	0.00
15.95	0.83	0.33	2.49	0.00	0.00	0.00
16.00	0.83	0.33	2.49	0.00	0.00	0.00
16.05	0.83	0.33	2.49	0.00	0.00	0.00
16.10	0.83	0.33	2.49	0.00	0.00	0.00
16.15	0.83	0.33	2.49	0.00	0.00	0.00
16.20	0.83	0.33	2.49	0.00	0.00	0.00
16.25	0.83	0.33	2.49	0.00	0.00	0.00
16.30	0.83	0.33	2.49	0.00	0.00	0.00

16.35	0.83	0.33	2.49	0.00	0.00	0.00
16.40	0.83	0.33	2.49	0.00	0.00	0.00
16.45	0.83	0.33	2.49	0.00	0.00	0.00
16.50	0.83	0.33	2.49	0.00	0.00	0.00
16.55	0.83	0.33	2.48	0.00	0.00	0.00
16.60	0.83	0.33	2.48	0.00	0.00	0.00
16.65	0.83	0.33	2.48	0.00	0.00	0.00
16.70	0.83	0.33	2.48	0.00	0.00	0.00
16.75	0.83	0.33	2.48	0.00	0.00	0.00
16.80	0.83	0.33	2.48	0.00	0.00	0.00
16.85	0.83	0.34	2.48	0.00	0.00	0.00
16.90	0.83	0.34	2.48	0.00	0.00	0.00
16.95	0.83	0.34	2.48	0.00	0.00	0.00
17.00	0.83	0.34	2.48	0.00	0.00	0.00
17.05	0.83	0.34	2.48	0.00	0.00	0.00
17.10	0.83	0.34	2.48	0.00	0.00	0.00
17.15	0.83	0.34	2.48	0.00	0.00	0.00
17.20	0.83	0.34	2.47	0.00	0.00	0.00
17.25	0.83	0.34	2.47	0.00	0.00	0.00
17.30	0.83	0.34	2.47	0.00	0.00	0.00
17.35	0.83	0.34	2.47	0.00	0.00	0.00
17.40	0.83	0.34	2.47	0.00	0.00	0.00
17.45	0.83	0.34	2.47	0.00	0.00	0.00
17.50	0.83	0.34	2.47	0.00	0.00	0.00
17.55	0.83	0.34	2.47	0.00	0.00	0.00
17.60	0.83	0.34	2.47	0.00	0.00	0.00
17.65	0.83	0.34	2.47	0.00	0.00	0.00
17.70	0.83	0.34	2.47	0.00	0.00	0.00
17.75	0.83	0.34	2.47	0.00	0.00	0.00
17.80	0.83	0.34	2.47	0.00	0.00	0.00
17.85	0.83	0.34	2.47	0.00	0.00	0.00
17.90	0.83	0.34	2.46	0.00	0.00	0.00
17.95	0.83	0.34	2.46	0.00	0.00	0.00
18.00	0.83	0.34	2.46	0.00	0.00	0.00
18.05	0.83	0.34	2.46	0.00	0.00	0.00
18.10	0.83	0.34	2.46	0.00	0.00	0.00
18.15	0.83	0.34	2.46	0.00	0.00	0.00
18.20	0.83	0.34	2.46	0.00	0.00	0.00
18.25	0.83	0.34	2.46	0.00	0.00	0.00
18.30	0.83	0.34	2.46	0.00	0.00	0.00
18.35	0.83	0.34	2.46	0.00	0.00	0.00
18.40	0.83	0.34	2.46	0.00	0.00	0.00
18.45	0.83	0.34	2.46	0.00	0.00	0.00
18.50	0.83	0.34	2.46	0.00	0.00	0.00
18.55	0.83	0.34	2.46	0.00	0.00	0.00
18.60	0.83	0.34	2.46	0.00	0.00	0.00
18.65	0.83	0.34	2.46	0.00	0.00	0.00
18.70	0.83	0.34	2.46	0.00	0.00	0.00
18.75	0.83	0.34	2.45	0.00	0.00	0.00
18.80	0.83	0.34	2.45	0.00	0.00	0.00
18.85	0.83	0.34	2.45	0.00	0.00	0.00
18.90	0.83	0.34	2.45	0.00	0.00	0.00
18.95	0.83	0.34	2.45	0.00	0.00	0.00
19.00	0.83	0.34	2.45	0.00	0.00	0.00
19.05	0.83	0.34	2.45	0.00	0.00	0.00
19.10	0.83	0.34	2.45	0.00	0.00	0.00
19.15	0.83	0.34	2.45	0.00	0.00	0.00
19.20	0.83	0.34	2.45	0.00	0.00	0.00
19.25	0.83	0.34	2.45	0.00	0.00	0.00
19.30	0.83	0.34	2.45	0.00	0.00	0.00
19.35	0.83	0.34	2.45	0.00	0.00	0.00
19.40	0.83	0.34	2.45	0.00	0.00	0.00
19.45	0.83	0.34	2.45	0.00	0.00	0.00
19.50	0.83	0.34	2.45	0.00	0.00	0.00
19.55	0.83	0.34	2.45	0.00	0.00	0.00
19.60	0.83	0.34	2.45	0.00	0.00	0.00
19.65	0.83	0.34	2.44	0.00	0.00	0.00
19.70	0.83	0.34	2.44	0.00	0.00	0.00
19.75	0.83	0.34	2.44	0.00	0.00	0.00
19.80	0.83	0.34	2.44	0.00	0.00	0.00
19.85	0.83	0.34	2.44	0.00	0.00	0.00

19.90	0.83	0.34	2.44	0.00	0.00	0.00
19.95	0.83	0.34	2.44	0.00	0.00	0.00
20.00	0.83	0.34	2.44	0.00	0.00	0.00
20.05	2.00	0.34	5.00	0.00	0.00	0.00
20.10	2.00	0.34	5.00	0.00	0.00	0.00
20.15	2.00	0.34	5.00	0.00	0.00	0.00
20.20	2.00	0.34	5.00	0.00	0.00	0.00
20.25	2.00	0.34	5.00	0.00	0.00	0.00
20.30	2.00	0.34	5.00	0.00	0.00	0.00
20.35	2.00	0.34	5.00	0.00	0.00	0.00
20.40	2.00	0.34	5.00	0.00	0.00	0.00
20.45	2.00	0.34	5.00	0.00	0.00	0.00
20.50	2.00	0.34	5.00	0.00	0.00	0.00
20.55	2.00	0.34	5.00	0.00	0.00	0.00
20.60	2.00	0.34	5.00	0.00	0.00	0.00
20.65	2.00	0.34	5.00	0.00	0.00	0.00
20.70	2.00	0.34	5.00	0.00	0.00	0.00
20.75	2.00	0.34	5.00	0.00	0.00	0.00
20.80	2.00	0.34	5.00	0.00	0.00	0.00
20.85	2.00	0.34	5.00	0.00	0.00	0.00
20.90	2.00	0.34	5.00	0.00	0.00	0.00
20.95	2.00	0.34	5.00	0.00	0.00	0.00
21.00	2.00	0.34	5.00	0.00	0.00	0.00
21.05	2.00	0.34	5.00	0.00	0.00	0.00
21.10	2.00	0.34	5.00	0.00	0.00	0.00
21.15	2.00	0.34	5.00	0.00	0.00	0.00
21.20	2.00	0.34	5.00	0.00	0.00	0.00
21.25	2.00	0.34	5.00	0.00	0.00	0.00
21.30	2.00	0.34	5.00	0.00	0.00	0.00
21.35	2.00	0.34	5.00	0.00	0.00	0.00
21.40	2.00	0.34	5.00	0.00	0.00	0.00
21.45	2.00	0.34	5.00	0.00	0.00	0.00
21.50	2.00	0.34	5.00	0.00	0.00	0.00
21.55	2.00	0.34	5.00	0.00	0.00	0.00
21.60	2.00	0.34	5.00	0.00	0.00	0.00
21.65	2.00	0.34	5.00	0.00	0.00	0.00
21.70	2.00	0.34	5.00	0.00	0.00	0.00
21.75	2.00	0.34	5.00	0.00	0.00	0.00
21.80	2.00	0.34	5.00	0.00	0.00	0.00
21.85	2.00	0.34	5.00	0.00	0.00	0.00
21.90	2.00	0.34	5.00	0.00	0.00	0.00
21.95	2.00	0.34	5.00	0.00	0.00	0.00
22.00	2.00	0.34	5.00	0.00	0.00	0.00
22.05	2.00	0.34	5.00	0.00	0.00	0.00
22.10	2.00	0.34	5.00	0.00	0.00	0.00
22.15	2.00	0.34	5.00	0.00	0.00	0.00
22.20	2.00	0.34	5.00	0.00	0.00	0.00
22.25	2.00	0.34	5.00	0.00	0.00	0.00
22.30	2.00	0.34	5.00	0.00	0.00	0.00
22.35	2.00	0.34	5.00	0.00	0.00	0.00
22.40	2.00	0.34	5.00	0.00	0.00	0.00
22.45	2.00	0.34	5.00	0.00	0.00	0.00
22.50	2.00	0.34	5.00	0.00	0.00	0.00
22.55	2.00	0.34	5.00	0.00	0.00	0.00
22.60	2.00	0.34	5.00	0.00	0.00	0.00
22.65	2.00	0.34	5.00	0.00	0.00	0.00
22.70	2.00	0.34	5.00	0.00	0.00	0.00
22.75	2.00	0.34	5.00	0.00	0.00	0.00
22.80	2.00	0.34	5.00	0.00	0.00	0.00
22.85	2.00	0.34	5.00	0.00	0.00	0.00
22.90	2.00	0.34	5.00	0.00	0.00	0.00
22.95	2.00	0.34	5.00	0.00	0.00	0.00
23.00	2.00	0.34	5.00	0.00	0.00	0.00
23.05	2.00	0.34	5.00	0.00	0.00	0.00
23.10	2.00	0.34	5.00	0.00	0.00	0.00
23.15	2.00	0.34	5.00	0.00	0.00	0.00
23.20	2.00	0.34	5.00	0.00	0.00	0.00
23.25	2.00	0.34	5.00	0.00	0.00	0.00
23.30	2.00	0.34	5.00	0.00	0.00	0.00
23.35	2.00	0.34	5.00	0.00	0.00	0.00
23.40	2.00	0.34	5.00	0.00	0.00	0.00

23.45	2.00	0.34	5.00	0.00	0.00	0.00
23.50	2.00	0.34	5.00	0.00	0.00	0.00
23.55	2.00	0.34	5.00	0.00	0.00	0.00
23.60	2.00	0.34	5.00	0.00	0.00	0.00
23.65	2.00	0.34	5.00	0.00	0.00	0.00
23.70	2.00	0.34	5.00	0.00	0.00	0.00
23.75	2.00	0.34	5.00	0.00	0.00	0.00
23.80	2.00	0.34	5.00	0.00	0.00	0.00
23.85	2.00	0.34	5.00	0.00	0.00	0.00
23.90	2.00	0.34	5.00	0.00	0.00	0.00
23.95	2.00	0.34	5.00	0.00	0.00	0.00
24.00	2.00	0.34	5.00	0.00	0.00	0.00
24.05	2.00	0.34	5.00	0.00	0.00	0.00
24.10	2.00	0.34	5.00	0.00	0.00	0.00
24.15	2.00	0.34	5.00	0.00	0.00	0.00
24.20	2.00	0.34	5.00	0.00	0.00	0.00
24.25	2.00	0.34	5.00	0.00	0.00	0.00
24.30	2.00	0.34	5.00	0.00	0.00	0.00
24.35	2.00	0.34	5.00	0.00	0.00	0.00
24.40	2.00	0.34	5.00	0.00	0.00	0.00
24.45	2.00	0.34	5.00	0.00	0.00	0.00
24.50	2.00	0.34	5.00	0.00	0.00	0.00
24.55	2.00	0.34	5.00	0.00	0.00	0.00
24.60	2.00	0.34	5.00	0.00	0.00	0.00
24.65	2.00	0.34	5.00	0.00	0.00	0.00
24.70	2.00	0.34	5.00	0.00	0.00	0.00
24.75	2.00	0.34	5.00	0.00	0.00	0.00
24.80	2.00	0.34	5.00	0.00	0.00	0.00
24.85	2.00	0.34	5.00	0.00	0.00	0.00
24.90	2.00	0.34	5.00	0.00	0.00	0.00
24.95	2.00	0.34	5.00	0.00	0.00	0.00
25.00	2.00	0.34	5.00	0.00	0.00	0.00
25.05	2.00	0.34	5.00	0.00	0.00	0.00
25.10	2.00	0.34	5.00	0.00	0.00	0.00
25.15	2.00	0.34	5.00	0.00	0.00	0.00
25.20	2.00	0.34	5.00	0.00	0.00	0.00
25.25	2.00	0.34	5.00	0.00	0.00	0.00
25.30	2.00	0.34	5.00	0.00	0.00	0.00
25.35	2.00	0.34	5.00	0.00	0.00	0.00
25.40	2.00	0.34	5.00	0.00	0.00	0.00
25.45	2.00	0.34	5.00	0.00	0.00	0.00
25.50	2.00	0.34	5.00	0.00	0.00	0.00
25.55	2.00	0.34	5.00	0.00	0.00	0.00
25.60	2.00	0.34	5.00	0.00	0.00	0.00
25.65	2.00	0.34	5.00	0.00	0.00	0.00
25.70	2.00	0.34	5.00	0.00	0.00	0.00
25.75	2.00	0.34	5.00	0.00	0.00	0.00
25.80	2.00	0.34	5.00	0.00	0.00	0.00
25.85	2.00	0.34	5.00	0.00	0.00	0.00
25.90	2.00	0.34	5.00	0.00	0.00	0.00
25.95	2.00	0.34	5.00	0.00	0.00	0.00
26.00	2.00	0.34	5.00	0.00	0.00	0.00
26.05	2.00	0.34	5.00	0.00	0.00	0.00
26.10	2.00	0.34	5.00	0.00	0.00	0.00
26.15	2.00	0.34	5.00	0.00	0.00	0.00
26.20	2.00	0.34	5.00	0.00	0.00	0.00
26.25	2.00	0.34	5.00	0.00	0.00	0.00
26.30	2.00	0.34	5.00	0.00	0.00	0.00
26.35	2.00	0.34	5.00	0.00	0.00	0.00
26.40	2.00	0.34	5.00	0.00	0.00	0.00
26.45	2.00	0.34	5.00	0.00	0.00	0.00
26.50	2.00	0.34	5.00	0.00	0.00	0.00
26.55	2.00	0.34	5.00	0.00	0.00	0.00
26.60	2.00	0.34	5.00	0.00	0.00	0.00
26.65	2.00	0.34	5.00	0.00	0.00	0.00
26.70	2.00	0.34	5.00	0.00	0.00	0.00
26.75	2.00	0.34	5.00	0.00	0.00	0.00
26.80	2.00	0.34	5.00	0.00	0.00	0.00
26.85	2.00	0.34	5.00	0.00	0.00	0.00
26.90	2.00	0.34	5.00	0.00	0.00	0.00
26.95	2.00	0.34	5.00	0.00	0.00	0.00

27.00	2.00	0.34	5.00	0.00	0.00	0.00
27.05	2.00	0.34	5.00	0.00	0.00	0.00
27.10	2.00	0.34	5.00	0.00	0.00	0.00
27.15	2.00	0.34	5.00	0.00	0.00	0.00
27.20	2.00	0.34	5.00	0.00	0.00	0.00
27.25	2.00	0.34	5.00	0.00	0.00	0.00
27.30	2.00	0.34	5.00	0.00	0.00	0.00
27.35	2.00	0.34	5.00	0.00	0.00	0.00
27.40	2.00	0.34	5.00	0.00	0.00	0.00
27.45	2.00	0.34	5.00	0.00	0.00	0.00
27.50	2.00	0.34	5.00	0.00	0.00	0.00
27.55	2.00	0.34	5.00	0.00	0.00	0.00
27.60	2.00	0.34	5.00	0.00	0.00	0.00
27.65	2.00	0.34	5.00	0.00	0.00	0.00
27.70	2.00	0.34	5.00	0.00	0.00	0.00
27.75	2.00	0.34	5.00	0.00	0.00	0.00
27.80	2.00	0.34	5.00	0.00	0.00	0.00
27.85	2.00	0.34	5.00	0.00	0.00	0.00
27.90	2.00	0.34	5.00	0.00	0.00	0.00
27.95	2.00	0.34	5.00	0.00	0.00	0.00
28.00	2.00	0.34	5.00	0.00	0.00	0.00

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* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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1 atm (atmosphere) = 1 tsf (ton/ft2)

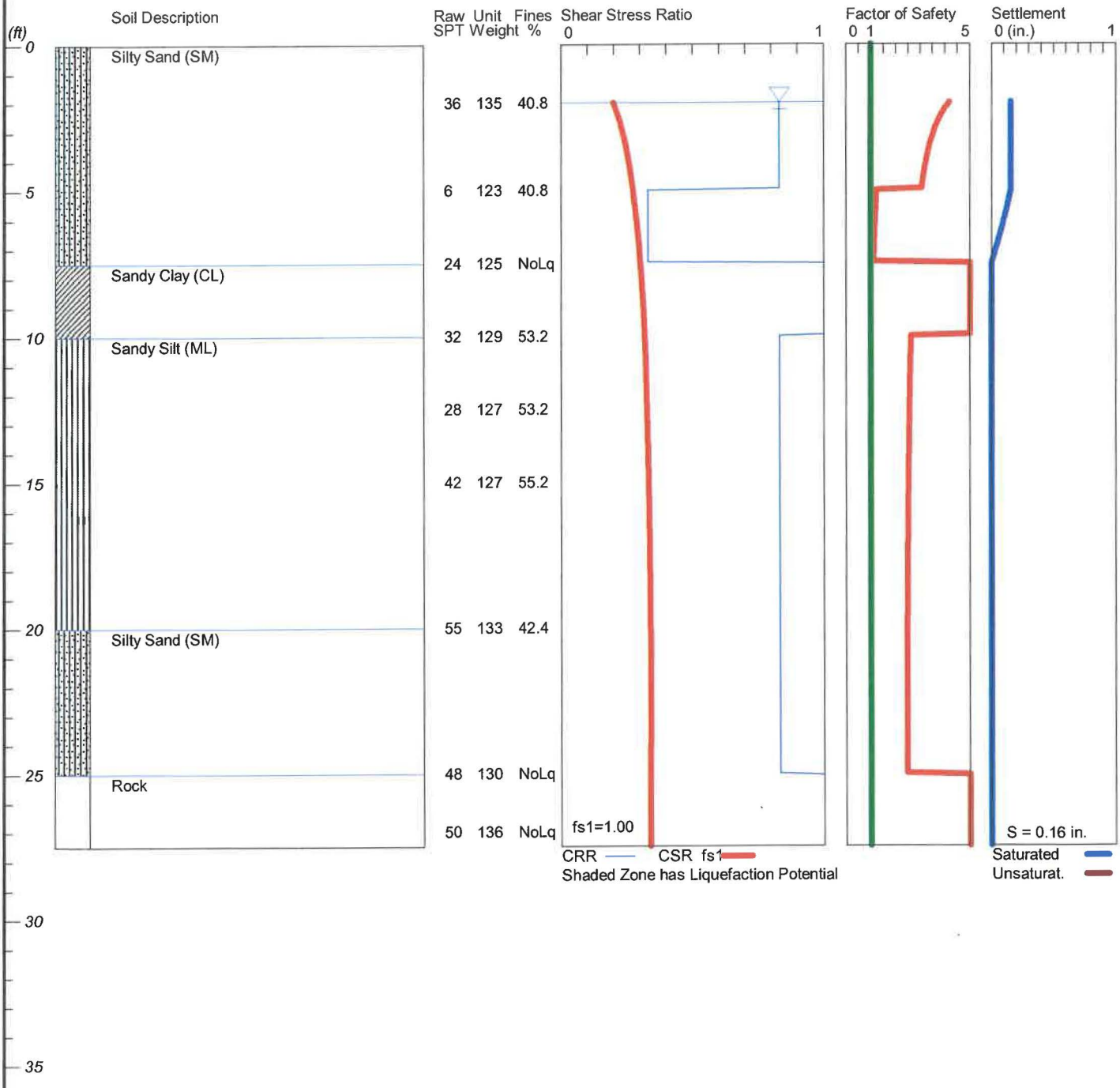
CRRm	Cyclic resistance ratio from soils
CSRsf	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S.	Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat	Settlement from saturated sands
S_dry	Settlement from Unsaturated Sands
S_all	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils

LIQUEFACTION ANALYSIS

Triangle Development

Hole No.=B23 Water Depth=2 ft

Magnitude=6.15
Acceleration=0.307g



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Krazan

012-22165

Plate A-1

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LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: C:\Users\mweber\Documents\Krazan\Projects\012\22\165 Triangle Development\823\823 Liquefaction.liq
Title: Triangle Development
Subtitle: 012-22165

Surface Elev.=
Hole No.=823
Depth of Hole= 27.50 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 3.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.15

Input Data:
Surface Elev.=
Hole No.=823
Depth of Hole=27.50 ft
Water Table during Earthquake= 2.00 ft
Water Table during In-Situ Testing= 3.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.15
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or 8PT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.4
7. Borehole Diameter, Cb= 1.05
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
2.00	36.00	135.00	40.80
5.00	6.00	123.00	40.80
7.50	24.00	125.00	NoLiq
10.00	32.00	129.00	53.20
12.50	28.00	127.00	53.20
1S.00	42.00	127.00	55.20
20.00	SS.00	133.00	42.40
25.00	48.00	130.00	NoLiq
27.00	50.00	136.00	NoLiq

Output Results:
Settlement of Saturated Sands=0.16 in.
Settlement of Unsaturated Sands=0.00 in.
Total Settlement of Saturated and Unsaturated Sands=0.16 in.
Differential Settlement=0.079 to 0.104 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
2.00	0.83	0.20	4.18	0.16	0.00	0.16
2.05	0.83	0.20	4.14	0.16	0.00	0.16
2.10	0.83	0.20	4.09	0.16	0.00	0.16

2.15	0.83	0.21	4.05	0.16	0.00	0.16
2.20	0.83	0.21	4.01	0.16	0.00	0.16
2.25	0.83	0.21	3.97	0.16	0.00	0.16
2.30	0.83	0.21	3.93	0.16	0.00	0.16
2.35	0.83	0.21	3.90	0.16	0.00	0.16
2.40	0.83	0.21	3.86	0.16	0.00	0.16
2.45	0.83	0.22	3.83	0.16	0.00	0.16
2.50	0.83	0.22	3.80	0.16	0.00	0.16
2.55	0.83	0.22	3.77	0.16	0.00	0.16
2.60	0.83	0.22	3.74	0.16	0.00	0.16
2.65	0.83	0.22	3.71	0.16	0.00	0.16
2.70	0.83	0.23	3.69	0.16	0.00	0.16
2.75	0.83	0.23	3.66	0.16	0.00	0.16
2.80	0.83	0.23	3.64	0.16	0.00	0.16
2.85	0.83	0.23	3.61	0.16	0.00	0.16
2.90	0.83	0.23	3.59	0.16	0.00	0.16
2.95	0.83	0.23	3.57	0.16	0.00	0.16
3.00	0.83	0.23	3.55	0.16	0.00	0.16
3.05	0.83	0.24	3.53	0.16	0.00	0.16
3.10	0.83	0.24	3.51	0.16	0.00	0.16
3.15	0.83	0.24	3.49	0.16	0.00	0.16
3.20	0.83	0.24	3.47	0.16	0.00	0.16
3.25	0.83	0.24	3.45	0.16	0.00	0.16
3.30	0.83	0.24	3.43	0.16	0.00	0.16
3.35	0.83	0.24	3.41	0.16	0.00	0.16
3.40	0.83	0.24	3.40	0.16	0.00	0.16
3.45	0.83	0.25	3.38	0.16	0.00	0.16
3.50	0.83	0.25	3.37	0.16	0.00	0.16
3.55	0.83	0.25	3.35	0.16	0.00	0.16
3.60	0.83	0.25	3.34	0.16	0.00	0.16
3.65	0.83	0.25	3.32	0.16	0.00	0.16
3.70	0.83	0.25	3.31	0.16	0.00	0.16
3.75	0.83	0.25	3.29	0.16	0.00	0.16
3.80	0.83	0.25	3.28	0.16	0.00	0.16
3.85	0.83	0.25	3.27	0.16	0.00	0.16
3.90	0.83	0.26	3.26	0.16	0.00	0.16
3.95	0.83	0.26	3.24	0.16	0.00	0.16
4.00	0.83	0.26	3.23	0.16	0.00	0.16
4.05	0.83	0.26	3.22	0.16	0.00	0.16
4.10	0.83	0.26	3.21	0.16	0.00	0.16
4.15	0.83	0.26	3.20	0.16	0.00	0.16
4.20	0.83	0.26	3.19	0.16	0.00	0.16
4.25	0.83	0.26	3.18	0.16	0.00	0.16
4.30	0.83	0.26	3.17	0.16	0.00	0.16
4.35	0.83	0.26	3.16	0.16	0.00	0.16
4.40	0.83	0.26	3.15	0.16	0.00	0.16
4.45	0.83	0.26	3.14	0.16	0.00	0.16
4.50	0.83	0.27	3.13	0.16	0.00	0.16
4.55	0.83	0.27	3.12	0.16	0.00	0.16
4.60	0.83	0.27	3.11	0.16	0.00	0.16
4.65	0.83	0.27	3.10	0.16	0.00	0.16
4.70	0.83	0.27	3.09	0.16	0.00	0.16
4.75	0.83	0.27	3.08	0.16	0.00	0.16
4.80	0.83	0.27	3.07	0.16	0.00	0.16
4.85	0.83	0.27	3.07	0.16	0.00	0.16
4.90	0.83	0.27	3.06	0.16	0.00	0.16
4.95	0.83	0.27	3.05	0.16	0.00	0.16
5.00	0.33	0.27	1.21	0.16	0.00	0.16
5.05	0.33	0.27	1.21	0.16	0.00	0.16
5.10	0.33	0.27	1.20	0.15	0.00	0.15
5.15	0.33	0.28	1.20	0.15	0.00	0.15
5.20	0.33	0.28	1.20	0.15	0.00	0.15
5.25	0.33	0.28	1.20	0.15	0.00	0.15
5.30	0.33	0.28	1.19	0.14	0.00	0.14
5.35	0.33	0.28	1.19	0.14	0.00	0.14
5.40	0.33	0.28	1.19	0.14	0.00	0.14
5.45	0.33	0.28	1.18	0.13	0.00	0.13
5.50	0.33	0.28	1.18	0.13	0.00	0.13
5.55	0.33	0.28	1.18	0.13	0.00	0.13
5.60	0.33	0.28	1.18	0.13	0.00	0.13
5.65	0.33	0.28	1.17	0.12	0.00	0.12

5.70	0.33	0.28	1.17	0.12	0.00	0.12
5.75	0.33	0.28	1.17	0.12	0.00	0.12
5.80	0.33	0.28	1.16	0.11	0.00	0.11
5.85	0.33	0.28	1.16	0.11	0.00	0.11
5.90	0.33	0.29	1.16	0.11	0.00	0.11
5.95	0.33	0.29	1.16	0.10	0.00	0.10
6.00	0.33	0.29	1.15	0.10	0.00	0.10
6.05	0.33	0.29	1.15	0.10	0.00	0.10
6.10	0.33	0.29	1.15	0.10	0.00	0.10
6.15	0.33	0.29	1.15	0.09	0.00	0.09
6.20	0.33	0.29	1.15	0.09	0.00	0.09
6.25	0.33	0.29	1.14	0.09	0.00	0.09
6.30	0.33	0.29	1.14	0.08	0.00	0.08
6.35	0.33	0.29	1.14	0.08	0.00	0.08
6.40	0.33	0.29	1.14	0.08	0.00	0.08
6.45	0.33	0.29	1.13	0.07	0.00	0.07
6.50	0.33	0.29	1.13	0.07	0.00	0.07
6.55	0.33	0.29	1.13	0.07	0.00	0.07
6.60	0.33	0.29	1.13	0.06	0.00	0.06
6.65	0.33	0.29	1.13	0.06	0.00	0.06
6.70	0.33	0.29	1.12	0.06	0.00	0.06
6.75	0.33	0.29	1.12	0.05	0.00	0.05
6.80	0.33	0.29	1.12	0.05	0.00	0.05
6.85	0.33	0.30	1.12	0.05	0.00	0.05
6.90	0.33	0.30	1.12	0.04	0.00	0.04
6.95	0.33	0.30	1.12	0.04	0.00	0.04
7.00	0.33	0.30	1.11	0.04	0.00	0.04
7.05	0.33	0.30	1.11	0.03	0.00	0.03
7.10	0.33	0.30	1.11	0.03	0.00	0.03
7.15	0.33	0.30	1.11	0.03	0.00	0.03
7.20	0.33	0.30	1.11	0.02	0.00	0.02
7.25	0.33	0.30	1.11	0.02	0.00	0.02
7.30	0.33	0.30	1.10	0.01	0.00	0.01
7.35	0.33	0.30	1.10	0.01	0.00	0.01
7.40	0.33	0.30	1.10	0.01	0.00	0.01
7.45	0.33	0.30	1.10	0.00	0.00	0.00
7.50	2.00	0.30	5.00	0.00	0.00	0.00
7.55	2.00	0.30	5.00	0.00	0.00	0.00
7.60	2.00	0.30	5.00	0.00	0.00	0.00
7.65	2.00	0.30	5.00	0.00	0.00	0.00
7.70	2.00	0.30	5.00	0.00	0.00	0.00
7.75	2.00	0.30	5.00	0.00	0.00	0.00
7.80	2.00	0.30	5.00	0.00	0.00	0.00
7.85	2.00	0.30	5.00	0.00	0.00	0.00
7.90	2.00	0.30	5.00	0.00	0.00	0.00
7.95	2.00	0.30	5.00	0.00	0.00	0.00
8.00	2.00	0.31	5.00	0.00	0.00	0.00
8.05	2.00	0.31	5.00	0.00	0.00	0.00
8.10	2.00	0.31	5.00	0.00	0.00	0.00
8.15	2.00	0.31	5.00	0.00	0.00	0.00
8.20	2.00	0.31	5.00	0.00	0.00	0.00
8.25	2.00	0.31	5.00	0.00	0.00	0.00
8.30	2.00	0.31	5.00	0.00	0.00	0.00
8.35	2.00	0.31	5.00	0.00	0.00	0.00
8.40	2.00	0.31	5.00	0.00	0.00	0.00
8.45	2.00	0.31	5.00	0.00	0.00	0.00
8.50	2.00	0.31	5.00	0.00	0.00	0.00
8.55	2.00	0.31	5.00	0.00	0.00	0.00
8.60	2.00	0.31	5.00	0.00	0.00	0.00
8.65	2.00	0.31	5.00	0.00	0.00	0.00
8.70	2.00	0.31	5.00	0.00	0.00	0.00
8.75	2.00	0.31	5.00	0.00	0.00	0.00
8.80	2.00	0.31	5.00	0.00	0.00	0.00
8.85	2.00	0.31	5.00	0.00	0.00	0.00
8.90	2.00	0.31	5.00	0.00	0.00	0.00
8.95	2.00	0.31	5.00	0.00	0.00	0.00
9.00	2.00	0.31	5.00	0.00	0.00	0.00
9.05	2.00	0.31	5.00	0.00	0.00	0.00
9.10	2.00	0.31	5.00	0.00	0.00	0.00
9.15	2.00	0.31	5.00	0.00	0.00	0.00
9.20	2.00	0.31	5.00	0.00	0.00	0.00

9.25	2.00	0.31	5.00	0.00	0.00	0.00
9.30	2.00	0.31	5.00	0.00	0.00	0.00
9.35	2.00	0.31	5.00	0.00	0.00	0.00
9.40	2.00	0.31	5.00	0.00	0.00	0.00
9.45	2.00	0.31	5.00	0.00	0.00	0.00
9.50	2.00	0.31	5.00	0.00	0.00	0.00
9.55	2.00	0.31	5.00	0.00	0.00	0.00
9.60	2.00	0.32	5.00	0.00	0.00	0.00
9.65	2.00	0.32	5.00	0.00	0.00	0.00
9.70	2.00	0.32	5.00	0.00	0.00	0.00
9.75	2.00	0.32	5.00	0.00	0.00	0.00
9.80	2.00	0.32	5.00	0.00	0.00	0.00
9.85	2.00	0.32	5.00	0.00	0.00	0.00
9.90	2.00	0.32	5.00	0.00	0.00	0.00
9.95	2.00	0.32	5.00	0.00	0.00	0.00
10.00	0.83	0.32	2.62	0.00	0.00	0.00
10.05	0.83	0.32	2.62	0.00	0.00	0.00
10.10	0.83	0.32	2.62	0.00	0.00	0.00
10.15	0.83	0.32	2.61	0.00	0.00	0.00
10.20	0.83	0.32	2.61	0.00	0.00	0.00
10.25	0.83	0.32	2.61	0.00	0.00	0.00
10.30	0.83	0.32	2.61	0.00	0.00	0.00
10.35	0.83	0.32	2.61	0.00	0.00	0.00
10.40	0.83	0.32	2.61	0.00	0.00	0.00
10.45	0.83	0.32	2.60	0.00	0.00	0.00
10.50	0.83	0.32	2.60	0.00	0.00	0.00
10.55	0.83	0.32	2.60	0.00	0.00	0.00
10.60	0.83	0.32	2.60	0.00	0.00	0.00
10.65	0.83	0.32	2.60	0.00	0.00	0.00
10.70	0.83	0.32	2.60	0.00	0.00	0.00
10.75	0.83	0.32	2.59	0.00	0.00	0.00
10.80	0.83	0.32	2.59	0.00	0.00	0.00
10.85	0.83	0.32	2.59	0.00	0.00	0.00
10.90	0.83	0.32	2.59	0.00	0.00	0.00
10.95	0.83	0.32	2.59	0.00	0.00	0.00
11.00	0.83	0.32	2.59	0.00	0.00	0.00
11.05	0.83	0.32	2.59	0.00	0.00	0.00
11.10	0.83	0.32	2.58	0.00	0.00	0.00
11.15	0.83	0.32	2.58	0.00	0.00	0.00
11.20	0.83	0.32	2.58	0.00	0.00	0.00
11.25	0.83	0.32	2.58	0.00	0.00	0.00
11.30	0.83	0.32	2.58	0.00	0.00	0.00
11.35	0.83	0.32	2.58	0.00	0.00	0.00
11.40	0.83	0.32	2.58	0.00	0.00	0.00
11.45	0.83	0.32	2.58	0.00	0.00	0.00
11.50	0.83	0.32	2.57	0.00	0.00	0.00
11.55	0.83	0.32	2.57	0.00	0.00	0.00
11.60	0.83	0.32	2.57	0.00	0.00	0.00
11.65	0.83	0.32	2.57	0.00	0.00	0.00
11.70	0.83	0.32	2.57	0.00	0.00	0.00
11.75	0.83	0.32	2.57	0.00	0.00	0.00
11.80	0.83	0.32	2.57	0.00	0.00	0.00
11.85	0.83	0.32	2.57	0.00	0.00	0.00
11.90	0.83	0.32	2.56	0.00	0.00	0.00
11.95	0.83	0.32	2.56	0.00	0.00	0.00
12.00	0.83	0.32	2.56	0.00	0.00	0.00
12.05	0.83	0.32	2.56	0.00	0.00	0.00
12.10	0.83	0.32	2.56	0.00	0.00	0.00
12.15	0.83	0.32	2.56	0.00	0.00	0.00
12.20	0.83	0.32	2.56	0.00	0.00	0.00
12.25	0.83	0.32	2.56	0.00	0.00	0.00
12.30	0.83	0.33	2.56	0.00	0.00	0.00
12.35	0.83	0.33	2.55	0.00	0.00	0.00
12.40	0.83	0.33	2.55	0.00	0.00	0.00
12.45	0.83	0.33	2.55	0.00	0.00	0.00
12.50	0.83	0.33	2.55	0.00	0.00	0.00
12.55	0.83	0.33	2.55	0.00	0.00	0.00
12.60	0.83	0.33	2.55	0.00	0.00	0.00
12.65	0.83	0.33	2.55	0.00	0.00	0.00
12.70	0.83	0.33	2.55	0.00	0.00	0.00
12.75	0.83	0.33	2.55	0.00	0.00	0.00

12.80	0.83	0.33	2.54	0.00	0.00	0.00
12.85	0.83	0.33	2.54	0.00	0.00	0.00
12.90	0.83	0.33	2.54	0.00	0.00	0.00
12.95	0.83	0.33	2.54	0.00	0.00	0.00
13.00	0.83	0.33	2.54	0.00	0.00	0.00
13.05	0.83	0.33	2.54	0.00	0.00	0.00
13.10	0.83	0.33	2.54	0.00	0.00	0.00
13.15	0.83	0.33	2.54	0.00	0.00	0.00
13.20	0.83	0.33	2.54	0.00	0.00	0.00
13.25	0.83	0.33	2.53	0.00	0.00	0.00
13.30	0.83	0.33	2.53	0.00	0.00	0.00
13.35	0.83	0.33	2.53	0.00	0.00	0.00
13.40	0.83	0.33	2.53	0.00	0.00	0.00
13.45	0.83	0.33	2.53	0.00	0.00	0.00
13.50	0.83	0.33	2.53	0.00	0.00	0.00
13.55	0.83	0.33	2.53	0.00	0.00	0.00
13.60	0.83	0.33	2.53	0.00	0.00	0.00
13.65	0.83	0.33	2.53	0.00	0.00	0.00
13.70	0.83	0.33	2.53	0.00	0.00	0.00
13.75	0.83	0.33	2.53	0.00	0.00	0.00
13.80	0.83	0.33	2.52	0.00	0.00	0.00
13.85	0.83	0.33	2.52	0.00	0.00	0.00
13.90	0.83	0.33	2.52	0.00	0.00	0.00
13.95	0.83	0.33	2.52	0.00	0.00	0.00
14.00	0.83	0.33	2.52	0.00	0.00	0.00
14.05	0.83	0.33	2.52	0.00	0.00	0.00
14.10	0.83	0.33	2.52	0.00	0.00	0.00
14.15	0.83	0.33	2.52	0.00	0.00	0.00
14.20	0.83	0.33	2.52	0.00	0.00	0.00
14.25	0.83	0.33	2.52	0.00	0.00	0.00
14.30	0.83	0.33	2.52	0.00	0.00	0.00
14.35	0.83	0.33	2.52	0.00	0.00	0.00
14.40	0.83	0.33	2.51	0.00	0.00	0.00
14.45	0.83	0.33	2.51	0.00	0.00	0.00
14.50	0.83	0.33	2.51	0.00	0.00	0.00
14.55	0.83	0.33	2.51	0.00	0.00	0.00
14.60	0.83	0.33	2.51	0.00	0.00	0.00
14.65	0.83	0.33	2.51	0.00	0.00	0.00
14.70	0.83	0.33	2.51	0.00	0.00	0.00
14.75	0.83	0.33	2.51	0.00	0.00	0.00
14.80	0.83	0.33	2.51	0.00	0.00	0.00
14.85	0.83	0.33	2.51	0.00	0.00	0.00
14.90	0.83	0.33	2.51	0.00	0.00	0.00
14.95	0.83	0.33	2.51	0.00	0.00	0.00
15.00	0.83	0.33	2.51	0.00	0.00	0.00
15.05	0.83	0.33	2.50	0.00	0.00	0.00
15.10	0.83	0.33	2.50	0.00	0.00	0.00
15.15	0.83	0.33	2.50	0.00	0.00	0.00
15.20	0.83	0.33	2.50	0.00	0.00	0.00
15.25	0.83	0.33	2.50	0.00	0.00	0.00
15.30	0.83	0.33	2.50	0.00	0.00	0.00
15.35	0.83	0.33	2.50	0.00	0.00	0.00
15.40	0.83	0.33	2.50	0.00	0.00	0.00
15.45	0.83	0.33	2.50	0.00	0.00	0.00
15.50	0.83	0.33	2.50	0.00	0.00	0.00
15.55	0.83	0.33	2.50	0.00	0.00	0.00
15.60	0.83	0.33	2.50	0.00	0.00	0.00
15.65	0.83	0.33	2.50	0.00	0.00	0.00
15.70	0.83	0.33	2.50	0.00	0.00	0.00
15.75	0.83	0.33	2.50	0.00	0.00	0.00
15.80	0.83	0.33	2.49	0.00	0.00	0.00
15.85	0.83	0.33	2.49	0.00	0.00	0.00
15.90	0.83	0.33	2.49	0.00	0.00	0.00
15.95	0.83	0.33	2.49	0.00	0.00	0.00
16.00	0.83	0.33	2.49	0.00	0.00	0.00
16.05	0.83	0.33	2.49	0.00	0.00	0.00
16.10	0.83	0.33	2.49	0.00	0.00	0.00
16.15	0.83	0.33	2.49	0.00	0.00	0.00
16.20	0.83	0.33	2.49	0.00	0.00	0.00
16.25	0.83	0.33	2.49	0.00	0.00	0.00
16.30	0.83	0.33	2.49	0.00	0.00	0.00

16.35	0.83	0.33	2.49	0.00	0.00	0.00
16.40	0.83	0.33	2.49	0.00	0.00	0.00
16.45	0.83	0.33	2.49	0.00	0.00	0.00
16.50	0.83	0.33	2.49	0.00	0.00	0.00
16.55	0.83	0.33	2.49	0.00	0.00	0.00
16.60	0.83	0.33	2.49	0.00	0.00	0.00
16.65	0.83	0.33	2.48	0.00	0.00	0.00
16.70	0.83	0.33	2.48	0.00	0.00	0.00
16.75	0.83	0.33	2.48	0.00	0.00	0.00
16.80	0.83	0.33	2.48	0.00	0.00	0.00
16.85	0.83	0.33	2.48	0.00	0.00	0.00
16.90	0.83	0.33	2.48	0.00	0.00	0.00
16.95	0.83	0.33	2.48	0.00	0.00	0.00
17.00	0.83	0.33	2.48	0.00	0.00	0.00
17.05	0.83	0.33	2.48	0.00	0.00	0.00
17.10	0.83	0.33	2.48	0.00	0.00	0.00
17.15	0.83	0.33	2.48	0.00	0.00	0.00
17.20	0.83	0.34	2.48	0.00	0.00	0.00
17.25	0.83	0.34	2.48	0.00	0.00	0.00
17.30	0.83	0.34	2.48	0.00	0.00	0.00
17.35	0.83	0.34	2.48	0.00	0.00	0.00
17.40	0.83	0.34	2.48	0.00	0.00	0.00
17.45	0.83	0.34	2.48	0.00	0.00	0.00
17.50	0.83	0.34	2.48	0.00	0.00	0.00
17.55	0.83	0.34	2.48	0.00	0.00	0.00
17.60	0.83	0.34	2.48	0.00	0.00	0.00
17.65	0.83	0.34	2.48	0.00	0.00	0.00
17.70	0.83	0.34	2.47	0.00	0.00	0.00
17.75	0.83	0.34	2.47	0.00	0.00	0.00
17.80	0.83	0.34	2.47	0.00	0.00	0.00
17.85	0.83	0.34	2.47	0.00	0.00	0.00
17.90	0.83	0.34	2.47	0.00	0.00	0.00
17.95	0.83	0.34	2.47	0.00	0.00	0.00
18.00	0.83	0.34	2.47	0.00	0.00	0.00
18.05	0.83	0.34	2.47	0.00	0.00	0.00
18.10	0.83	0.34	2.47	0.00	0.00	0.00
18.15	0.83	0.34	2.47	0.00	0.00	0.00
18.20	0.83	0.34	2.47	0.00	0.00	0.00
18.25	0.83	0.34	2.47	0.00	0.00	0.00
18.30	0.83	0.34	2.47	0.00	0.00	0.00
18.35	0.83	0.34	2.47	0.00	0.00	0.00
18.40	0.83	0.34	2.47	0.00	0.00	0.00
18.45	0.83	0.34	2.47	0.00	0.00	0.00
18.50	0.83	0.34	2.47	0.00	0.00	0.00
18.55	0.83	0.34	2.47	0.00	0.00	0.00
18.60	0.83	0.34	2.47	0.00	0.00	0.00
18.65	0.83	0.34	2.47	0.00	0.00	0.00
18.70	0.83	0.34	2.47	0.00	0.00	0.00
18.75	0.83	0.34	2.47	0.00	0.00	0.00
18.80	0.83	0.34	2.47	0.00	0.00	0.00
18.85	0.83	0.34	2.47	0.00	0.00	0.00
18.90	0.83	0.34	2.47	0.00	0.00	0.00
18.95	0.83	0.34	2.46	0.00	0.00	0.00
19.00	0.83	0.34	2.46	0.00	0.00	0.00
19.05	0.83	0.34	2.46	0.00	0.00	0.00
19.10	0.83	0.34	2.46	0.00	0.00	0.00
19.15	0.83	0.34	2.46	0.00	0.00	0.00
19.20	0.83	0.34	2.46	0.00	0.00	0.00
19.25	0.83	0.34	2.46	0.00	0.00	0.00
19.30	0.83	0.34	2.46	0.00	0.00	0.00
19.35	0.83	0.34	2.46	0.00	0.00	0.00
19.40	0.83	0.34	2.46	0.00	0.00	0.00
19.45	0.83	0.34	2.46	0.00	0.00	0.00
19.50	0.83	0.34	2.46	0.00	0.00	0.00
19.55	0.83	0.34	2.46	0.00	0.00	0.00
19.60	0.83	0.34	2.46	0.00	0.00	0.00
19.65	0.83	0.34	2.46	0.00	0.00	0.00
19.70	0.83	0.34	2.46	0.00	0.00	0.00
19.75	0.83	0.34	2.46	0.00	0.00	0.00
19.80	0.83	0.34	2.46	0.00	0.00	0.00
19.85	0.83	0.34	2.46	0.00	0.00	0.00

19.90	0.83	0.34	2.46	0.00	0.00	0.00
19.95	0.83	0.34	2.46	0.00	0.00	0.00
20.00	0.83	0.34	2.46	0.00	0.00	0.00
20.05	0.83	0.34	2.46	0.00	0.00	0.00
20.10	0.83	0.34	2.46	0.00	0.00	0.00
20.15	0.83	0.34	2.46	0.00	0.00	0.00
20.20	0.83	0.34	2.46	0.00	0.00	0.00
20.25	0.83	0.34	2.46	0.00	0.00	0.00
20.30	0.83	0.34	2.46	0.00	0.00	0.00
20.35	0.83	0.34	2.46	0.00	0.00	0.00
20.40	0.83	0.34	2.46	0.00	0.00	0.00
20.45	0.83	0.34	2.46	0.00	0.00	0.00
20.50	0.83	0.34	2.46	0.00	0.00	0.00
20.55	0.83	0.34	2.46	0.00	0.00	0.00
20.60	0.83	0.34	2.46	0.00	0.00	0.00
20.65	0.83	0.34	2.46	0.00	0.00	0.00
20.70	0.83	0.34	2.46	0.00	0.00	0.00
20.75	0.83	0.34	2.46	0.00	0.00	0.00
20.80	0.83	0.34	2.46	0.00	0.00	0.00
20.85	0.83	0.34	2.46	0.00	0.00	0.00
20.90	0.83	0.34	2.46	0.00	0.00	0.00
20.95	0.83	0.34	2.46	0.00	0.00	0.00
21.00	0.83	0.34	2.46	0.00	0.00	0.00
21.05	0.83	0.34	2.46	0.00	0.00	0.00
21.10	0.83	0.34	2.46	0.00	0.00	0.00
21.15	0.83	0.34	2.46	0.00	0.00	0.00
21.20	0.83	0.34	2.46	0.00	0.00	0.00
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21.30	0.83	0.34	2.46	0.00	0.00	0.00
21.35	0.83	0.34	2.46	0.00	0.00	0.00
21.40	0.83	0.34	2.46	0.00	0.00	0.00
21.45	0.83	0.34	2.46	0.00	0.00	0.00
21.50	0.83	0.34	2.46	0.00	0.00	0.00
21.55	0.83	0.34	2.46	0.00	0.00	0.00
21.60	0.83	0.34	2.46	0.00	0.00	0.00
21.65	0.83	0.34	2.46	0.00	0.00	0.00
21.70	0.83	0.34	2.46	0.00	0.00	0.00
21.75	0.83	0.34	2.46	0.00	0.00	0.00
21.80	0.83	0.34	2.46	0.00	0.00	0.00
21.85	0.83	0.34	2.46	0.00	0.00	0.00
21.90	0.83	0.34	2.46	0.00	0.00	0.00
21.95	0.83	0.34	2.46	0.00	0.00	0.00
22.00	0.83	0.34	2.46	0.00	0.00	0.00
22.05	0.83	0.34	2.46	0.00	0.00	0.00
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22.60	0.83	0.34	2.46	0.00	0.00	0.00
22.65	0.83	0.34	2.46	0.00	0.00	0.00
22.70	0.83	0.34	2.46	0.00	0.00	0.00
22.75	0.83	0.34	2.46	0.00	0.00	0.00
22.80	0.83	0.34	2.46	0.00	0.00	0.00
22.85	0.83	0.34	2.46	0.00	0.00	0.00
22.90	0.83	0.34	2.46	0.00	0.00	0.00
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23.65	0.83	0.34	2.46	0.00	0.00	0.00
23.70	0.83	0.34	2.46	0.00	0.00	0.00
23.75	0.83	0.34	2.46	0.00	0.00	0.00
23.80	0.83	0.34	2.46	0.00	0.00	0.00
23.85	0.83	0.34	2.46	0.00	0.00	0.00
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25.65	2.00	0.34	5.00	0.00	0.00	0.00
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26.40	2.00	0.34	5.00	0.00	0.00	0.00
26.45	2.00	0.34	5.00	0.00	0.00	0.00
26.50	2.00	0.34	5.00	0.00	0.00	0.00
26.55	2.00	0.34	5.00	0.00	0.00	0.00
26.60	2.00	0.34	5.00	0.00	0.00	0.00
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26.75	2.00	0.34	5.00	0.00	0.00	0.00
26.80	2.00	0.34	5.00	0.00	0.00	0.00
26.85	2.00	0.34	5.00	0.00	0.00	0.00
26.90	2.00	0.34	5.00	0.00	0.00	0.00
26.95	2.00	0.34	5.00	0.00	0.00	0.00

27.00	2.00	0.34	5.00	0.00	0.00	0.00
27.05	2.00	0.34	5.00	0.00	0.00	0.00
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27.15	2.00	0.34	5.00	0.00	0.00	0.00
27.20	2.00	0.34	5.00	0.00	0.00	0.00
27.25	2.00	0.34	5.00	0.00	0.00	0.00
27.30	2.00	0.34	5.00	0.00	0.00	0.00
27.35	2.00	0.34	5.00	0.00	0.00	0.00
27.40	2.00	0.34	5.00	0.00	0.00	0.00
27.45	2.00	0.34	5.00	0.00	0.00	0.00
27.50	2.00	0.34	5.00	0.00	0.00	0.00

---

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

---

1 atm (atmosphere) = 1 tsf (ton/ft2)

CRRm	Cyclic resistance ratio from soils
CSRsf	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S.	Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat	Settlement from saturated sands
S_dry	Settlement from Unsaturated Sands
S_all	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils

APPENDIX D

CONSTRUCTION REQUIREMENTS IN GROUNDWATER CONDITIONS

Krazan & ASSOCIATES, INC.

GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

March 4, 2025

KA No. 012-22165

Ms. Goldie Lewis
Wilson Homes
7550 N. Palm Avenue, Suite 102
Fresno, California 93711

RE: Addendum to Geotechnical Feasibility Evaluation
Vista Ranch
Shepherd Avenue and Locan Avenue
Clovis, California

Dear Ms. Lewis:

In accordance with your request, we are providing this addendum to the Geotechnical Feasibility Evaluation for the proposed development at the above-referenced project site. Krazan & Associates, Inc. previously prepared a Geotechnical Feasibility Evaluation dated January 4, 2024 (KA Project No. 012-22165). This addendum provides clarification for construction of non-habitable structures within the 250-foot offset from the levee.

The 250-foot offset from the levee described in the above-referenced report does not apply to non-habitable structures. Construction that includes items such as roadways, underground utilities, parks, walls, etc. can be constructed within this zone. It is common practice within areas throughout California to construct roadways, utilities, parks, etc. in areas where groundwater is at elevations of less than 5 feet below existing site grade.

Underground utilities that will be constructed within the offset should have backfill compacted to a minimum of 95 percent of maximum density. This includes the material that will be around the haunches of the pipes if soil backfill is used. Alternatively, backfill of the pipe zone can consist of ½ or ¾ inch crushed rock that is wrapped in a filter fabric similar to Mirafi 140N to prevent migration of fines into the rock. If the construction of utilities is performed at a time when high water levels in the reservoir are present, groundwater may be encountered during construction. If this is the case, the water should be pumped from the trench prior to backfill and the trench backfilled to a foot above the water line with crushed rock as described above.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (559) 348-2200.



Respectfully submitted,
KRAZAN & ASSOCIATES, INC.

David R. Jarosz, II
Managing Engineer
RGE No. 2698/RCE No. 60185

DRJ:ht

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L.2 - Water Supply Assessment

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CITY OF CLOVIS

WATER SUPPLY ASSESSMENT VISTA RANCH MASTER PLAN

CITY OF CLOVIS
MARCH 2024, **REVISED SEPTEMBER 2025**

PREPARED FOR:
City of Clovis

PREPARED BY:
PROVOST & PRITCHARD CONSULTING GROUP
455 W FIR AVENUE, CLOVIS, CA 93611

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ABBREVIATIONS

AF ..... acre-feet
AFY ..... acre feet per year
Boswell ..... Boswell Groundwater Banking Facility
City ..... City of Clovis
County ..... Fresno County
CVP ..... Central Valley Project
CWC ..... California Water Code
FID ..... Fresno Irrigation District
GP ..... City of Clovis General Plan
GWD ..... Garfield Water District
IWD ..... International Water District
LDR ..... Low Density Residential
MDR ..... Medium Density Residential
MGD ..... million gallons per day
MHDR ..... Medium High Density Residential
NKGSA ..... North Kings Groundwater Sustainability Agency
NKGSP ..... North Kings Groundwater Sustainability Plan
RR ..... Rural Residential
SFR ..... Single-Family Residential
SOI ..... Sphere of Influence
SWTP ..... City of Clovis Surface Water Treatment Plant
UWMP ..... Urban Water Management Plan
VHDR ..... Very High Density Residential
Waldron ..... Waldron Banking Facility
WDF ..... Water Demand Factor
WMP ..... City of Clovis, Water Master Plan Update, Phase III
WRF ..... Water Reclamation Facility
WSA ..... Water Supply Assessment
WSCP ..... Water Shortage Contingency Plan

1 INTRODUCTION

1.1 PURPOSE AND NEED FOR THE WATER SUPPLY ASSESSMENT

California Water Code (CWC) §10912(a) requires preparation of a Water Supply Assessment (WSA) meeting the requirements of CWC §10910 et seq for projects within cities and counties that meet one of several water demand triggers, or the equivalent. These triggers include construction of 500 or more residential units, construction of a shopping center or business establishment having 500,000 square feet of floor space, construction of a commercial office building having more than 250,000 square feet, a proposed hotel or motel having more than 500 rooms, or another project having a water demand equivalent to or greater than the 500-unit development.

This WSA evaluates the adequacy of available water supplies for the proposed Vista Ranch Master Plan development and non-development areas, including a Sphere of Influence (SOI) Expansion Area north of Shepherd Ave, west of Sunnyside Ave located in Fresno County, California. The Master Plan would entail the development of up to 3,286 single family residential lots, more than the "500 residential units" trigger; therefore, a WSA is required. The City of Clovis operates the water system to which the Project proposes to connect. This water system meets the standards for a "Public Water System" as set forth in CWC §10912(c); the City is therefore responsible for preparation of the required WSA in accordance with CWC §10910(b).

This WSA discusses the estimated water demands and water supply for the proposed Project. The Project is located in Fresno County (County), adjacent to the City of Clovis (City) limits; the area will be annexed as part of the Project's progress and the entire Project will be supplied with water from the City.

1.2 RELIANCE ON A RELATED URBAN WATER MANAGEMENT PLAN

If the Project falls within the boundaries of a current Urban Water Management Plan (UWMP) prepared by the water purveyor, CWC §10910(c)(1) requires that the WSA determines whether projected water demand associated with the Project is included as part of that duly adopted UWMP.

1.3 DOCUMENT ORGANIZATION

This WSA is organized as follows:

- Section 2 describes the Project and its location.
- Section 3 describes the Project's potable and non-potable water demands in addition to those of other existing and planned uses, and how these vary from the numbers used in the UWMP.
- Section 4 provides an overview of the City's primary water supplies.
- Section 5 discusses the adequacy of water supplies during normal years.
- Section 6 discusses the adequacy of water supplies during single-dry and multiple-dry years.
- Section 7 discusses operational reliability on a daily basis.
- Section 8 discusses the adequacy of water supplies during normal, dry-year, and multiple-dry years during a 20-year projection.
- Section 9 lists references cited in this WSA.

2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SETTING

The City limits currently encompasses 25.9 square miles. The City's SOI covers 34.9 square miles, while the City's General Plan (GP) encompasses approximately 74.3 square miles. The City's General Plan (Placeworks, 2014) identified three Urban Centers to focus growth, including Loma Vista, the Northwest area, and the Northeast area; this Project lies within the Northeast area, within the villages identified in the Water Master Plan Update, Phase III (WMP) (Provost & Pritchard Consulting Group, 2018) as Northeast Triangle and Northern Rural. Figure 2-1 identifies the location of the Project in relation to the surrounding Clovis/Fresno region.

The Project includes a total area of 952 acres located between Sunnyside and Fowler Avenues, Shepherd and Behymer Avenues, and the Big Dry Creek Reservoir. Located just outside the city limits and the SOI, according to the 2014 City of Clovis General Plan, the area north and east of the Project is open space, north of the Project is agriculture, west of the Project is rural residential, and south of the Project is low and very low residential uses.

The Project entails two distinct components, which are analyzed jointly in this WSA:

- Vista Ranch Master Plan: a proposed master planned community, including approximately 3,286 dwelling units on 507.4 acres with a variety of land uses, including Low Density Residential (LDR), Medium Density Residential (MDR), Medium-High Density Residential (MHDR), Very-High Density Residential (VHDR), Mixed-Use, Neighborhood Commercial, Trails, Open Space, Park, and School.
    - 410.6-acres of this area was included in the WMP and UWMP analyses
    - 96.8-acres of this area was included in the UWMP analysis but not the WMP analysis.
- Non-Development Area: adjacent to Vista Ranch, the area northeast and west of the Vista Ranch boundaries, as follows:
    - Northeast area: 57.7-acres, to be evaluated as an Agricultural land use.
    - This area was not included in the City's UWMP analysis and will be discussed further throughout this WSA.
    - West area: 386.9-acres, with a potential to develop as Rural Residential.
    - This area was included in the City's UWMP analysis.

The Project area is currently designated, in the County of Fresno – Zoning, as AE-20, AL-20, and RR, and current land uses are rural residential and open fields. As noted by the VRMP Project proponent/ applicant, the current land uses receive water to meet demands through existing domestic or agricultural groundwater wells; the amount of groundwater pumped from those wells is estimated at 10 acre-feet per year (AFY) as described in the memorandum entitled *Vista Ranch Development – Evaluation of Impacts to Groundwater Levels* (Provost & Pritchard Consulting Group, August 2025). The Vista Ranch Master Plan will include the abandonment of these existing onsite wells.

2.2 WATER SUPPLY AND DISTRIBUTION

The project will receive water supply from the City's water distribution system, which relies on both groundwater and surface water supplies. The City's Surface Water Treatment Plant (SWTP) has a current treatment capacity of 22.5 million gallons per day (MGD); expansion to 45 MGD is planned.

In addition to the supply from the SWTP, the City has more than 30 groundwater wells located throughout the City, with the nearest being approximately one mile south of the Project, at Temperance and Nees Avenues, no groundwater wells would be constructed within or in the vicinity of the Project boundary as a part of the Project development. While the City's system is divided into two pressure zones, there are interconnections between the two to balance supply and demand throughout the year in various water demand scenarios.

The Project area is entirely within the water system's Pressure Zone 2, which largely relies on surface water supplies. Water will be delivered to the Project via the City's existing and planned distribution system. The water distribution system is shown in full in the WMP, and in detail for this area on Figure 2-2. The master planned 16-inch distribution mains in East Shepherd Avenue west of North Armstrong Avenue and in North Armstrong Avenue running south from East Shepherd Avenue exist. Additionally, master planned 24-inch transmission mains in Sunnyside and Perrin Avenues exist or will exist by the time this Project proceeds. Connectivity in both directions along Shepherd Avenue, Sunnyside Avenue, and/or in Temperance Avenue are required to reliably supply water to the Project.

The master planned mains within the Northeast Triangle, north of Shepherd Avenue, will require modification to accommodate the layout of the Project, as discussed in the Water Infrastructure Investigation, separate from this WSA. The mains in Figure 2-2 are those currently shown as planned in the WMP, not the updated alignments as the potential new alignments are not approved or confirmed by City staff at the time of preparation of this report.

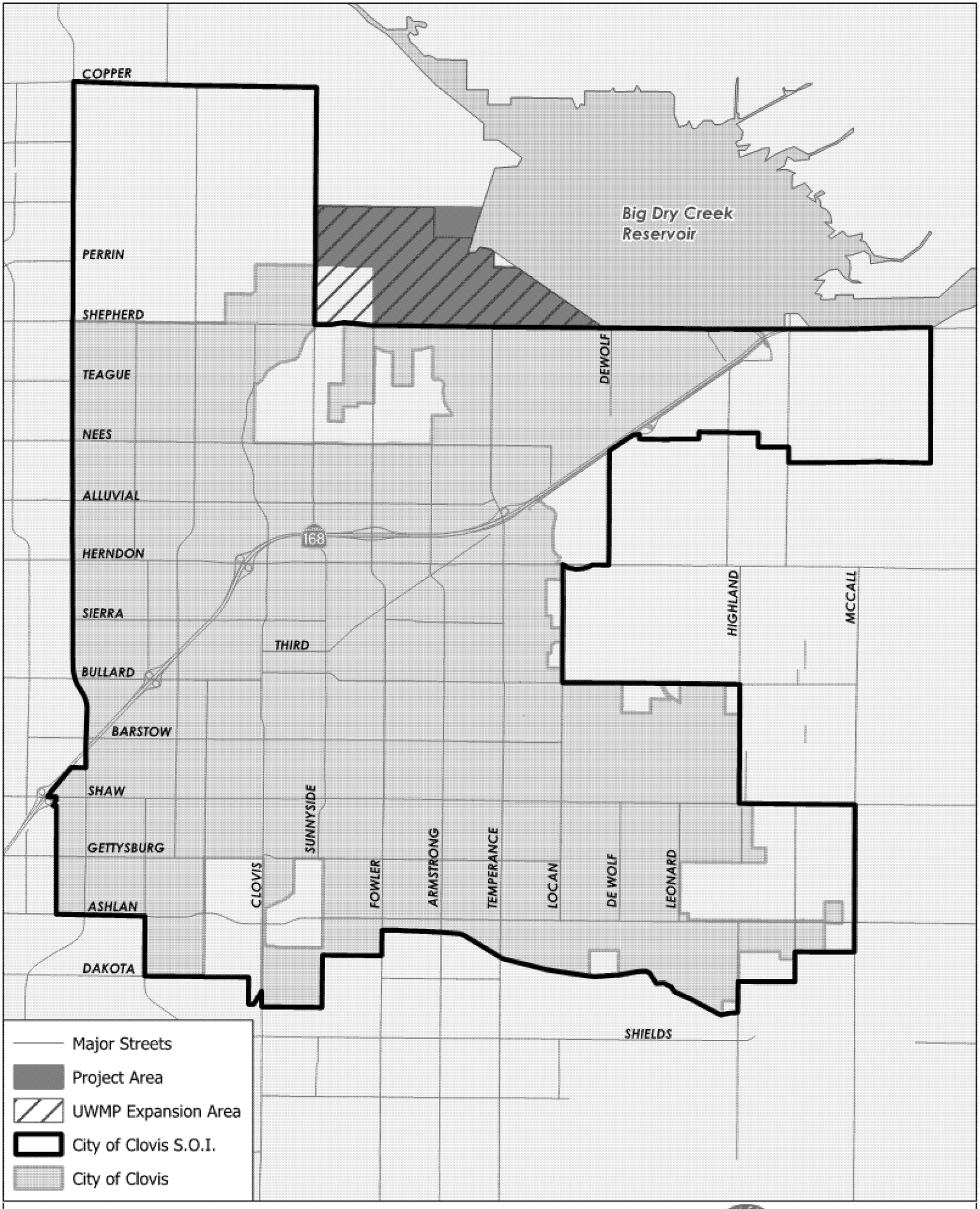


Figure 2-1: Project Location

Water Supply Assessment- Vista Ranch

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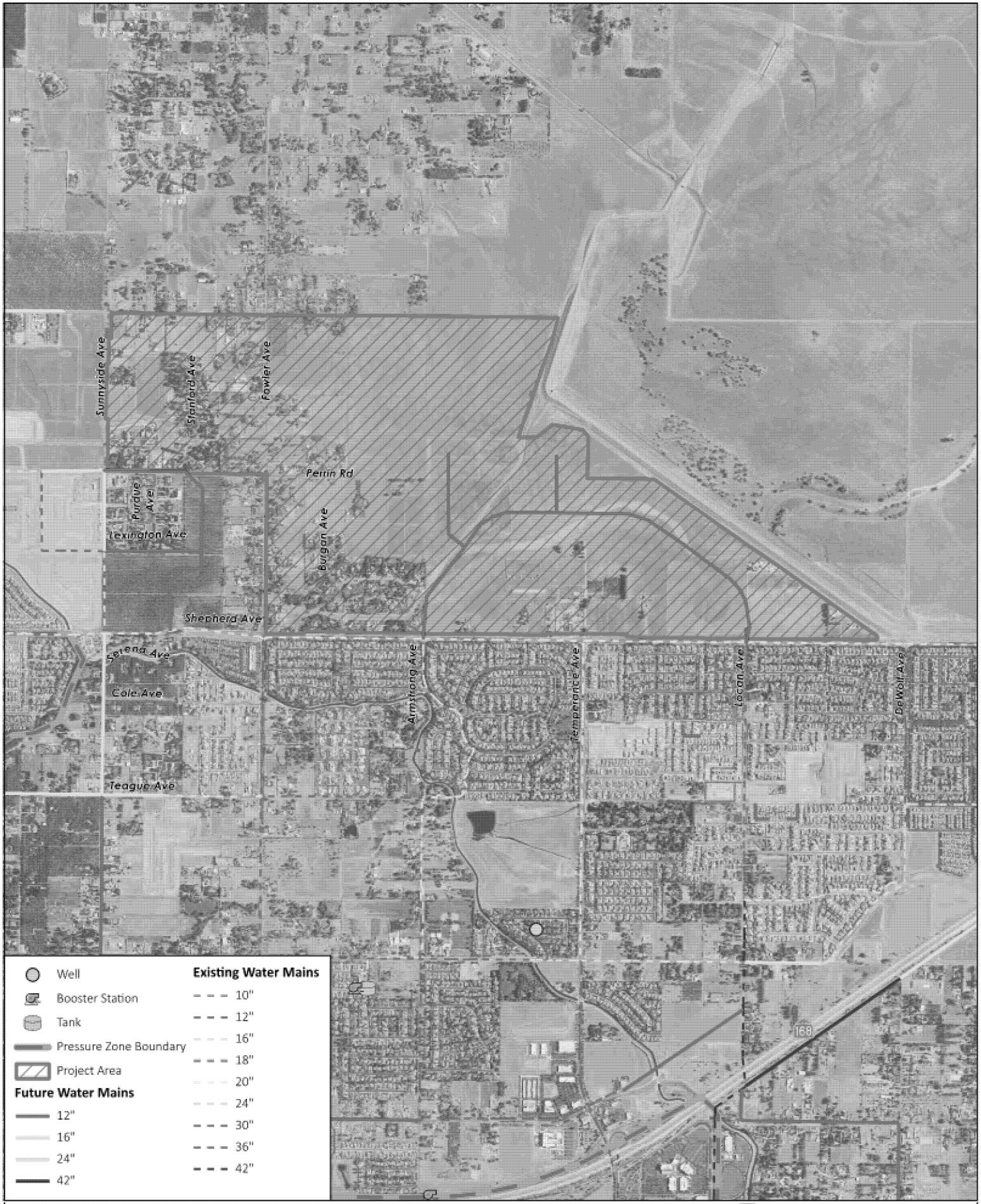


Figure 2-2: Water Infrastructure at Buildout

Water Supply Assessment- Vista Ranch

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3 WATER DEMANDS

This section summarizes projected water demands of the Project, assuming full buildout of the Project by 2035. Water demands were based on Land Use-based Water Demand Factors (WDFs) applied to land uses shown in the City's Adopted General Plan. Proposed Project water demands have been estimated based on the proposed land uses and the WDFs shown in the adopted WMP. This section compares water demand estimates developed as part of this study with the City's existing plans.

3.1 PROJECT DEMANDS

Based on the adopted WDFs stated in the WMP, and the existing GP land use designations (shown in Figure 3-1), the planned water demands for the Project area within the WMP and the area outside the WMP, shown in AFY, are shown in Table 3-1 below. This table is utilized for comparison of overall water supply portfolio impact of the Project, according to the WMP.

Table 3-1. Planned Demand Estimates

PLANNED DEMAND ESTIMATES			
PLANNED LAND USE DESIGNATION	UNIT FACTOR (AFY/ACRE)	ACREAGE (acres)	DEMAND (AFY)
AREA INCLUDED IN THE WMP ANALYSIS (NORTHEAST TRIANGLE)			
Rural Residential (RR)	0.7	2.0	1.4
Low Density Residential (LDR)	2.5	169.0	422.5
Medium Density Residential (MDR)	2.2	100.0	220.0
Medium-High Density Residential (MHDR)	3.3	24.0	79.2
Mixed Use – Village (MU-V)	5.0	14.0	70.0
Open Space	1.5	39.0	58.5
Park	3.0	22.0	66.0
School	2.8	16.0	44.8
Right-of-way (Road)	0.0	24.6	0.0
	Subtotal:	**410.6**	**962.4**
AREA NOT INCLUDED IN THE WMP ANALYSIS			
No planned land use[1]	0.0	541.4	0.0
	Subtotal	**541.4**	**0.0**
	Overall Total:	952.0	962.4

Based on the proposed land use designation (see Figure 3-2), the proposed water demands for the Project area are shown in Table 3-2. The water usage projection for the Project was developed based on the Water Demand Factors in the WMP for the proposed Project land use.

[1] For purposes of the WMP comparison, this area does not have a planned land use demand; however, for purposes of the UWMP comparison, this area is assumed to have a population associated with it per the Rural Residential land use shown in the Fresno County General Plan.

Table 3-2. Proposed Demand Estimates

PROPOSED DEMAND ESTIMATES			
PROPOSED LAND USE DESIGNATION	UNIT FACTOR (AFY/ACRE)	ACREAGE	DEMAND (AFY) [4]
VISTA RANCH MASTER PLAN (AREA WITHIN THE WMP)			
LDR	2.5	34.2	85.5
MDR	2.2	146.4	322.1
MHDR	3.3	71.8	236.9
Very High Density Residential (VHDR)	7.3	15.7	114.6
Community Recreation [1]	5.0	3.1	15.5
Neighborhood Commercial	2.9	12.7	36.8
Industrial (Mini Storage) [2]	--	32.2	0.4
Open (No water use) [3]	0.0	28.3	0.0
Park	3.0	27.1	81.3
School	2.8	19.3	54.0
Road (No water use)	0.0	19.8	0.0
	Subtotal:	**410.6**	**947.1**
VISTA RANCH MASTER PLAN (AREA NOT WITHIN THE WMP)			
MDR	2.2	71.4	157.1
MHDR	3.3	17.5	57.8
Park	3.0	3.3	9.9
Road	0.0	4.6	0.0
	Subtotal:	**96.8**	**224.8**
NON-DEVELOPMENT AREAS (AREA NOT WITHIN THE WMP)			
RR	0.7	386.9	270.8
Agriculture (not accounted for in UWMP)	0.0	57.7	0.0
	Subtotal:	**444.6**	**270.8**
	Overall Total:	**952**	**1,442.7**

Notes:
[1] This proposed land use is equivalent to the *Mixed Use – Village* land use in the City's General Plan and WMP.
[2] The water demand shown for this area is based on the Approved Fresno County Condition Use Permit for a Mini-Storage Project that is currently under construction.
[3] The project applicant has indicated this open space area will not be irrigated.
[4] Due to rounding, some totals may not reconcile.

To evaluate the overall water supply portfolio impact to the City's water supply portfolio, the additional water supply needed for the project includes the demands associated the Non-Development Areas not previously accounted for in the WMP plus the increased density above that which was accounted for in the WMP. The impact of the Project to the City's water supply portfolio shown in the WMP is as follows:

- Changed density within the area shown in the WMP:
  - Planned: 962.4 AFY
  - Proposed: 947.1 AFY
  - Difference: -15.3 AFY
- Area outside WMP:
  - Planned: 0.0 AFY
  - Proposed: 495.6 AFY
  - Difference: 495.6 AFY

Total Impact to Water Supply: 480.3 AFY

For purposes of understanding the difference between planned and proposed demands on a per capita basis, as documented in the UWMP, the "Area Not Included in WMP Analysis" would have had an assumed demand associated with rural residential (541.4 acres * 0.7 AFY/acre = 379 AFY) and the impact of the Project would be associated with the increased density. This total impact is calculated as follows:

- Increased density within the area shown in the UWMP:
    - Planned: 1,341.4 AFY (962.4 AFY + 379.0 AFY)
    - Proposed: 1,442.7 AFY
    - Difference: 101.4 AFY

Total Impact to Water Supply: 101.4 AFY

Comparison between the projected water demands and the demands anticipated in the UWMP evaluates the overall availability of water supply to meet the City's per capita demand scenarios described later in the WSA.

3.1.1 INCREMENTAL PROPOSED WATER DEMANDS

Project water demands were calculated in 5-year increments, as shown in Table 3-3. This table is based upon the understanding that the Project will be entirely constructed by 2035[2].

Table 3-3. Proposed Demands in 5-Year Increments

PROPOSED DEMANDS IN 5-YEAR INCREMENTS				
CRITERIA	2025	2030	2035	TOTAL[3]
Estimated Demand (AFY)	0.4	721.2	721.2	1,442.7

3.2 DEMANDS OF OTHER EXISTING AND PLANNED DEVELOPMENT

The UWMP reports the planned demands for similar types of uses proposed with this Project within the City, referred to collectively as Single-Family Residential uses (SFR), Multi-Family Residential uses, and Commercial uses. These demands are summarized in UWMP Table 4-5, which is reproduced, in part, below.

[2] The anticipated demands timing is an estimate and development of the Project will be determined by the Project Applicant. This WSA does not govern the development timeline.
[3] Due to rounding, some totals may not reconcile.

Table 3-4. UWMP Planned Water Demands by Use Type (UWMP Table 4-5)

UWMP PLANNED WATER DEMANDS BY USE TYPE (As shown in UWMP Table 4-5)			
USE TYPE	UWMP PROJECTED DEMANDS IN 2035 (AFY)	PROPOSED PROJECT DEMANDS IN 2035	
		PROJECTED PROJECT DEMANDS (AFY)	% OF UWMP DEMANDS
Residential	23,331	1,252.6	5.4%
Commercial (includes schools)	3,670	99.0	2.7%
Landscape (includes open space and parks)	1,336	91.2	6.8%
Totals	**28,337**	**1,442.7**	**5.1%**

Comparing the total proposed Project water demands in Table 3-2 with the total water demand area analyzed in the UWMP and shown in Table 3-4, the Project makes up a small portion of the overall water anticipated to be delivered by the City to similar types of uses.

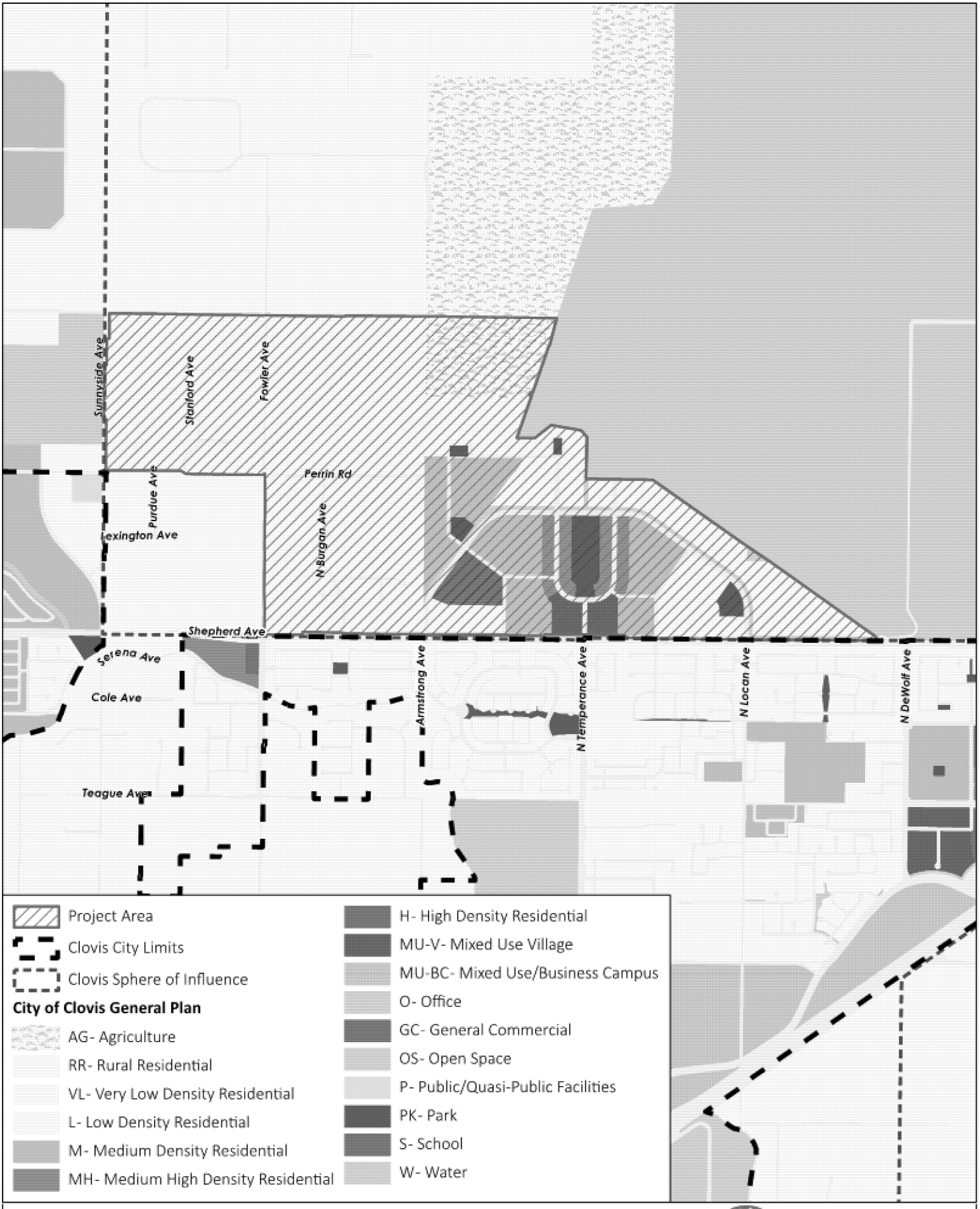


Figure 3-1: General Plan Land Use in Project Area

Water Supply Assessment- Vista Ranch

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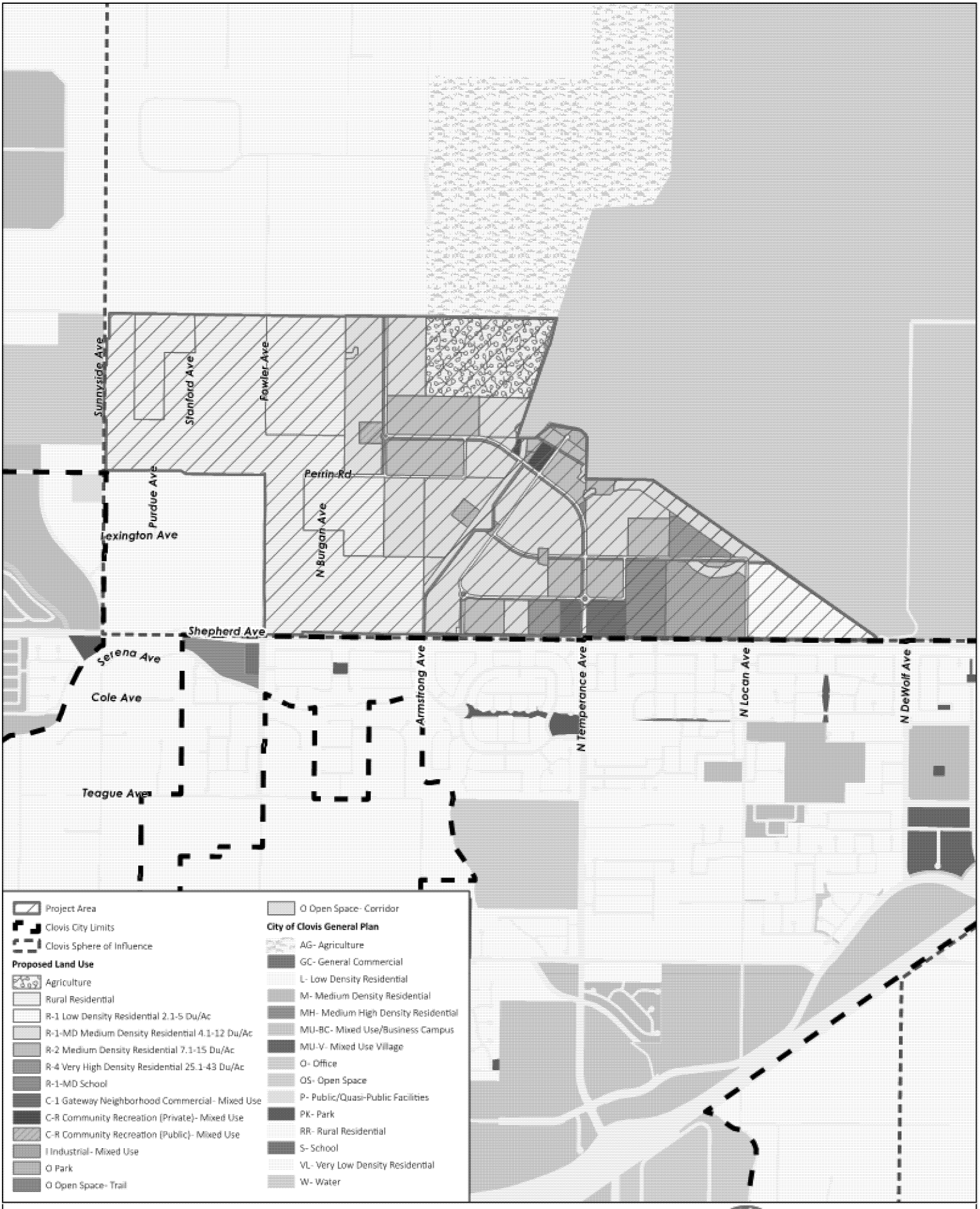


Figure 3-2: Proposed Land Use in Project Area

Water Supply Assessment- Vista Ranch

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4 OVERVIEW OF WATER SUPPLIES

CWC §10910(c)(2) allows reliance on the City's UWMP to determine overall water supply reliability if the Project's planned water demand was included in the UWMP. All of the Project demand was included in the City's UWMP calculations and, while only a portion of the demand of this entire area was included in the WMP, the calculations and analysis from the UWMP are utilized as a current baseline for the City's supply and demand comparison. The Project's demands are greater than those contemplated in the UWMP, as discussed in Section 3 and later in this WSA.

CWC §10910(d) requires that a WSA identify any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, including any such existing entitlements, rights, or contracts held by the public water system or city or county preparing the WSA. These descriptions appear in detail in Chapter 6 of the UWMP and are summarized below.

4.1 SURFACE WATER

The City's surface water supply is provided through agreements with Fresno Irrigation District (FID), which allows the City to receive a share of FID's King's River and Friant Central Valley Project (CVP) entitlements. Garfield Water District (GWD) and International Water District (IWD) are located within the City's General Plan boundaries. As the districts' service areas are urbanized over time, surface supplies available to the two districts will be added to the City's surface water supply. As those supplies are added to the City's water supply portfolio, they will be available throughout the City's service area as part of the general water supply. Currently, all surface water available to the City comes from the FID contract. The overall boundaries of each of the districts are shown on Figure 4-1.

A portion of the surface water supply (Firm Supply) is related to the 2019 *Firm Surface Water Supply and Purchase Agreement* between FID and the City, which provides for up to 7,000 AFY of surface water usable, available for use "anywhere the City delivers water by means of the City Water System". This water supply becomes available to the City on an incremental basis, beginning in September 2020 with 1,000 AFY and increasing through 2030 by 300 AFY and thereafter by 200 AFY through September 2045 for a total of 7,000 AFY. A summary of the availability of the Firm Supply is provided in Section 8.

4.1.1 KINGS RIVER

FID obtains much of its surface water from the Kings River. FID is a member of the Kings River Water Association, which holds water rights licenses for all the Kings River and storage rights licenses on Kings River reservoirs. FID is entitled to water based upon a prorated monthly schedule determined by the natural flow of the Kings River as it would occur without reservoir storage above the historic Piedra gauging station. FID is entitled to water from the Kings River at all flows, but the percentage is higher at relatively low Kings River flows. If the snowmelt is slow, the District receives greater entitlement. FID's average gross annual entitlement is 452,541 acre-feet (AF). Within the last fifty years, the smallest entitlement received was 158,109 AF, which occurred in 2015.

The City's allocation from the Kings River is proportional to the total acreage of the City's included area to the total FID area receiving water; the total amounts available to the City are discussed in greater detail in Section 6.

4.1.2 CENTRAL VALLEY PROJECT WATER ALLOCATION: FRIANT DIVISION

The water obtained from the CVP comes from the diversion and storage of water from the San Joaquin River behind Friant Dam. The total available water on the San Joaquin River has been estimated at 2,200,000 AF. Of that, 800,000 AF have been designated as Class I supply (Bureau of Reclamation, 2005). Class I supply is considered to be dependable in most years with shortages only in very dry years. Class II

water is in excess of Class I and is therefore much less dependable. FID has a contract with the United States Bureau of Reclamation for 75,000 AF of Class II water from this source (Bureau of Reclamation, 2005). The agreement between the City and FID requires the District to make available to the City a proportional share of all surface water available to the District although it does not allow the City to directly receive FID's CVP supplies. Therefore, FID is required to make a like amount of Kings River (or any other surface) water available to the City for its proportional share of Class II CVP supplies. FID's Class II contract has received an average 13,577 AFY with the actual number ranging from zero to the full 75,000 AF depending upon the nature of each water year over that period. Table 4-1 lists the projected surface water volume through 2040.

4.1.3 GARFIELD WATER DISTRICT

GWD is located north of the City with a portion of the District in the City's SOI. The GWD holds a Class I CVP contract for 3,500 AFY. With half of GWD within the City's SOI, an estimated 1,750 AFY is expected to be added to the City's supply upon development. As noted in the UWMP, the first portion of GWD supplies is not anticipated to be available to the City until 2025, with the total 1,750 AFY not accounted for in the supply totals until 2040.

4.1.4 INTERNATIONAL WATER DISTRICT

IWD is located east of the City's SOI within the general plan's boundary. The IWD holds a Class I CVP contract for 1,200 AFY. The City's General Plan designates a portion of the District's area as industrial and residential use. At build-out it is estimated that the entire 1,200 AFY supply will be added to the City's supply. As noted in the UWMP, the first portion of IWD supplies is not anticipated to be available to the City until 2030, with the total 1,200 AFY not accounted for in the supply totals until 2040.

4.2 SUPPLY FROM STORAGE

Since 2004, the City has been storing water in the aquifer to create a stable source of supply over the years, as explained in the UWMP. The City has been working with FID to recharge surface water, using the City's contracted shares of capacity in FID's Waldron Banking Facility and Boswell Groundwater Banking Facility, to build up credit in those facilities which allows for annual water withdrawals, on an as-needed or as-requested basis. The surface water banked includes portions of FID's Kings and CVP supplies and may in the future also include other surface water supplies that FID is able to secure on the spot market. Recharged water is purchased under separate agreements with FID and is not included in the surface water totals in the previous section, so this is truly a separate water supply.

Two banking facilities, the Waldron Banking Facility (Waldron) and Boswell Groundwater Banking Facility (Boswell), have been constructed in central Fresno County. The City entered into an agreement with FID to participate in the financing of the construction of a dedicated water banking facility called the Waldron Banking Facilities. The City is entitled to receive up to ninety percent (9,000 AF) of the annual yield. The City and FID have entered into a similar agreement regarding the Boswell Groundwater Banking Facility whereby the City will have access to up to 4,500 AFY of additional surface water supplies. The recharged water will be "banked" for future recovery during dry periods or to accommodate planned growth.

The City has created a recharge plan accounting for historic variations in surface water supplies that will allow it to withdraw an annual 13,500 AF, the maximum withdrawal allowed under the City's agreements with FID. This is considered a firm supply because the contract allows for the City to purchase water at market cost should there be no yield in a given year. The 13,500 AF maximum annual withdrawal is built into the water supply projections in the UWMP for each year over the planning horizon.

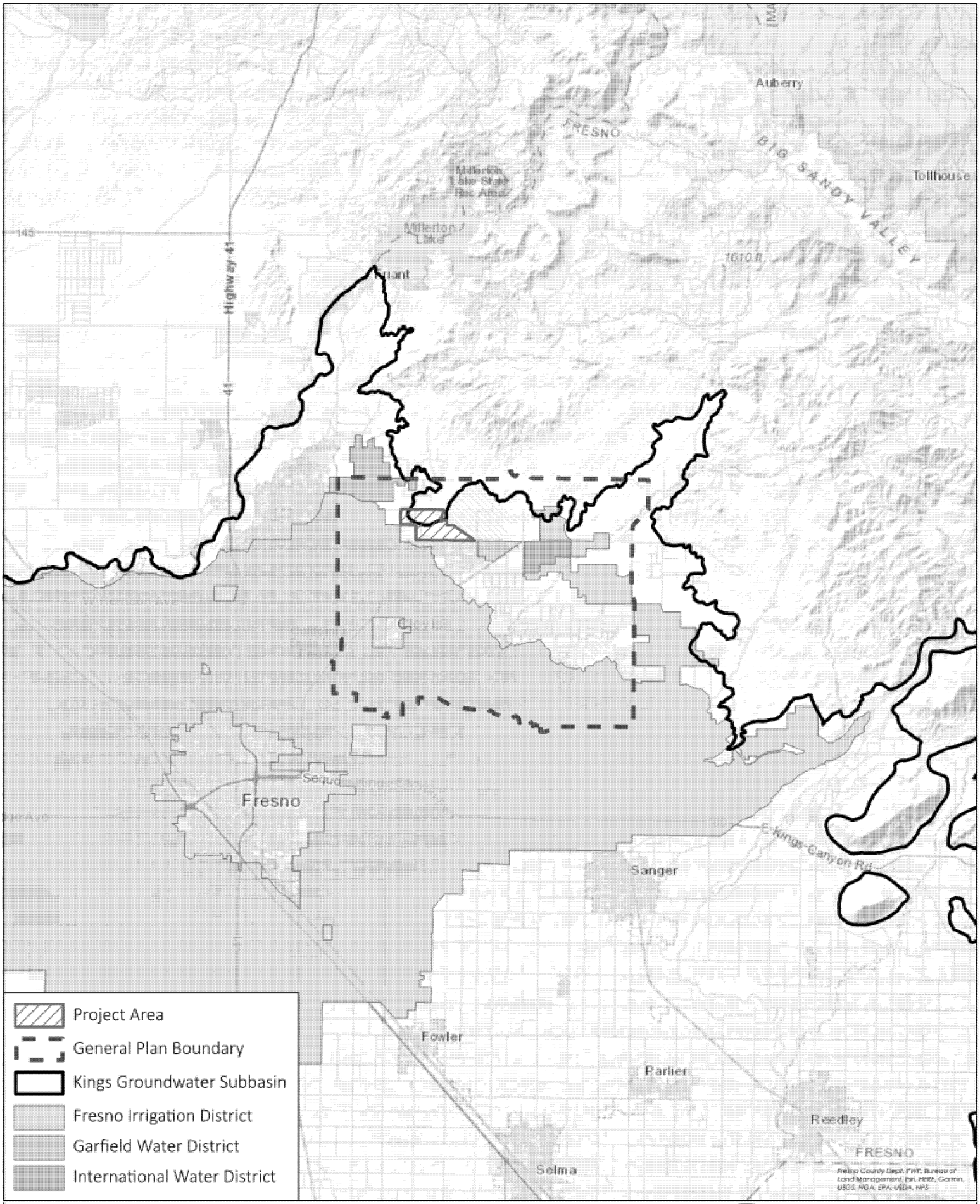


Figure 4-1: Irrigation and Water Districts

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4.3 GROUNDWATER

The City is located within the Kings Groundwater sub-basin, a part of the Tulare Lake Hydrogeologic Basin as described in the Department of Water Resources Bulletin 118 (Department of Water Resources, 2003). The groundwater basin is in overdraft and has been for many years. However, it has not been adjudicated.

Chapter 6 of the UWMP discusses a sustainable groundwater yield for the service area and concludes the sustainable yield to be 9,400 AFY, as discussed in greater detail in the WMP. While the North Kings Groundwater Sustainability Plan (NKGSP) has been written and adopted, it does not yet include a firmer approximation of sustainable yield, although development of one is anticipated. The sustainable yield from the UWMP and WMP has been used for this assessment.

The impacts of the Project to the groundwater aquifer are further discussed in the memorandum entitled *Vista Ranch Development – Evaluation of Impacts to Groundwater Levels* (Provost & Pritchard Consulting Group, August 2025).

4.4 RECYCLED WATER

Most of the City's wastewater flow is treated at the Regional Water Reclamation Facility, located southwest of the City of Fresno on Jensen Avenue. In 2009, the City of Clovis completed a new Water Reclamation Facility (WRF). In 2020, the WRF produced approximately 2,496 AFY. Of that total, 28 percent was recycled for mostly landscape and agricultural irrigation, with the remainder being discharged to FID's Fancher Creek for agricultural irrigation.

Ultimately the WRF will be expanded to be able to treat 8.4 MGD, or 9,400 AFY, and will make a substantial contribution to the City's overall water resources. According to the 2020 UWMP, recycled water is used for irrigation of public and private landscape within the service area. Areas receiving or planned to receive recycled water include the Freeway 168 corridor between Shepherd and Sierra Avenues, the existing Clovis Community Medical Center campus, and multiple City parks and landscape areas.

Landscape irrigation will continue to be the main use of recycled water in the future. All public landscape areas within three-quarters of a mile of the distribution system are considered potential recycled water use areas. Clovis Unified School District is evaluating the use of recycled water for its landscape areas. Caltrans has expanded their use of recycled water along State Route 168 from Armstrong Avenue west to Sierra Avenue. Concurrent with the Project's development, the City will expand its use of recycled water and broaden its range of beneficial uses to potentially include irrigating the public landscape space to be developed with the Project.

To affect that increase in use, the City now requires all new development of public landscape near recycled water transmission lines to use recycled water. Additional actions include extending the recycled water distribution system to discharge at groundwater recharge facilities and reducing the cost of recycled water. The UWMP indicates planned use of recycled water supply will be 9,400 AFY by 2040 (UWMP Table 6-13). A 30-inch recycled water transmission main exists in North Temperance Avenue which bisects the proposed Project area. With a planned[4] recycled water transmission main in East Shepherd Ave, it is possible this Project may use recycled water for landscape irrigation, but the City will make final determination of that at a later date. Additionally, there are planned 6-inch and 8-inch recycled water transmission mains within the Project area.

[4] As noted in the City's 2018 Recycled Water Master Plan

4.5 EXCHANGES

Water exchanges, transfers, and water banking allow purveyors to manage demand and supply variability by ensuring water will be available for the near future. A portion of the City's wastewater is treated at the RWRF. Under an agreement with FID, the City of Fresno receives 0.92 AF of Kings River surface water in exchange for each two AF of reclaimed water produced by RWRF (46 percent exchange). Clovis is in discussions with FID and the City of Fresno, to appropriately allocate Clovis' pro-rata share of the treated water.

4.6 WATER SUPPLY SUMMARY

The five sources discussed above make up the City's water resources. These are tabulated overall for 2025 and for each subsequent 5-year period through 2040 in Table 4-1.

The City's overall water resources are projected to increase from 50,739 AFY in 2025 to 74,650 AFY in 2040. Nearly all this increase will come from increasing surface water resources from 18,039 AFY in 2020 to 39,400 AFY in 2040. The mix of water supplies the City plans to use to meet these demands is changing over time and, while the surface water supplies will be the primary source, a mixture of groundwater and supply from storage will be used to meet demands.

Table 4-1. Water Supplies – Normal Year (UWMP Tables 6-12 and 6-13)

WATER SUPPLIES – NORMAL YEAR (As shown in UWMP Tables 6-12 and 6-13)				
WATER SUPPLY	PROJECTED WATER SUPPLY (AF)			
	2025	2030	2035	2040
Groundwater [1]	11,429	10,753	10,076	9,400
Surface Water [2,3]	22,160	27,584	32,508	39,400
Supply from Storage (Waldron and Boswell facilities)	13,500	13,500	13,500	13,500
Recycled Water	3,100	5,500	6,300	9,400
Transfers (GWD and IWD)	550	1,600	2,650	2,950
Total:	**50,739**	**58,937**	**65,034**	**74,650**

Notes:

[1] Reasonably available volume shows a steady reduction in reliance on groundwater supply, as planned, to the sustainable yield volume in 2040; discussed in greater detail in the UWMP.

[2] Surface water quantities shown in greater detail in the UWMP.

[3] As noted in the UWMP and above, the Surface Water supply includes up to 7,000 AFY of Firm Water. As of 2025, 2,500 AFY of the Firm Water Supply is available to the City, with that quantity increasing annually by 300 AFY. As noted in Table 3-3, the Project is anticipated to be fully constructed by 2035, at which time the City will have access to 5,000 AFY of their Firm Water Supply. This incremental increase is reflected in the Projected Water Supply values from the UWMP.

5 NORMAL YEAR WATER OPERATIONS

This section evaluates the ability of the City to meet the overall water demands during normal water years. A normal year is a year, or average range of years, that most closely represents the average water supply available to the City. In this case, the normal year reflects the overall water supply summary discussed in Section 4.

This Chapter relies on information taken from Sections 6 and 7 of the UWMP. Table 5-1 compares the City's water demands and compares them with the normal year water supplies (see Table 4-1) for the 5-year increments the Project is anticipated to be constructed, and through 2040, as shown in the UWMP. As shown, total supplies would exceed total demands. Adequate supplies are available to serve the City and its water customers in normal rainfall years such as those discussed in this section. The excess water supply is adequate to meet the estimated Project water demands.

Table 5-1. Comparison of Normal Year Supplies and Demands

COMPARISON OF NORMAL YEAR SUPPLIES AND DEMANDS				
CONDITION	WATER SUPPLY (AFY)			
	2025	2030	2035	2040
Water Demand	39,737	42,824	46,422	52,598
Water Supply	50,739	58,937	65,034	74,650
Excess/Shortage	**11,002**	**16,113**	**18,612**	**22,052**

6 SINGLE-DRY AND MULTIPLE-DRY YEAR WATER SUPPLIES

This section evaluates the availability of City water supplies during single-dry and multiple-dry water years, based on Project buildout in 2035. Numerous factors will work to change the relative quantities of water the City receives from its several water sources. Since each of these has a different reliability in dry years, the overall water supply reliability will change over time. The following sections discuss how this will occur.

During a single-dry year, surface water allotments are anticipated to be reduced by as much as 66 percent for Kings River surface water supplies, and CVP Class II supplies are eliminated completely in dry years. In the future, as the City becomes more reliant on surface water supplies, the impact of surface water reductions in dry years will be more significant.

A multiple-dry year period represents the lowest average supply available to the Project for a consecutive five-year period. This analysis is referred to as a "multi-dry" condition in the UWMP. The WSA analysis is based on the five consecutive driest years of record for the Project's surface water supplies, which were water years 2011/12 through 2015/16.

6.1 WATER YEAR EFFECTS ON WATER SOURCES

6.1.1 KINGS RIVER SURFACE WATER

Both the single-dry and multiple-dry analyses are most affected by the variations in Kings River entitlement in dry years. FID's entitlement does not vary directly in proportion to overall annual runoff; rather it favors FID versus all the other Kings River diverters. When river flows are low due to slow runoff, low annual precipitation or both, FID's share of the daily river flow increases.

The effect of this is that FID's entitlement, as a percentage of its average entitlement, is higher than the overall water year percentage flow, for virtually any below-average water year. As noted in the UWMP, the anticipated share of Kings River water is shown as 32,100 AFY (UWMP Table 6-4) in 2040 for an average water year. As discussed in the UWMP, the City executed a contract with FID in 2019 for development of a new firm water supply starting at 1,000 AFY in 2020 and increasing to a maximum of 7,000 AFY by 2045 and thereafter. This new supply will not have the variability of the existing supply based on water year type.

6.1.2 FRIANT CVP SURFACE WATER

Over the period of 1986 through 2016, the average Class II allocation has been 38 percent of the contracted amount. However, Class II supplies are particularly subject to the water year type. However, these supplies are relatively small and would not have a significant impact on the total supply. While Class I entitlements do not currently affect the City's FID supplies, they will affect the future-year GWD and IWD entitlements. Class I allocations in the five multiple-dry years were 0 percent of the contracted amount for all five years.

6.1.3 SUPPLY FROM STORAGE

The contract for the Waldron facility allows annual withdrawals of up to approximately 9,000 AFY, while the Boswell Facility allows up to 4,500 AFY. According to the UWMP, the combined withdrawal limit from the two facilities is 13,500 AFY. In any year where surface water deliveries are substantially limited, the City would want to use these resources to the limit.

A related matter is how contributions are made to supply storage. Whereas in normal years the City is making deposits to both facilities, in a drier year those contributions would be reduced or halted since the surface supplies necessary for the deposits would not be available. Since the deposits come from surface

water resources not counted in the City's water balance, being acquired under separate FID agreements, the curtailment of deposits does not reduce the City's water demand.

6.1.4 GROUNDWATER

As of the preparation of the 2020 UWMP, the City of Clovis obtains groundwater from more than 30 wells, located throughout the service area. The total well production is estimated at 37,290 gallons per minute.

According to the UWMP, the City aims to reduce its direct groundwater consumption whenever possible. Most of the City's water demands will be met by a combination of surface water and supplies from storage, in water years when those two resources are sufficient to meet demands. In drier years, when surface water supplies are limited, the City will pump groundwater, potentially beyond the 9,400 AFY accounted for in a normal year, to make up the shortfall but not to an unsustainable level as discussed in the NKGSP. The City will also recharge surface waters when available to allow for additional groundwater pumping when needed.

Planning to make that objective possible is very important, as Chapter 6 of the UWMP states that the sustainable groundwater supply in the City service area is 9,400 AFY, for normal, dry, and multi-dry years. For the time being, there is no restriction against pumping groundwater above the sustainable aquifer yield; however, the NKGSP indicates the City must sustainably use groundwater.

This WSA uses 9,400 AFY as the sustainable groundwater pumping amount, as stated in the UWMP. Due to the very large size of the aquifer underlying the City, available groundwater is not quickly affected by the type of water year. Anticipating a mix of wet and dry years similar to what has been historically seen, this WSA does not reduce available groundwater in dry or multiple-dry years; however, the City will be prioritizing use of other supplies over groundwater when possible.

6.1.5 RECYCLED WATER

Recycled water production, being tied directly to indoor water use, does not vary significantly with the water year type, and is not adjusted from normal for this analysis.

6.2 CHANGES IN WATER SOURCE RELIABILITY OVER THE PLANNING HORIZON

In 2020, surface water made up 58 percent of the City's direct water supply. In 2035, the surface water supply is planned to be 53 percent of the total while the supply from storage will have increased to 18 percent in a normal year. Groundwater will remain an important, but decreasing, component of the water supply in the near future.

This means the City's reliance on surface water supplies, either directly used or pumped from subsurface storage, will have increased to 71 percent of the total. While there is a margin of normal year supply available over planned demand over the entire planning horizon, some provisions may have to be made for additional reliable storage to account for such a large portion of surface water being subject to water year variability. See the reliability analysis in Section 6.3 following.

6.3 SUMMARY OF SINGLE-DRY AND MULTIPLE-DRY YEAR RELIABILITY OVER THE PLANNING HORIZON

Supply for dry years would be drawn from a combination of Kings River surface water, supply from storage, groundwater, and recycled water. As shown in the UWMP, it is anticipated that surface water supplies from the FID Firm Water Agreement would still be available during drought years. Other firm water supply sources are groundwater, banked water, and recycled water, all of which are considered

resilient against drought compared to surface water supplies while still being able to use previously banked groundwater supplies from the Waldron and Boswell facilities. Project demand was assumed to be constant across all water years.

The supplies that would be available during single-dry and multiple-dry years in 2035 (at assumed Project buildout) are summarized in Table 6-1; this is a reproduction of the data from the UWMP for reference, see Table 8-1 for a comparison including the Project demands.

The supply varies based on the percentages shown in UWMP Table 7-1, as follows, and is based on the actual data from the 2012-2016 drought period:

- Single-Dry Year: 66%
- Multiple-Dry Year:
  - Year 1: 89%
  - Year 2: 85%
  - Year 3: 77%
  - Year 4: 66%
  - Year 5: 98%

The City has a Water Shortage Contingency Plan (WSCP) (Provost & Pritchard Consulting Group 2021) in place that could be partially or fully implemented if needed or mandated. The "Demands with Conservation" noted below vary with the availability of water supply and the stage of the WSCP being implemented to reduce demands. As Year 5 has nearly normal water supply availability, the conservation requirements are set at lower levels according to the WSCP and the demands increase accordingly, as discussed in the UWMP.

Table 6-1. Dry Year Supply and Demand Comparison in 2035 (UWMP Tables 7-2, 7-3, and 7-4)

DRY YEAR SUPPLY AND DEMAND COMPARISON IN 2035 (As shown in UWMP Tables 7-2, 7-3, and 7-4)						
SCENARIO	SINGLE-DRY YEAR	MULTIPLE-DRY YEAR				
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Baseline demand	46,422	46,422	46,422	46,422	46,422	46,422
Demand with Conservation	40,957	42,840	40,200	37,028	33,353	44,176
Total Supply	47,233	60,330	57,958	52,625	47,233	64,141
Excess/<Deficit> in Supply	**811**	**13,908**	**11,536**	**6,203**	**811**	**17,719**
Excess/<Deficit> in Supply with Conservation	**6,276**	**17,490**	**17,758**	**15,597**	**13,880**	**19,965**
Note: Refer to the 2020 UWMP, Section 7.2, for additional discussion regarding calculation methodology. Units: AFY						

6.4 CLIMATE-BASED RELIABILITY FACTORS

The following is an excerpt from the UWMP regarding climate change:

> *"The most probable water supply in the City's portfolio to be impacted by climate change is their surface water supply. The NKGSP examined the reliability of the Kings River supply and concluded that the agencies reliant on the Kings Subbasin could continue to plan on those supplies with climate change factored in, stating specifically, "Kings River water supplies available to the Kings*

Subbasin will be managed in the future to maintain historical levels of water supplies." Evaluation of the Kings River supplies into the future, considering climate change impacts of warmer temperatures, showed more precipitation occurring as rainfall and less as snowfall and that the snowfall (snowpack) will have a tendency to melt sooner in the season. The biggest impact this shift will have is water management, including additional reservoir storage and increased recharge during low-use periods. The GSP further states that "climate change will have no significant impact on Kings River diversions."

This WSA defers to the UWMP for additional discussion of the overall effects of climate change upon supply reliability. Climate change has been considered in the preparation of the UWMP in Sections 3.3.1, 4.1, and 7.1.4.

7 OPERATIONAL RELIABILITY

The City's surface water entitlement does not accrue all at once during a given water year. Rather, the Kings River entitlement accrues daily throughout the year based on actual river runoff and the Kings River Water Association (KRWA) entitlement schedule. The daily nature of the Kings River supply is especially important early in the water year, which begins October 1. The very low river flows in October and November mean that supply is low, and the City must rely on other water supplies during those months. The relatively large supplies available from storage help mitigate the seasonal nature of the surface water supply, and these are further backed up by groundwater supplies equivalent to almost half the City's total annual demand. Additionally, the 2019 Cooperative Agreement allows for up to an additional 5,000 AFY of carryover, when available, which can help with seasonal supply.

The City has not had any issue with temporary water shortages to date. The City's WMP and UWMP indicate a need to increase their surface water and groundwater supplies to meet future demands and provide details on how much of each supply is needed compared to the existing supplies. The WMP also includes a Capital Improvements Program identifying capital projects that are necessary to acquire and facilitate the movement of current and future water supplies throughout the City's system in a reliable manner the City's adherence to their planning documents and consistent development of these water supplies and infrastructure is critical for the City's continued growth and development and will provide operational reliability into the future.

8 CONCLUSIONS

As summarized in Table 8-2, the City has adequate supplies to meet the needs of all the City's water customers including the Project, in normal water years, over the 20-years planning horizon. However, the 480 AFY of water supply used for this project above the supply planned for this area will need to be replaced to support full buildout of the GP.

In the buildout year, if demand is as projected, the City will have sufficient water to meet dry year demands of all dry year types. Conservation measures, detailed in the Water Shortage Contingency Plan, have been developed that would mitigate possible shortfalls by reducing demand by approximately 15 percent. Evidence from the 2013 to 2015 drought suggests that those results, and more, are achievable. Additionally, as the City has surplus water supplies in normal years, short-term additional groundwater extraction in the single-dry and multiple-dry years is also planned as part of their water portfolio.

As discussed in Section 7, the City is implementing plans to continue to acquire water supplies and construct infrastructure to supply current and future water users. Therefore, we conclude the City of Clovis has adequate water supplies to meet the needs of the City in normal, and multi-dry years given the previously discussed potential demand reductions and supply augmentations.

As discussed in Section 2, the existing groundwater wells on the properties proposed for development with the Project will be abandoned and destroyed, and no new City-owned groundwater wells will be constructed in the vicinity of or within the Project boundary as a part of this Project.

As discussed in Sections 4.3, 6.1 and 6.3, the City is an active participant in the North Kings Groundwater Sustainability Agency (NKGSA). The City's water system planning and development, and water supply management is consistent with the recommendations and actions discussed in the North Kings Groundwater Sustainability Plan that will allow the City and other NKGSA members to reach sustainability by 2040, as required by the Sustainable Groundwater Management Act. As the Project will be served by the City's water system, it is understood the City will condition the Project to be constructed consistent with the North Kings Groundwater Sustainability Plan and the Sustainable Groundwater Management Act requirements, as applicable.

8.1 CONCLUSIONS INCLUDING ADDITIONAL WSAs

Since the 2020 UWMP was adopted, four WSAs have been prepared for the City, including this one. It is important to understand the cumulative impact of the additional demands associated with WSAs over and beyond the demands analyzed in the 2020 UWMP.

As noted above, the City has a surface water supply that is able to be used north and east of the FID place of use boundary and that supply is increasing annually through 2045. While the City shares water supplies across both pressure zones, it is understood Pressure Zone 2 relies largely on the SWTP. The area outside the FID place of use boundary will rely, at least in part, on the Firm Water Supply; therefore, the following comparison of projects that have been approved outside the FID place of use boundary and their entire water demand is shown below, including anticipated year of build out (if known), alongside a comparison of the quantity of Firm Water Supply the City will have access to at that time.

Table 8-1. Summary of Demands Compared to the Firm Water Supply

SUMMARY OF DEMANDS COMPARED TO THE FIRM WATER SUPPLY NORTH/EAST OF ENTERPRISE CANAL		
PROJECT NAME	TOTAL PROJECT DEMAND (AFY)	ANTICIPATED BUILD OUT YEAR
Tract 6200	288	Unknown
Tract 6343	236	2030
Trace 6205	256	2030
Vista Ranch	1,443	2035
Project Demand Totals	**2,223**	
Firm Water Supply (2030)	**4,000**	
Firm Water Supply (2035)	**5,000**	

As the table shows, the Firm Water Supply is sufficient in 2035 to meet the demands of all projects currently in process or anticipated to begin in the near-term (as indicated by City staff) outside the FID place of use boundary, including Vista Ranch.

The demands in Table 8-2 include those demands noted in the UWMP (see Table 6-1 above), and the additional demands (above the UWMP) associated with the Project evaluated in this WSA, as discussed in Section 2.2. Only the "additional demand" is noted in the table below, as the rest of the demand was already accounted for in the UWMP. Similarly, the noted Excess/Deficit reflects the difference between these summated demands and the total supply noted in the UWMP and in Table 5-1, above. This approach accounts for the additional demands associated with the proposed land use type above the demands associated with the originally planned land use type. The analysis of this report results in two impacts of the Project:

- Near-term: there is an excess of supply in all conditions, even with the additional demands.
- Long-term: the WMP evaluated the City's build-out of the General Plan based on assumed land use densities. The Project increases the density of those areas with calculated demands documented in the WMP and develops into an area without water demands associated with it in the WMP. The impact of those increases equates to an additional water supply needed for the Project of 480 AFY.

Table 8-2. Summary of Project Water Supplies and Demands

SUMMARY OF PROJECT WATER SUPPLIES AND DEMANDS							
2020 UWMP SUPPLY AND DEMAND COMPARISON RESULTS	NORMAL YEAR (2035)	SINGLE-DRY YEAR	MULTIPLE-DRY YEAR				
			YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Excess/<Deficit> in Supply [1]	18,612	811	13,908	11,536	6,203	811	17,719
Excess/<Deficit> in Supply with Conservation [1]	--	6,276	17,490	17,758	15,597	13,880	19,965
ADDITIONAL DEMANDS ASSOCIATED WITH WSAs PREPARED SINCE 2020 UWMP							
Home Place Master Plan (Approved March 2021)	No Additional Demand Associated with WSA						
Tract 6205 SOI Expansion (Approved 2022)	256	256	256	256	256	256	256
Tract 6343 (Approved 2022)	79	79	79	79	79	79	79
Vista Ranch Master Plan (Approval Anticipated by Spring 2026)	101	101	101	101	101	101	101
Excess/(Deficit) in Supply including Additional Demands from Approved WSAs	**18,176**	**375**	**13,472**	**11,100**	**5,767**	**375**	**17,283**
Excess/(Deficit) in Supply with Conservation including Additional Demands Approved WSAs [2]	**--**	**5,905**	**17,119**	**17,387**	**15,226**	**13,509**	**19,594**

Units: AFY

[1] See Section 6.3 for additional discussion on the values shown in the table.

[2] Per the UWMP, conservation efforts will reduce the demands by an estimated 15%, which is reflected in the values in the table.

9 REFERENCES

Provost & Pritchard Consulting Group (2021). City of Clovis, 2020 Urban Water Management Plan Update. Clovis.
Placeworks. (2014). General Plan, City of Clovis. Clovis.
Department of Water Resources. (2003). Bulletin 118 - California's Groundwater. Sacramento.
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L.3 - Water Infrastructure Investigation

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MEMORANDUM

To:	Chris Kelly, PE City of Clovis
From:	Nicholas Jacobson, PE
Subject:	Water Infrastructure Investigation for Vista Ranch Master Plan and Non-Development Areas
Date:	September 26, 2025

Provost and Pritchard Consulting Group ("P&P") has prepared this memorandum summarizing the findings of our investigation into the water system infrastructure required to serve a proposed project which is bounded, in general, by Shepherd Avenue (to the south), Behymer Avenue (to the north), Sunnyside Avenue (to the west), DeWolf Avenue (to the east), and the Big Dry Creek Reservoir.

Project Information

It is our understanding that the City of Clovis (City) is contemplating a Sphere of Influence (SOI) expansion including portions of both the Northeast Triangle and the Northern Rural villages, including two distinct components (Project):

- A proposed master planned community, Vista Ranch, including approximately 507-acres with a variety of land uses such as mixed-use, residential, schools, and public facilities.
    - The anticipated number of single-family dwelling units is 3,286.
    - The development is mostly within the Northeast Triangle, but all portions west of Armstrong Avenue (alignment) are within the Northern Rural village.
    - The development timeline for the Project spans from 2025 through 2035.
- The additional non-development areas to be included in the SOI expansion include lands north and west of the Vista Ranch proposed development, totaling approximately 445-acres with existing land uses including 387-acres of rural residential and 58-acres of agricultural.
    - There is no timeline associated with this area, but it is assumed it will be developed or otherwise incorporated into the City's water system after the Vista Ranch community.

The Project is located between Sunnyside and Fowler Avenues, Shepherd and Behymer Avenues, and the Big Dry Creek Reservoir. This area is within the City's water system Pressure Zone No. 2 (PZ2) and outside the Fresno Irrigation District (FID) boundary, which means the Project would access to a portion of the City's surface water supplies, including the supplies documented in the *2019 Firm Surface Water Supply and Purchase Agreement* as discussed in the Water Supply Assessment (Provost & Pritchard Consulting Group, August 2025). Overall water supply will be provided from the City of Clovis municipal system.

The Project area was included in the 2020 Urban Water Management Plan (UWMP), however a portion of the previously mentioned, "Additional Areas" were not included (approximately 58 acres) in the UWMP. As discussed in the revised WSA (Provost & Pritchard, July 2025), no demand has been assigned to this 58-acre area. In addition, the Northeast Triangle village was included in the City's 2018 Water Master Plan Update, Phase III (WMP) but the Northern Rural village was not. Additionally, the proposed layout of the streets (where water mains would be located) within Vista Ranch differs from the assumed layout of water mains in the WMP. As a

result, it is necessary to evaluate the existing infrastructure and alternatives for construction of transmission mains to provide sufficient supply (including pressure and velocity evaluations) to the Project without compromising the City's ability to provide water supply to existing customers.

Assumptions

The following assumptions apply to this investigation and are separated by phase:

Phase 1

- The City requires a minimum of two points of connection to the existing water system.
- The developer is responsible for sizing all water mains and other water related infrastructure internal to the Project and subject to City review and approval.
- The Clovis Fire Department (CFD) requires a minimum fire flow of 1,800 gallons per minute (gpm) and a minimum residual pressure of 35 pounds per square inch (psi), per CFD Standard #2.3.
- Existing infrastructure sizes based on GIS data from the City (see Figure 1).
- Recycled water may be applied to public landscaping surrounding the Project.
- Infrastructure internal to and along frontages of tract maps (TMs) 6200, 6205, and 6343 will be constructed prior to development of the Project.
- WMP capital improvement project pipelines, P-3 (Sunnyside Ave. from Shepherd Ave. to Teague Ave.), P-4 (Sunnyside Ave. from Teague Ave. to Nees Ave.), will be constructed prior to development of the Project.
- Existing and proposed Water system demands will be based on unit demand from the *Water Master Plan Update Phase III - Facilities Plan* (Provost & Pritchard, 2018).
- The analysis will reflect the demands associated with existing developments in the area based on actual land use; undeveloped areas are modeled utilizing land use designations specified in the General Plan. Proposed demands will be modeled using the above referenced land use designations rather than those shown in the General Plan. In addition, it is assumed that TMs 6200, 6205, and 6343 will be built prior to the Project, therefore, the analysis also reflects the demands associated with TMs 6200, 6205, and 6343.
- Perrin Road, west of Fowler Avenue, is not anticipated to be continuous, therefore a water main has not been assumed to be constructed in that portion of the alignment.
- Phase 1 is understood to include the areas related to the Project that are south of the existing Fresno Metropolitan Flood Control District (FMFCD) spillway that runs through the Project area. The analysis assumed the transmission grid main infrastructure shown as existing and future (See Figures 2, 3, and 4) are under construction and are assumed to be operational for the purposes of this modeling effort.
- The system is operating with all valves open.
- For planning purposes, system velocities should not exceed 10 feet per second (fps).
- For this study it is assumed that the first phase of the T-9 site is constructed, including 3.5 million gallons of water storage and associated booster pump capacity.

Phase 2:

All assumptions stated previously for Phase 1 apply to Phase 2. Assumptions unique to Phase 2 include:

- WMP capital improvement project pipeline, P-19 (Behymer Ave. from Baron Ave. to Sunnyside Ave.) will be constructed prior to development of the Project.
- Phase 2 is understood to include the areas related to the Project that are north of the existing Fresno Metropolitan Flood Control District (FMFCD) spillway that runs through the Project area. The analysis assumed the transmission grid main infrastructure shown as existing and future (See Figures 5, 6, and 7) are under construction and are assumed to be operational for the purposes of this modeling effort. Phase 2 would also include the internal Project infrastructure included with Phase 1 as shown in Figures 2, 3, and 4).

Phase 2 With Non-Development Areas

All assumptions stated previously for Phases 1 and 2 apply to “Phase 2 with Non-Development Areas”. Assumptions unique to “Phase 2 with Non-Development Areas" are stated below:

- Phase 2 was further analyzed to include non-development areas adjacent to the Project that have existing land uses that include rural residential and agricultural. The City does not plan to change those land uses, at this time. Figures 8, 9, and 10 show the hydraulic impacts of adding the demands associated with these land uses to the area.
- The City does not serve agriculture areas and were not added to the model.
- No layout information was available for the non-development areas included in the analyses summarized in Figures 8, 9, and 10. Rather than make assumptions for infrastructure alignments to serve the non-development areas, demands associated with the non-development areas were inputted into the model at junctions located in the most northerly area closest to where the development is planned to occur.
- The non-development area with an associated land use of agriculture does not have a demand applied, as the City does not provide water supplies to agriculture areas.

This investigation will include analysis of whether the existing (or soon to be existing) water system, as described above and shown on the attached figures, will be sufficient to provide up to Maximum Day Demand (MDD) and also meet MDD+FF demands per the WMP requirements with the City’s Surface Water Treatment Plant (SWTP) in operation.

Water Demand

Potable water demands for the Project were estimated using land-use-based unit water demand factors from the WMP. Land use throughout the project area and non-development areas included in this study vary and include those listed in Table 1.

A separate water supply assessment (WSA) was prepared by P&P. The WSA estimated water demands for the Project. For consistency, the demand estimates stated in the WSA were used for this analysis. For specifics surrounding Project water demands refer to **Table 1** below.

Infrastructure

The Project is comprised of numerous parcels that are currently being utilized in several ways including: fallow land, commercial landscaping, agricultural land, and residential. Because of the limited existing backbone infrastructure in the area, this development will depend on the existing infrastructure in Shepherd Avenue being operational to connect proposed infrastructure.

There is an existing 16-inch transmission main in Shepherd Avenue that fronts the entire Project from Fowler Avenue to DeWolf Avenue. South of Shepherd Avenue there are several mains that bring water to the Project area. There are existing 16-inch transmission mains in both Armstrong and Temperance Avenues and 12-inch distribution mains in Fowler and Locan Avenues.

Water Supply

Urbanization within Clovis occurs both inside and outside the Kings River service area for Fresno Irrigation District (FID), therefore not all lands have access to this water source. Lands generally located south and west of the Enterprise Canal are within the Kings River service area and as such are entitled to an average annual allotment of approximately 2.24 acre-feet per acre (AF/ac). The Project lies outside of the Kings River service area for FID. The City adopted an ordinance requiring new development with demands exceeding the allotment to pay fees, so the City can acquire additional water supply to serve the development. The Project will need to pay for supplies for demands over and above the FID available supply for the Project area within FID and for all demands for the Project area outside FID, as shown below. Table 1 summarizes the additional supply required to serve the Project

area. For additional details on water supply for the Project, refer to the WSA (Provost & Pritchard, July 2025) prepared for the Project.

Evaluation

The City has requested an investigation, utilizing the current City hydraulic model, to determine whether the proposed infrastructure in the vicinity of the Project (Figure 1) will provide adequate service during MDD and MDD+FF for several infrastructure scenarios including:

- Phase 1: analysis of the infrastructure required to deliver both MDD and MDD+FF for the Project area south of the existing FMFCD spillway
- Phase 2: analysis of the infrastructure required to deliver both MDD and MDD+FF for the Phase 1 area and the Project area north of the existing FMFCD spillway
- Phase 2 With Non-Development Areas: analysis of Phases 1 and 2 along with the adjacent non-development areas

As shown on Figure 1, infrastructure associated with Vista Ranch included the backbone infrastructure only. The analysis does not include the water mains internal to the individual neighborhood developments that will comprise Vista Ranch.

Table 1. Reconciliation of Surface Water Supply and Demand

Land Use Category	Area (ac)	Land Use Demand Factor (AFY/ac)	Annual Average Demand (AFY)	FID Entitlement (AFY)	Additional Supply Required (AFY)
Vista Ranch Master Plan					
Low Density Residential	34.2	2.5	85.5	0	(85.5)
Medium Density Residential	217.8	2.2	479.2	0	(479.2)
Medium-High Density Residential	89.3	3.3	294.7	0	(294.7)
Very High Density Residential	15.7	7.3	114.6	0	(114.6)
Mixed Use – Village	3.1	5	15.5	0	(15.5)
Neighborhood Commercial	12.7	2.9	36.8	0	(36.8)
Industrial (Mini Storage)	32.2	--	0.4	0	(0.4)
Open (No water use)	28.3	0	0.0	0	0.0
Park	30.4	3	91.2	0	(91.2)
School	19.3	2.8	54.0	0	(54.0)
Road (No water use)	24.4	0	0.0	0	0.0
Non-Development Areas					
Rural Residential	386.9	0.7	270.8	0	(270.8)
Agriculture (No Water Demand)	57.7	0	0	0	0.0
Proposed Total	**952.0**		**1442.7**	**0**	**(1442.7)**

Maximum Day Demand Analyses

Phase 1

The hydraulic model analysis results indicate no pressure deficiencies internal to the Project. Minimum pressures during the MDD scenario are all above 40 psi. Pressures system wide are above 40 psi throughout the distribution system. Figure 2 summarizes the model results during the MDD analysis for Phase 1.

Phase 2

The hydraulic model analysis results indicate no pressure deficiencies internal to the Project. Minimum pressures during the MDD scenario are all above 40 psi. Pressures system wide are above 40 psi throughout the distribution system. Figure 5 summarizes the model results during the MDD analysis for Phase 2.

Phase 2 Plus Non-Development Areas

The hydraulic model analysis results indicate no pressure deficiencies internal to the Project. Minimum pressures during the MDD scenario are all above 40 psi. Pressures system wide are above 40 psi throughout the distribution system. Figure 8 summarizes the model results during the MDD analysis for Phase 3.

Maximum Day Demand Plus Fire Flow Analyses

Phase 1

The minimum pressure required during fire flow conditions (1,800 gpm) is 35 psi with a maximum velocity of 10 fps. The MDD+FF hydraulic model analysis results show residual pressures internal to the Project range from approximately 49 psi to approximately 56 psi (see Figure 3) assuming a mix of 8", 12", and 16" distribution mains. Available fire flow at the hydrants internal to the Project exceed 1,800 gpm while maintaining at least 35 psi. Figure 4 shows the recommended minimum infrastructure to support Phase 1 of the Project.

Phase 2

The minimum pressure required during fire flow conditions (1,800 gpm) is 35 psi with a maximum velocity of 10 fps. The MDD+FF hydraulic model analysis results show residual pressures internal to the Project range from approximately 52 psi to approximately 58 psi (see Figure 6) gpm assuming a mix of 8-inch, 12-inch, and 16-inch distribution mains (similar to what was planned for the area in the WMP). Available fire flow at the hydrants internal to the Project exceed 1,800 gpm while maintaining at least 35 psi.

Phase 2 Plus Non-Development Areas

The minimum pressure required during fire flow conditions (1,800 gpm) is 35 psi with a maximum velocity of 10 fps. The MDD+FF hydraulic model analysis results show residual pressures internal to the Project range from approximately 52 psi to approximately 57 psi (see Figure 9) assuming a mix of 8-inch, 12-inch, and 16-inch distribution mains (similar to what was planned for the area in the WMP). Available fire flow at the hydrants internal to the Project exceed 1,800 gpm while maintaining at least 35 psi.

Conclusion

Based on information collected during this investigation and the City's adherence to recommendations from prior water supply planning efforts, the existing and planned water distribution system and recommended connections should be adequate to convey water supply to the Project to support anticipated demands from the Project. The modeling analysis indicates that the infrastructure needs for the Project vary by phase. Phase 1 of the Project may proceed with the existing infrastructure and the planned infrastructure as shown in Figure 4 and include:

- 16-inch main internal to the Project in the Phase 1 area
- 12-inch and 8-inch looped mains internal to the Project in the Phase 1 area

If Phase 1 of the Project goes into construction prior to pipelines P-3 and P-4 (Sunnyside Ave from Shepherd Ave to Teague Ave, and from Teague Ave to Nees Ave, respectively) being operational, the City will need to take action to ensure those pipelines are built and operational to avoid potential reliability issues in Zone 2.

Phase 2 of the Project would require the infrastructure shown in Phase 1 along with additional infrastructure shown in Figure 7 and would include:

- Infrastructure listed above as part of Phase 1
- P-19 (Behymer Ave from Baron Ave to Sunnyside Ave)
- Continuation of the 16-inch main north to Behymer.
- 8-inch and 12-inch mains internal to the project.
- 16-inch distribution main in Behymer from east end of P-19 to northwest portion of Phase 2 of the Project

Infrastructure needs associated with Phase 2 and the non-development areas would be the same as for Phase 2 (See Figure 10).

Additionally, a portion of the area of this study was not included in the WMP; however, it is understood, if it was, master planned water mains along the major road would have been included in the WMP and it is recommended water mains in major roads, along the Project's frontage be conditioned for construction with this Project. It is also understood construction of water mains along Fowler Avenue between Shepherd and Perrin Avenues and in Perrin Ave between Fowler Avenue and Vista Ranch may be delayed due to the existing development along those alignments.

Serving this Project should not negatively impact the City's ability to provide a supply and delivery of water to reasonably foreseeable users within the City, assuming adherence to recommendations from prior water resources planning efforts. However, to understand the cumulative impacts to supplies and other major water infrastructure, the City should be tracking changes in demand as part of the development process in order to determine when projects with greater demand are offset by projects with demands lower than originally planned.

Enclosures:

- *Figure 1 – Existing Infrastructure*
- *Figure 2 – Vista Ranch Phase 1: Maximum Day Demand*
- *Figure 3 – Vista Ranch Phase 1: Maximum Day Demand Plus Fire Flow*
- *Figure 4 – Vista Ranch Phase 1: Recommended Master Plan Improvements*
- *Figure 5 – Vista Ranch Phase 2: Maximum Day Demand*
- *Figure 6 – Vista Ranch Phase 2: Maximum Day Demand Plus Fire Flow*
- *Figure 7 – Vista Ranch Phase 2: Recommended Master Plan Improvements*
- *Figure 8 – Vista Ranch Phase 2: With Non-Development Areas Maximum Day Demand*
- *Figure 9 – Vista Ranch Phase 2: With Non-Development Areas Maximum Day Demand Plus Fire Flow*
- *Figure 10 – Vista Ranch Phase 2: With Non-Development Areas Recommended Master Plan Improvements*

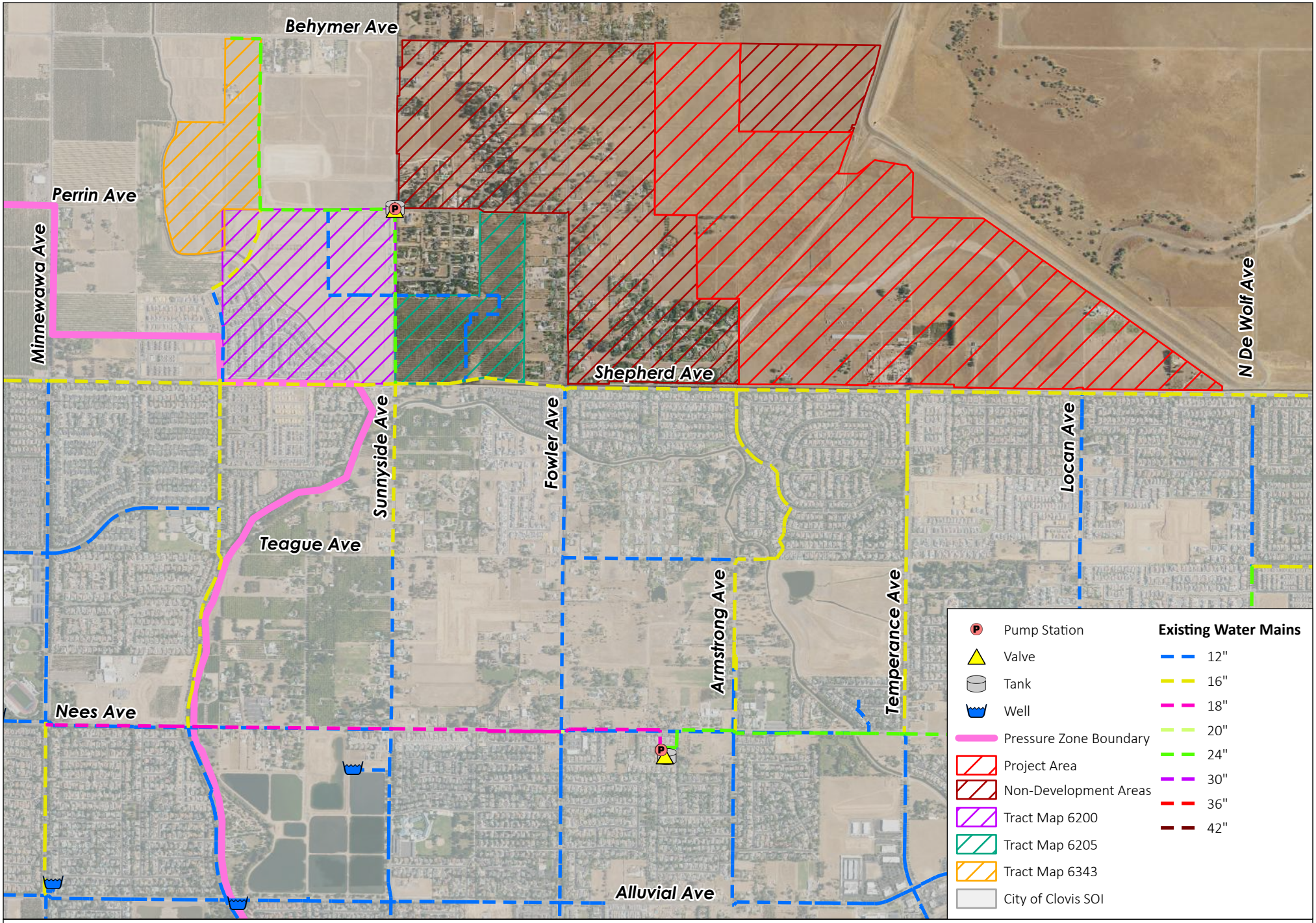


Figure 1: Existing Infrastructure

Vista Ranch Master Plan

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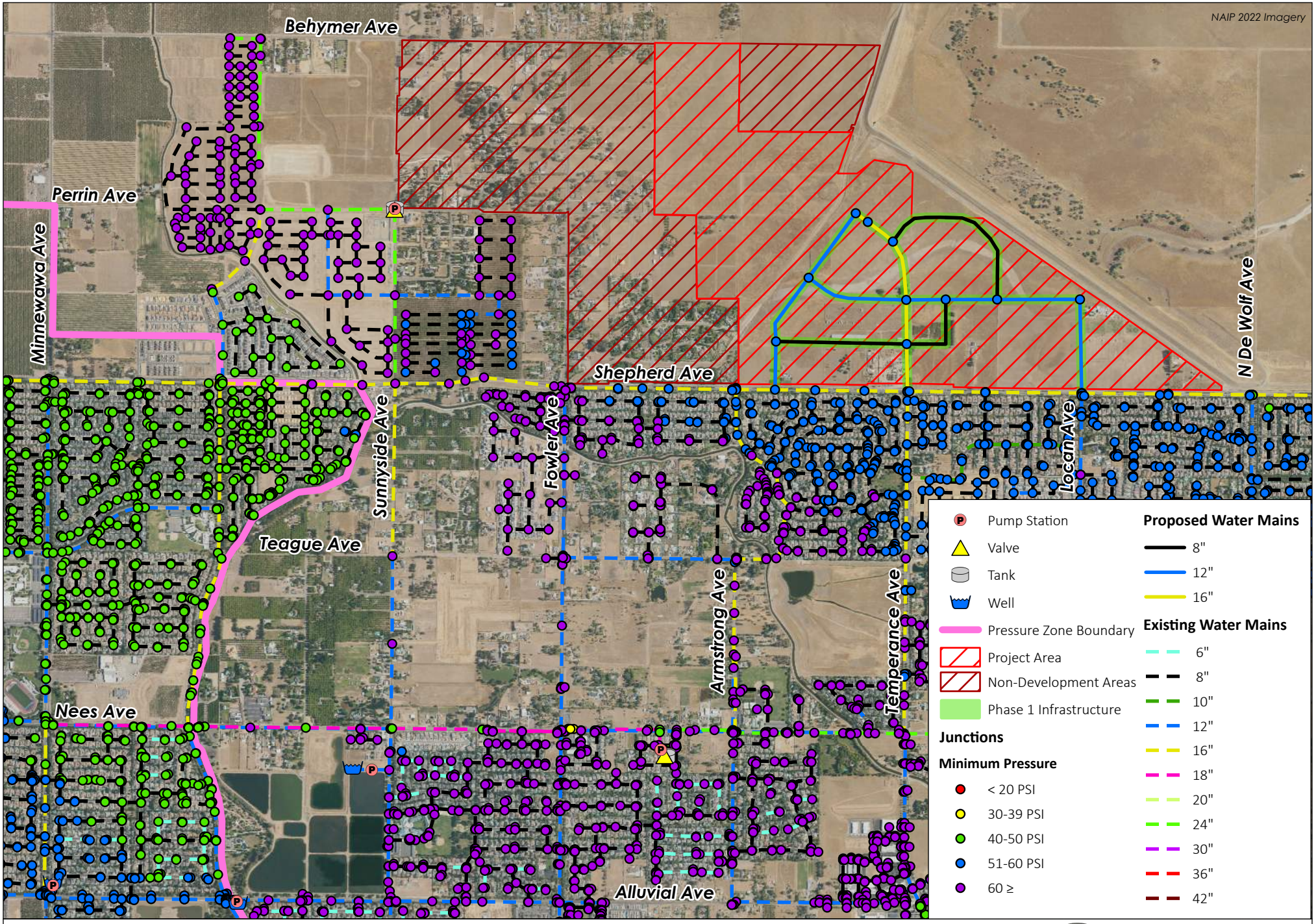


Figure 2: Phase 1 Maximum Day Demand

Vista Ranch Master Plan

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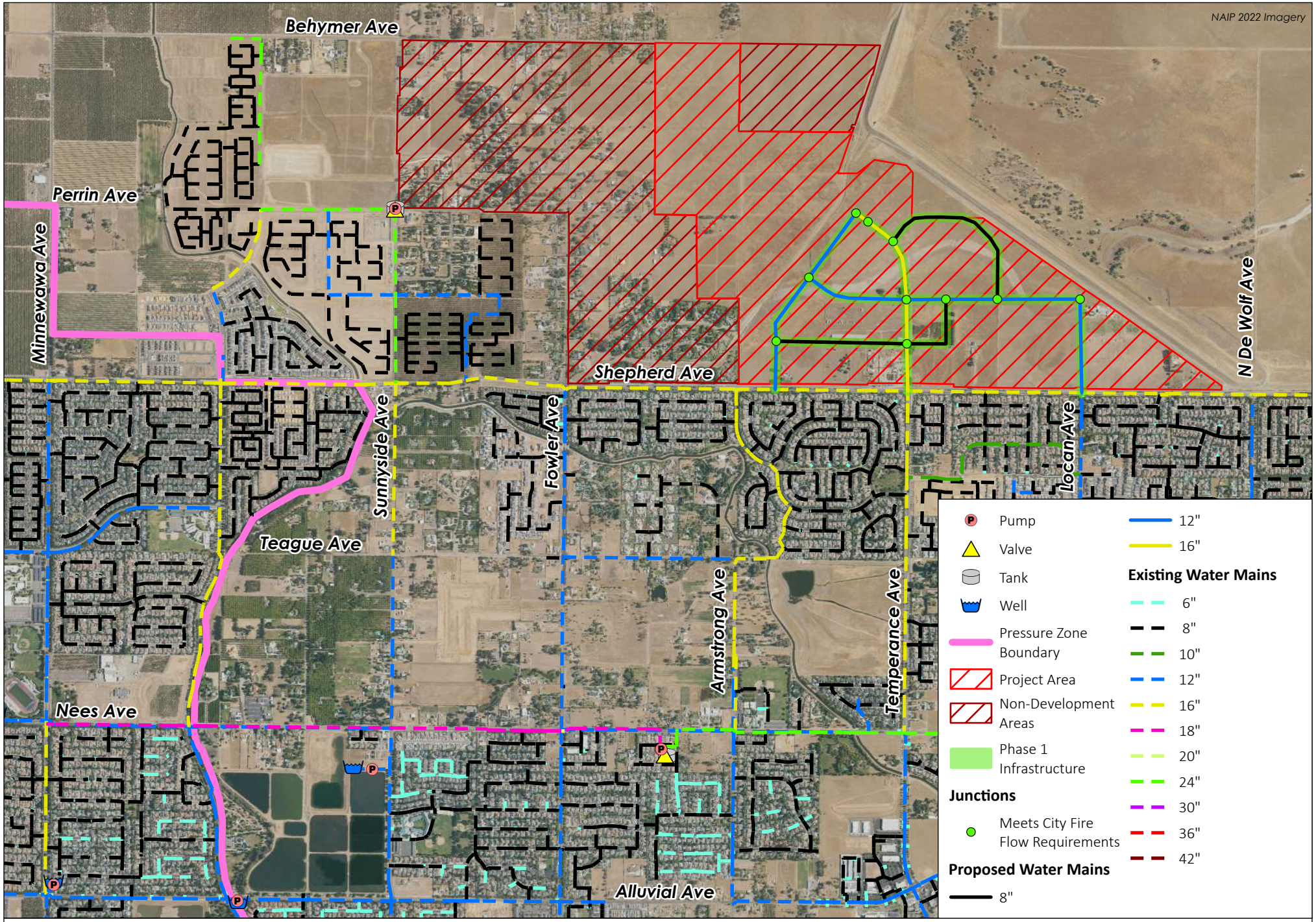


Figure 3: Phase 1 Maximum Day Demand Plus Fire Flow

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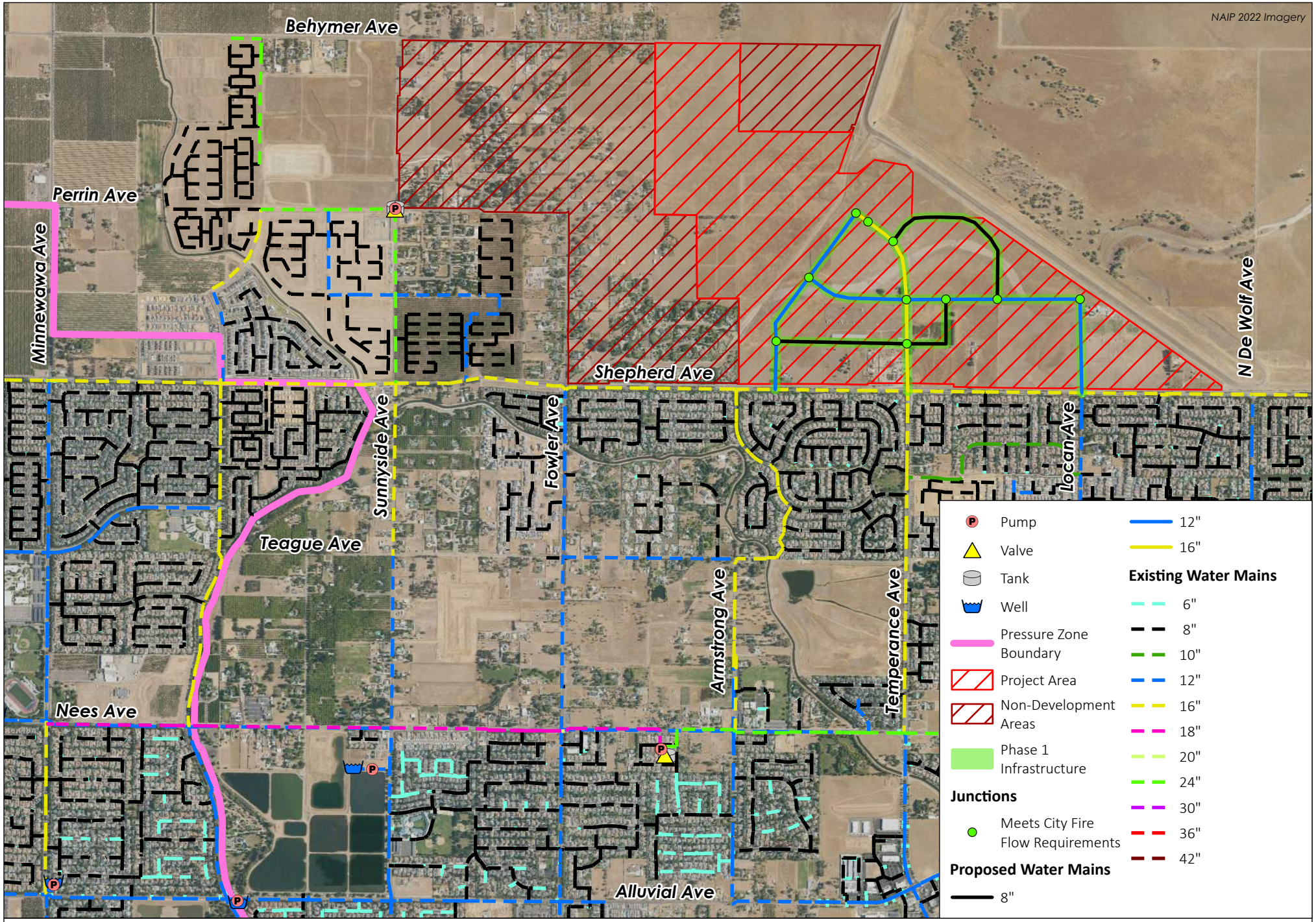


Figure 4: Phase 1 Recommended Master Plan Improvements

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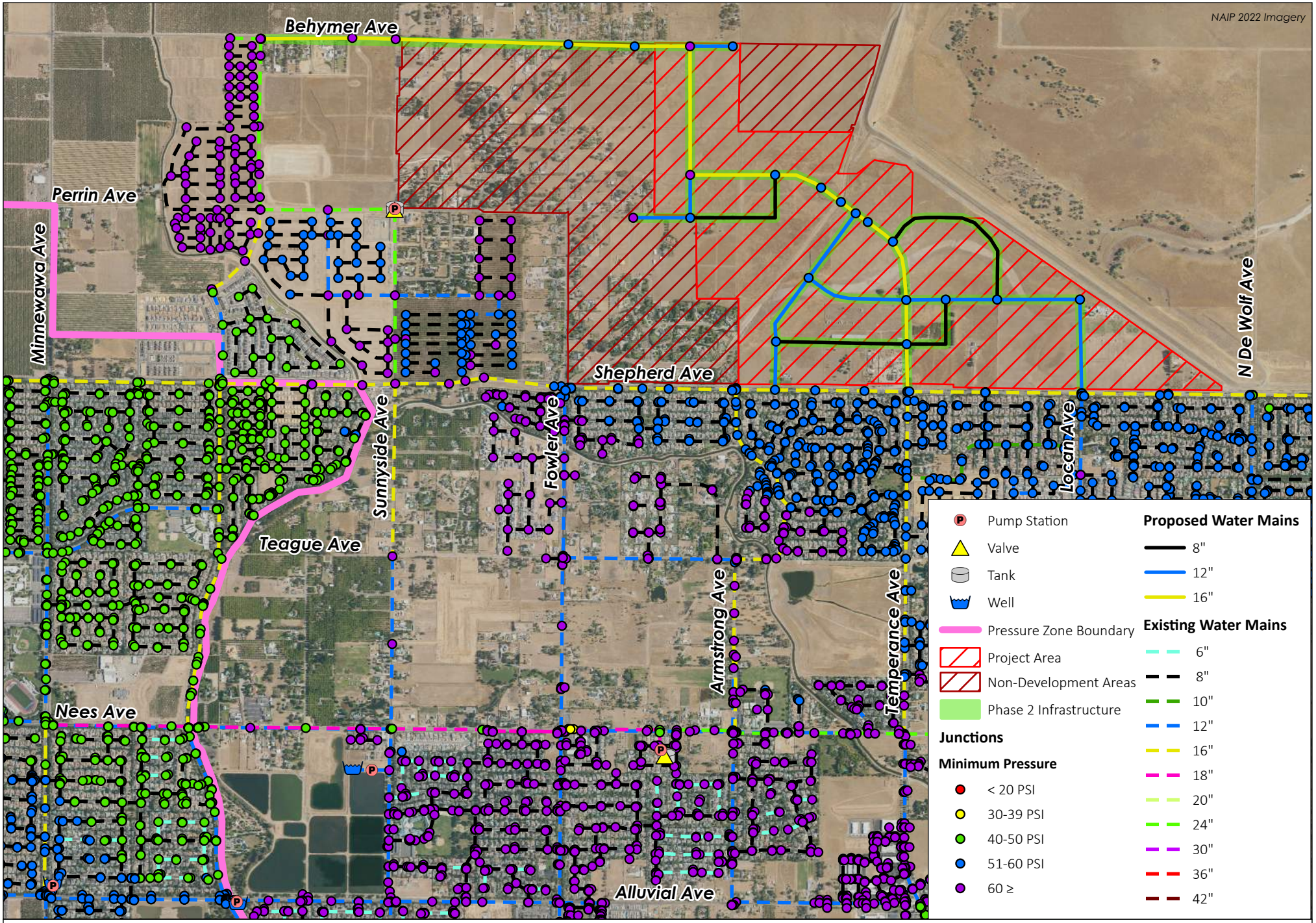


Figure 5: Phase 2 Maximum Day Demand

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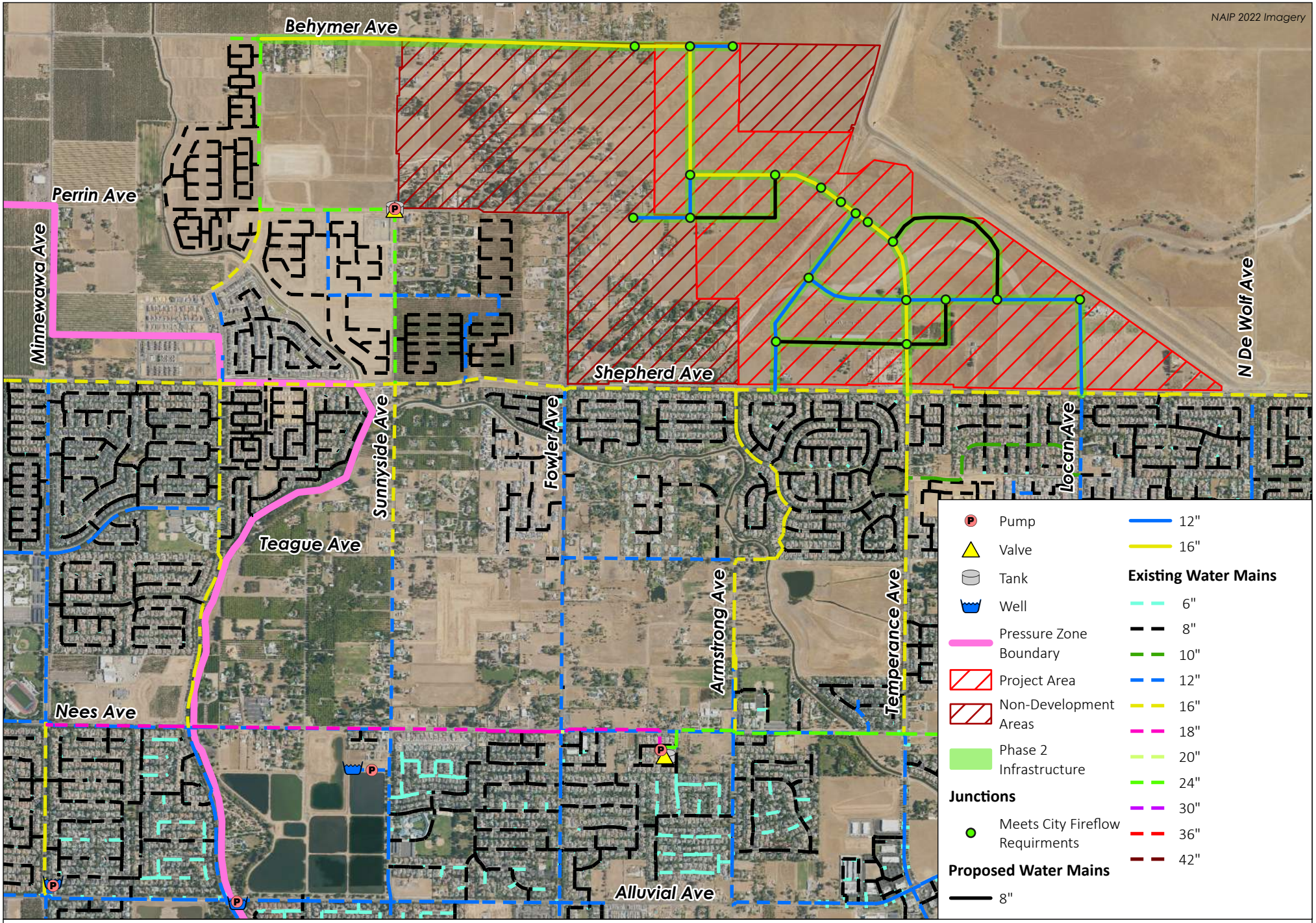


Figure 6: Phase 2 Maximum Day Demand Plus Fire Flow

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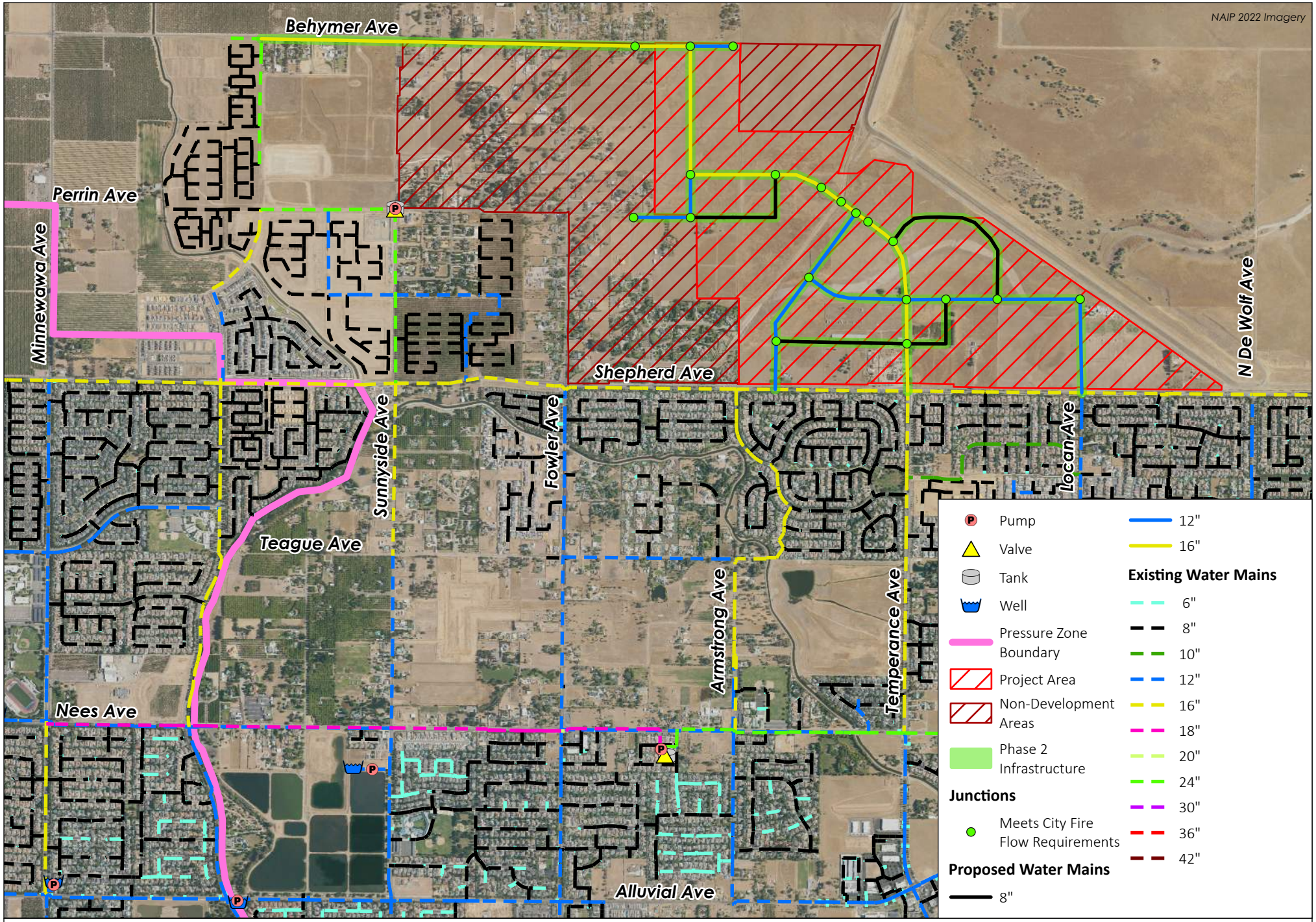


Figure 7: Phase 2 Recommended Master Plan Improvements

Vista Ranch Master Plan

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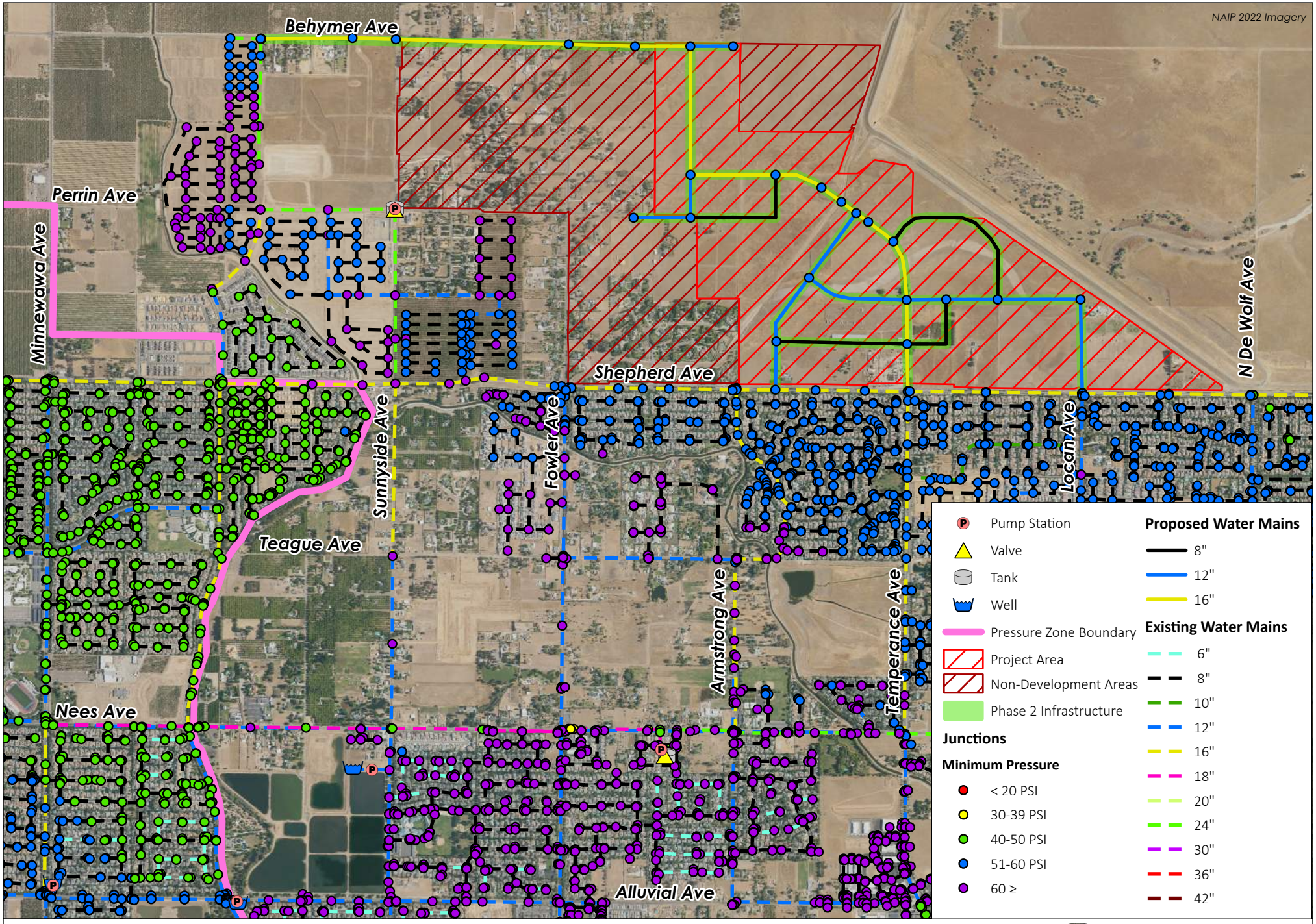


Figure 8: Phase 2 With Non-Development Areas Maximum Day Demand

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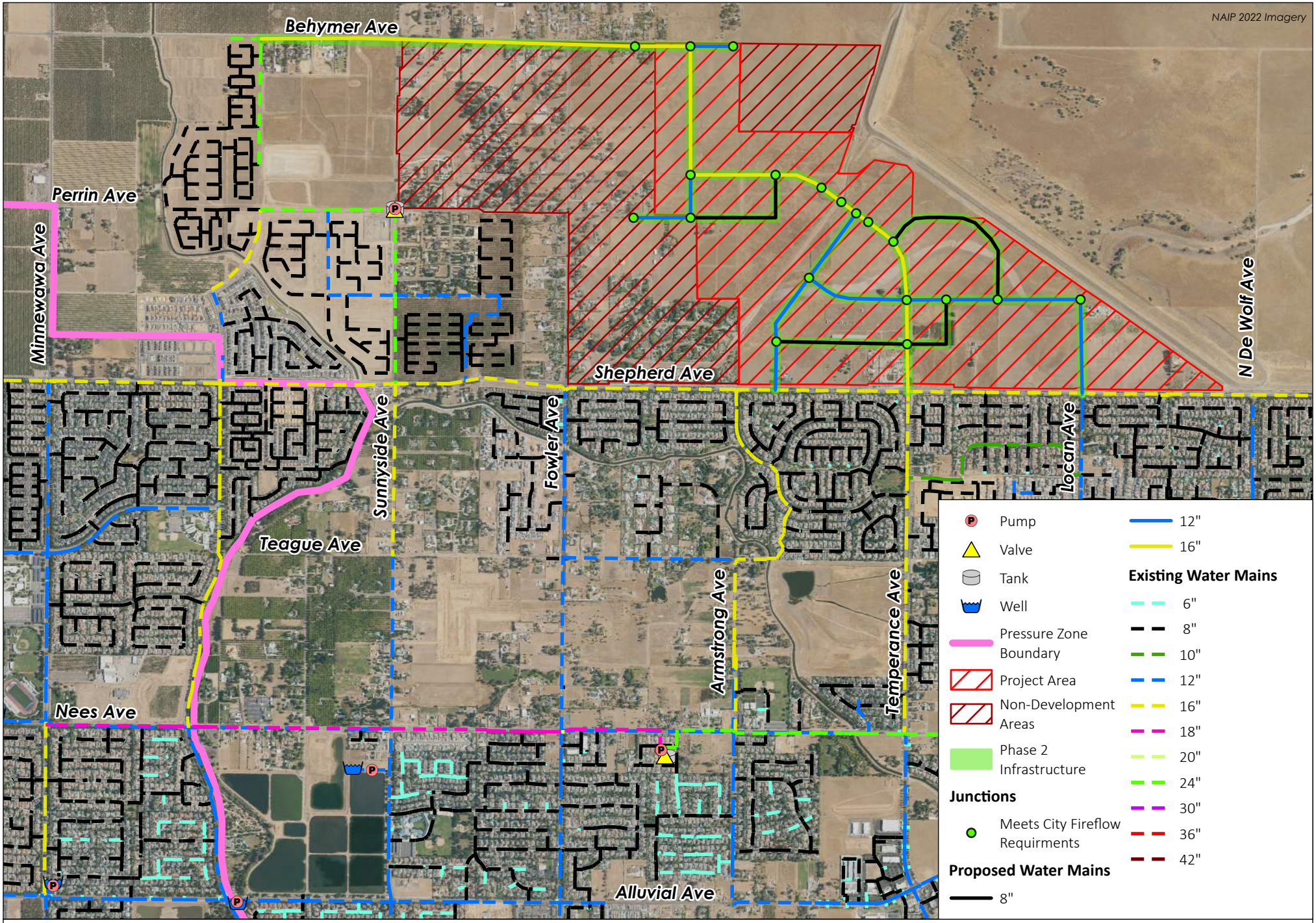


Figure 9: Phase 2 With Non-Development Areas Maximum Day Plus Fire Flow

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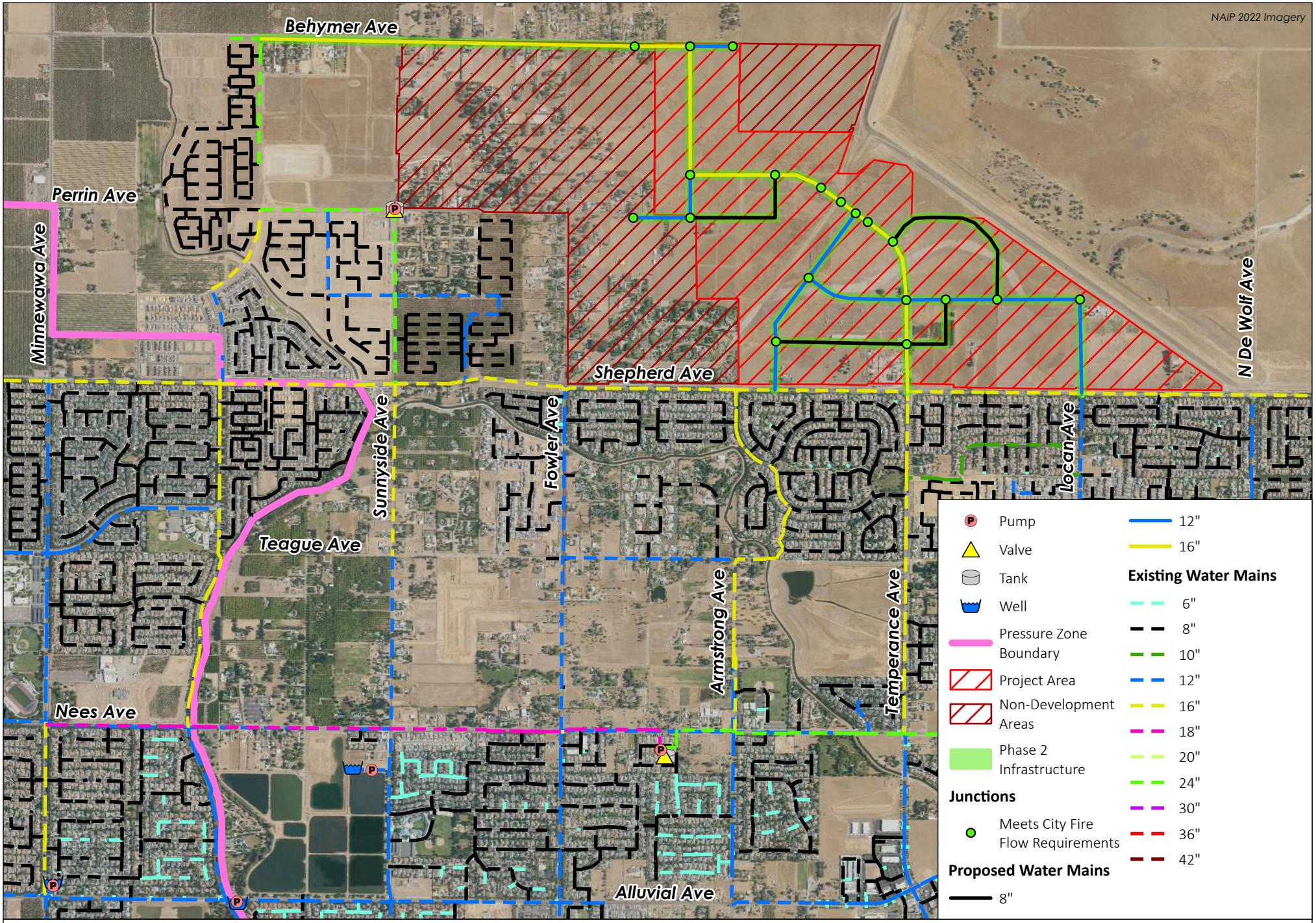


Figure 10: Phase 2 With Non-Development Areas
Recommended Master Plan Improvements
Vista Ranch Master Plan

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