ENVIRONMENTAL CAP AND DRAINAGE SYSTEM INSPECTION REPORT

FORMER CASCADE TIMBER NO. 3 LOG SORT YARD

Prepared for

PORT OF TACOMA

ONE SITCUM PLAZA
TACOMA, WA 98421

June 17, 2022
Project No. M0615.17.002

For submittal to

WASHINGTON STATE DEPARTMENT OF ECOLOGY

SOUTHWEST REGIONAL OFFICE
TOXICS CLEANUP PROGRAM
300 DESMOND DRIVE SE
LACEY, WA 98503

Consent Decree No. 94-2-03590-3 (April 11, 1994)
Washington State Department of Ecology Facility Site ID # 1206
Inspection Dates: February 27, 2022

MAUL FOSTER ALONGI

Prepared by
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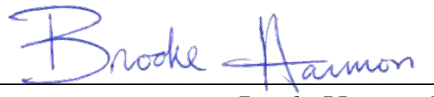
ENVIRONMENTAL CAP AND DRAINAGE SYSTEM INSPECTION REPORT

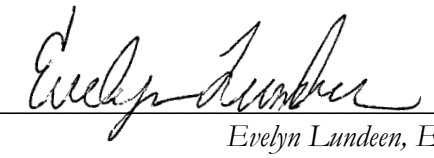
FORMER CASCADE TIMBER NO. 3 LOGSORT YARD

The material and data in this report were prepared under the supervision and direction of the undersigned.

MAUL FOSTER & ALONGI, INC.



Brooke Harmon, PE
Project Engineer



Evelyn Lundeen, EIT
Staff Engineer

CERTIFICATION

I hereby certify that I am familiar with the facilities addressed in this report and that the inspection was conducted in accordance with acceptable engineering practices.

This digital seal certifies the signatory and document content.

06-17-2022

Brooke Harmon, PE
Project Engineer

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FIGURES AND TABLES

FOLLOWING REPORT:

FIGURES

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ACRONYMS AND ABBREVIATIONS

Cascade Timber	former Cascade Timber No. 3 log sort yard
CD	consent decree
Ecology	Washington State Department of Ecology
Husky	Husky Terminal and Stevedoring, LLC
ID	identification
MFA	Maul Foster & Alongi, Inc.
MOU	memorandum of understanding
O&M	operations and maintenance
Port	Port of Tacoma
WUT	Washington United Terminals

1 INTRODUCTION

This report summarizes the field activities and results for the environmental cap and stormwater drainage system inspection conducted on behalf of the Port of Tacoma (Port) for the former Cascade Timber No. 3 log sort yard (Cascade Timber). Cascade Timber is located southwest of the Blair Waterway in Tacoma, Washington bordered by Thorne Road and Maxwell Way (the Site) (Figure 1). The facility is owned by the Port and leased by Washington United Terminals (WUT) and Husky Terminal and Stevedoring, LLC (Husky) as a truck queue area. The ground surface at Cascade Timber is covered by an environmental cap and has several stormwater drainage features, further described in this report.

Inspection activities were conducted in accordance with the requirements identified in Consent Decree (CD) No. 92-2-03590-3 issued by the Washington State Department of Ecology (Ecology) to the Port (Washington Superior Court, 1994) and the operations and maintenance plan contained in the final engineering and design report (HLA, 1994). A memorandum of understanding between Ecology and the Port, updating the cap inspection frequency to every 30 months starting with an inspection in February 2012, was issued on September 12, 2011 (Ecology and Port of Tacoma, 2011).

1.1 Purpose and Scope

The purpose of this report is to present the findings of the 2022 environmental cap and stormwater drainage system inspection at Cascade Timber. The purpose of the environmental cap is to prevent surface water infiltration, exposure of humans and the environment to underlying materials, and erosion. The stormwater drainage system is used to convey stormwater off the cap surfaces to prevent infiltration and erosion.

Maul Foster & Alongi, Inc. (MFA), performed the inspection on February 27, 2022, which included the following tasks:

- Inspection of the asphalt/concrete pavement for the presence of cracks or other failures in the pavement that allow surface water runoff to infiltrate the bark/slag surficial fill (e.g., cracks greater than 1/8 in. wide, sub-base material exposed, pavement edge deterioration, and general appearance).
- Evaluation of the structural and functional condition of the cap and drainage systems (including catch basins, maintenance holes, oil/water separators, and spill containment vessels).
- Evaluation of debris/sediment accumulation in the stormwater structures (if visible).

The inspection observations are presented in this report.

1.2 Facility Background

Cascade Timber Site encompasses approximately 10.7 acres of a larger property located southwest of the Blair Waterway. Cascade Timber operated its property as a log sort yard from 1967 to 1987 (Ecology, 2017). In 1982, approximately 500 tons of ASARCO slag were placed on-Site as ballast material. In the 1989 Record of Decision for the Commencement Bay Nearshore/Tideflats Superfund site, the Site was identified as a source of arsenic, copper, lead, and zinc to Sitcum Waterway. The property is operated by WUT and ITS Husky as a truck queue area. Trucks drive through the property over a set of truck scales before driving over to shipping yard.

In 1991, Ecology issued an Agreed Order (No. DE 91-S199) for a remedial investigation/feasibility study to evaluate metals associated with ASARCO slag at Cascade Timber and their extent in the soils, groundwater and surface water (stormwater runoff) on and adjacent to Cascade Timber (Ecology, 2017). A remedial investigation and feasibility study report was submitted to Ecology in June 1993 and an engineering design report was submitted to Ecology in 1994 by Harding Lawson Associates (HLA) (HLA, 1993; HLA, 1994). In 1993, a cleanup action plan was completed for Cascade Timber; the plan was included in the property's consent decree. Remedial activities, including the installation of a low-permeability asphalt cap, stormwater drainage system, and groundwater monitoring wells, were conducted in 1994.

Groundwater monitoring has been conducted at the Site since 1994 to monitor the effectiveness of the remedial action. Groundwater quality is monitored every 18 months (Ecology, 2011). The last groundwater monitoring event was conducted in February 2022 (described in a separate report [MFA, 2022]).

The Port is required to conduct environmental cap and drainage system inspections (inspections) every 30 months (Ecology, 2011). The last inspection was performed in August 2019 (Windward, 2019). During the 2019 inspection, portions of pavement and curbs were recommended for repair. The environmental cap was temporarily penetrated in 2020 during the installation of the new gate and utilities at the Site. The construction activities were approved by Ecology on December 30, 2019, and the cap was restored to its original condition after completion of the construction in 2020. A memorandum authored by the Port and summarizing the utility construction elements, soil management and disposal activities, cap restoration components, and asphalt permeability testing results is included as the appendix to this report.

2 FIELD OBSERVATIONS

MFA performed the 2022 inspection at Cascade Timber on February 27, 2022, making use of the previous inspection results and information regarding maintenance work provided by the Port (see the appendix). The inspection was led by a Washington State licensed professional engineer.

2.1 Environmental Cap

Inspectors were able to observe all paved surfaces within the environmental cap. The location of facility features and the Cascade Timber Site boundary are shown in Figure 2. Photographs depicting cap issues are provided in Table 1.

The cap was generally in good condition with minor asphalt damage observed across the cap. Several unsealed cracks wider than 1/8 inch were observed to run parallel with the drive lanes on the cap. Gouges ranging from 1-3 feet long were observed across the Site; these were generally only 1 inch deep. Deeper tire ruts were observed across the drive lanes located in the new gate areas.

Several areas of the asphalt curb were damaged or cracking along the pavement edge. Pavement edge erosion was observed behind the curb in several areas of the cap. Asphalt debris in areas with pavement edge erosion was observed sliding down the slopes at the edge of the cap. The subgrade material in one area was eroding from underneath the pavement edge.

Pavement repairs were completed in 2020 and are summarized in Section 3 and the appendix. Pavement repairs observed during the 2022 inspection are presented in Figure 3 and described in Table 2. Photographs of the observed repairs are provided in the appendix that follows this report.

The table below provides a summary of the cap conditions observed during the 2022 inspection; observations, photographs, and recommended actions keyed to specific locations are presented in Table 1 following this report.

Environmental Cap Conditions and Recommended Actions

Required Inspection Element	Observed Condition	Recommended Action
Presence of cracks wider than 1/8 inch	Cracks wider than 1/8 inch were observed across the cap.	Repair pavement as shown in Figure 2 and described in Table 1.
Pavement edge deterioration	Several areas of pavement edge determination were observed.	Locations of pavement edge deterioration are shown in Figure 2 and described in Table 1.
Sub-base material exposed	Sub-base material was potentially exposed in one area of pavement edge erosion.	Stabilize slope as described in Table 1.
Degradation, subsidence, general appearance	Limited degradation and deterioration were observed in asphalt surface.	Locations of pavement deterioration are shown in Figure 2 and described in Table 1.

2.2 Stormwater Drainage System

The Cascade Timber stormwater drainage system consists of six catch basins, one spill containment vessel, one oil/water separator,[1] and one maintenance hole. In 2022, each drainage system component was inspected for general appearance, sediment and debris accumulation (as visible), and structural and functional condition. Inspectors were unable to inspect maintenance hole WMH, as it was located

[1] The spill containment vessel and oil/water separator have two maintenance covers/vaults. In Figure 2 and Table 1, spill containment vaults are shown as SV1 and SV2; oil/water separator vaults are shown as OWS1 and OWS2.

within a secured fenced area that could not be unlocked. Stormwater features OWS1, OWS2, SV1, and SV2 were partially inspected due to the tight fit of the grates covering the structures. Catch basins CB5 and CB7 were not inspected due to severe deterioration in the catch basin inserts.

Catch basins across the Site appeared to be structurally sound and functioning normally, structures were actively discharging at the time of inspection which prevented visual observations of sediment accumulation as well as observing debris and floatables on the water surface. Table 3 summarizes the observations made at each drainage structure.

3 STATUS AND RECOMMENDATIONS

3.1 Maintenance and Repair Performed Since Previous Inspection

3.1.1 Environmental Cap

The 2019 inspection report (Windward, 2019) recommended the following repairs:

- Repair or monitor damaged curb areas
- Repair pavement in numerous areas of observed deterioration throughout the cap

As described in Section 2.1, Table 2, and the appendix, the following items have been repaired:

- Areas of freshly repaired asphalt were observed across the environmental cap. Repairs included repairs from previous inspection observations, as well as repairs associated with construction within the cap area (see the appendix).
- Two areas curb repairs were observed at C7 and C15

Three areas adjacent to or within repaired pavement had minor cracking or gouging (Table 2) that do not currently affect the integrity of the cap. MFA recommends monitoring these areas during the next inspection cycle (P12, P39, and P46). Overall, the repairs are in good condition.

3.1.2 Stormwater Drainage System

The 2019 inspection report (Windward, 2019) recommended the following repairs/maintenance:

- Remove sediment from catch basin filter inserts or replace damaged filter inserts
- Remove accumulated debris and sediment on the pavement surfaces near catch basins CB5 and CB7
- Remove floatables, debris, and sheen from the oil/water separator
- Restore access to the two lids of the spill containment vessel

- Remove floatables and debris from SV1

Due to the length of time since the previous 2019 cap inspection and the limited access to some stormwater features, inspectors were unable to determine if the proposed maintenance activities had been performed. Some of the above maintenance issues are reoccurring. The stormwater infrastructure at the Property is managed under the Port's municipal stormwater permit, and inspections and maintenance are performed under the requirements of the permit. Section 2.2 and Table 2 described current repair/maintenance items observed during the 2022 inspection.

3.2 Recommendations

3.2.1 Environmental Cap

The following recommendations are based on this 2022 inspection:

- Repair curb damage at locations C11 and C14
- Stabilize slope at location P4 to prevent further undercutting of the pavement cap
- Seal cracks at P10, P17, P18, P27, P28, P29, P30, P31, P32, and P59
- Repair asphalt depressions at P27, P33, P34, P37, and P60
- Monitor gouges and cracks in asphalt at locations P25, P26, P35, P36, and P39

Cracks wider than 1/8 inch observed across the Site are recommended for repair. Multiple curb locations which had damage extending through the vertical profile of the curb are recommended for repairs. Gouges and chipping of asphalt were observed across the cap. These gouges were generally less than 1 inch deep and are recommended for continued monitoring and evaluation during the next inspection cycle and gouges greater than 1 inch deep were recommended for repair. Recommended actions are further described in Table 1.

3.2.2 Stormwater Drainage System

The following recommendations are based on this 2022 inspection:

- Restore access to maintenance hole WMH to facilitate inspection during the next inspection cycle
- Consider replacing filter inserts in all catch basins
- Restore access to spill containment vessel and oil water separator during the next inspection cycle

Required and recommended actions are further described in Table 3.

LIMITATIONS

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Observations in this report are limited to environmental cap areas that were visible to the Windward field team. In some instances, portions of the cap surface may have been covered and not readily available for inspection. Inspection of stormwater structures was limited to observations made from the surface and by means of direct observation, probes (extendible poles to check for sediment), and photography. No confined space entry was performed. Observation of some stormwater structures was also limited by storm flow and/or the presence of damaged or sediment-laden catch basin inserts that could not be safely removed. No guarantee is made that all cap or stormwater deficiencies that could impact cap/drainage system performance were identified.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

REFERENCES

Ecology, Port of Tacoma. 2011. Memorandum of understanding. Former log yard groundwater monitoring and cap inspection. Washington State Department of Ecology and Port of Tacoma.

Ecology. 2017. Second periodic review report final, Cascade Timber 3 POT. Washington Department of Ecology. January.

HLA. 1993. Remedial investigation/feasibility study, Cascade Timber No. 3 Log Sort Yard, Tacoma Washington. March.

HLA. 1994. Engineering design report, remedial action, former Cascade Timber No. 3 Log Sort Yard, Port of Tacoma, Tacoma Washington. Appendix C, Compliance Monitoring Plan. Harding Lawson Associates. April 29.

MFA. 2022. Draft Letter (re: Groundwater Monitoring Report, Former Cascade Timber No. 3 Log Sort Yard Site, Consent Decree No. 94-2-03590-3, Facility Site ID: 1206, Monitoring Date: February 27, 2022) to A. Smith, Washington State Department of Ecology, from C. Wise and J. Lenahansen, Maul Foster & Alongi, Inc., Seattle, Washington. March 17.

Washington Superior Court. 1994. Case No. 94TC-S167. No. 94-2-3590-3 consent decree. Superior Court of the State of Washington for Pierce County, Pierce County.

Windward, Landau. 2019. Port of Tacoma environmental cap inspection report. Former Cascade Timber No. 3 Log Sort Yard. Windward Environmental LLC and Landau Associates, Seattle, WA.

FIGURES

NOTE:
Cascade Timber = Cascade Timber Company.

Source:
U.S. Geological Survey (2021) 7.5-minute topographic quadrangle: Tacoma North;
Township 21 north, range 3 east, section 34;
property boundary obtained from Anchor QEA site plan figure.

Legend

Site Boundary

Figure 1
Site Location

Former Cascade Timber
No. 3 Log Sort Yard Site
Tacoma, Washington

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0 1,000 2,000
Feet

Figure 2
Environmental Cap Observations

Former Cascade Timber
No. 3 Log Sort Yard Site
Tacoma, Washington

Legend

Type

- Catch Basin
- Curb Observation
- Maintenance Hole
- Oil Water Separator
- Pavement Observation
- Spill Containment Vessel
- Site Boundary

NOTE:
Inspection completed on February 27, 2022.
Maintenance hole "WMH" is located in a secured, fenced area that was not accessible to field staff.
Cascade Timber = Cascade Timber Company.

0 100
Feet

Source:
Aerial photograph (2018) obtained from City of Tacoma; tax lot data obtained from Pierce County GIS.

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Figure 3
Environmental Cap Repairs

Former Cascade Timber No. 3 Log Sort Yard Site
Tacoma, Washington

Legend

Field Observations

Type

- Curb Observation
- Pavement Observation
- Site Boundary

NOTES:
Inspection completed on February 27, 2022.
Cascade Timber = Cascade Timber Company.

0 100
Feet

Source:
Aerial photograph (2018) obtained from City of Tacoma; tax lot data obtained from Pierce County GIS.

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TABLES

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

Table 1: Environmental Cap Issues Observed During 2022 Inspection

ID	Type of Structure	Observation	Recommended Actions	Photographs
C9	curb	curb degradation extending approximately 20 lf; damage limited to backside of curb	monitor and reevaluate during next inspection cycle	
C11	curb	curb deterioration extending approximately 4 lf; damage extends through vertical profile	repair curb	

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ID	Type of Structure	Observation	Recommended Actions	Photographs
C12	curb	crack in top of curb as wide as 2 inches; approximately 15 feet long	monitor and reevaluate during next inspection cycle	
C13	curb	curb deterioration extending 15 feet; damage limited to backside of curb with erosion down slope	monitor and reevaluate during next inspection cycle	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
C14	curb	curb deterioration extending 5 feet; damage extends through portions of the vertical profile; backside of curb is most damaged	repair curb	
C17	curb	gouge in curb approximately 3 feet long impacted; drainage not currently effected	monitor and reevaluate during next inspection cycle	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P4	pavement	pavement edge deterioration; approximately 20 feet; slope undercuts curb in places	stabilize slope and monitor pavement edge during next inspection cycle	
P5	pavement	pavement edge deterioration approximately 40 feet long; edge of pavement separating from cap pavement; tree observed during previous inspection has been removed	monitor pavement edge during next inspection cycle	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P6	pavement	pavement edge deterioration approximately 45 feet; portions of pavement edge on back of curb observed sliding down slope	evaluate slope stability and stabilize as needed; monitor pavement edge during next inspection cycle	
P10	pavement	linear crack extending across property entrance; approximately 50 lf and 0.5 inches wide	seal crack	

Project Name: Environmental Cap and Drainage System Inspection Report
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Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P17	pavement	crack wider than 1/8 inch; extends north from point several hundred feet; previously sealed, but sealant missing in places	reseal crack	
P18	pavement	linear crack as wide as 1 inch; extends north from point several hundred feet; previously sealed, but sealant missing in places	reseal crack	

Project Name: Environmental Cap and Drainage System Inspection Report
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Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P25	pavement	tire ruts near truck scale (no visible cracks); approximately 3 inches deep; typical across all truck scale lanes	monitor and reevaluate during next inspection cycle	
P26	pavement	alligator cracking wider than 1/8 inch adjacent to recent cap repair; approximately 10 foot by 10 foot area; 0.5 foot long divot as deep as 1 inch present	monitor and reevaluate during next inspection cycle	

Project Name: Environmental Cap and Drainage System Inspection Report
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Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P27	pavement	deteriorating seal with divot approximately 0.5 ft long and 1 inch deep	reseal asphalt and repair asphalt depression	
P28	pavement	linear crack approximately 15 feet long and as wide as ¼ inch	seal crack	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P29	pavement	linear crack in asphalt extending approximately 75 lf from this point; as wide as 1 inch in places	seal crack	

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Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P30	pavement	linear asphalt crack; approximately 15 lf and 0.5 inches wide	seal crack	

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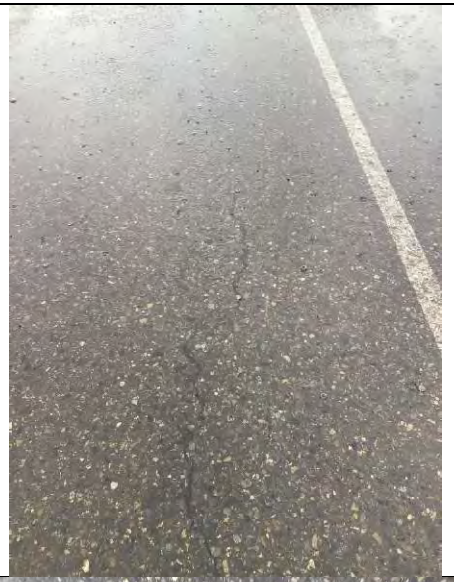
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P31	pavement	adjacent linear cracks approximately 3 feet and 30 feet long; approximately 1 inch deep; crack extends along drive lane from this point	seal cracks	
P32	pavement	linear crack with 2-3 inch deep divots; approximately 2 feet long	seal cracks	

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ID	Type of Structure	Observation	Recommended Actions	Photographs
P33	pavement	surfical asphalt chipping with divots approximately 2 foot by 4 foot area; 1-2 inches deep	repair asphalt depression	
P34	pavement	area with multiple divots and cracks wider than 1/8 inch; extends several feet radially from this point; 2-3 inches deep	repair asphalt depression	

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ID	Type of Structure	Observation	Recommended Actions	Photographs
P35	pavement	divot; approximately 2 feet long and 1 inch deep	monitor and reevaluate during next inspection cycle	
P36	pavement	linear crack approximately 10 feet long; crack connects with 2 foot long divot as wide as 0.5 ft and as deep as 1 inch	monitor and reevaluate during next inspection cycle	

Project Name: Environmental Cap and Drainage System Inspection Report
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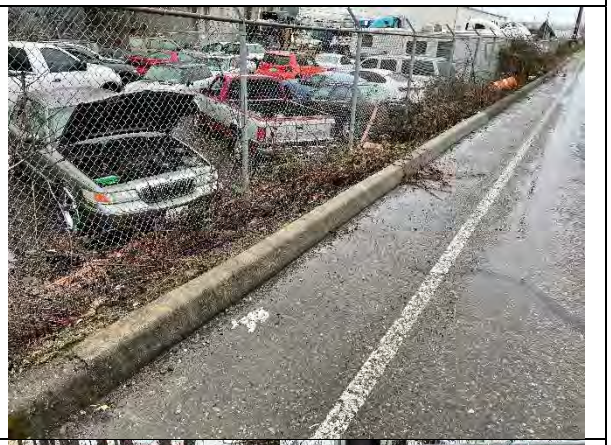
ID	Type of Structure	Observation	Recommended Actions	Photographs
P37	pavement	gouge in asphalt; approximately 2 foot by 1 foot area; 2-3 inches deep	repair asphalt depression	
P39	pavement	gouge in asphalt approximately 3 feet long with varying width as wide as 6 inches; approximately 1 inch deep	monitor and reevaluate during next inspection cycle	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P59	pavement	partially unsealed crack wider than 1/8 inch	seal crack	
P60	pavement	circular divot in pavement; approximately 1 foot in diameter and 2-3 inches deep	repair asphalt depression	

NOTES:
C = curb
ID = location identification number
lf = linear feet
P = pavement

Table 2: Environmental Cap Repairs Observed During 2022 Inspection

ID	Type of Structure	Observation	Recommended Actions	Photographs
C7	curb	new concrete curb section; approximately 30 lf	none	
C15	curb	new concrete curb section; approximately 6 feet long	none	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P1	pavement	repaired asphalt; approximately 5-foot-by-30-foot area; adjacent to catch basin CB2	none	
P2	pavement	repaired asphalt; approximately 5-foot-by-40-foot area	none	

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ID	Type of Structure	Observation	Recommended Actions	Photographs
P7	pavement	repaired asphalt; approximately 30-foot-by-50-foot area	none	

P9	pavement	adjacent repaired asphalt; approximately 4-foot-by-8-foot and 2-foot-by-40-foot areas	none	

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ID	Type of Structure	Observation	Recommended Actions	Photographs
P11	pavement	sealed cracks	none	
P12	pavement	repaired asphalt; approximately 5-foot-by-10-foot area; minor cracking adjacent to repair	monitor and reevaluate cracking near repair during next inspection cycle	

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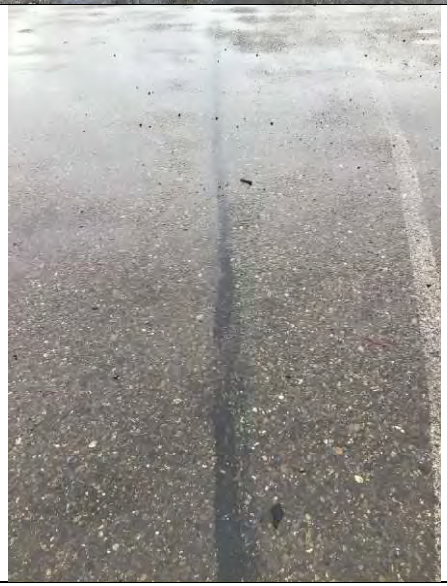
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P13	pavement	repaired asphalt; approximately 5-foot-by-20-foot area	none	
P15	pavement	sealed crack; runs northeast along the length of the cap from this point	none	

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ID	Type of Structure	Observation	Recommended Actions	Photographs
P16	pavement	sealed crack; runs northeast along the length of the cap from this point	none	
P19	pavement	sealed crack; runs northeast along the length of the cap from this point	none	

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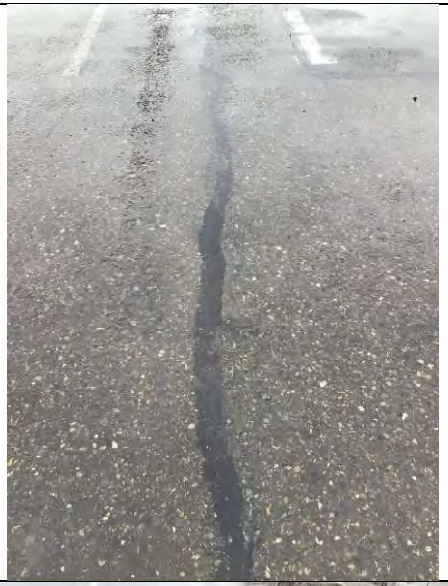
ID	Type of Structure	Observation	Recommended Actions	Photographs
P20	pavement	sealed crack; runs northeast along the length of the cap from this point	none	
P22	pavement	sealed crack	none	

Project Name: Environmental Cap and Drainage System Inspection Report
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Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P23	pavement	sealed asphalt cracks	none.	
P24	pavement	repaired asphalt; approximately 10-foot-by-20-foot area	none	

Project Name: Environmental Cap and Drainage System Inspection Report
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ID	Type of Structure	Observation	Recommended Actions	Photographs
P38	pavement	newly sealed crack; approximately 30 lf	none	

Project Name: Environmental Cap and Drainage System Inspection Report
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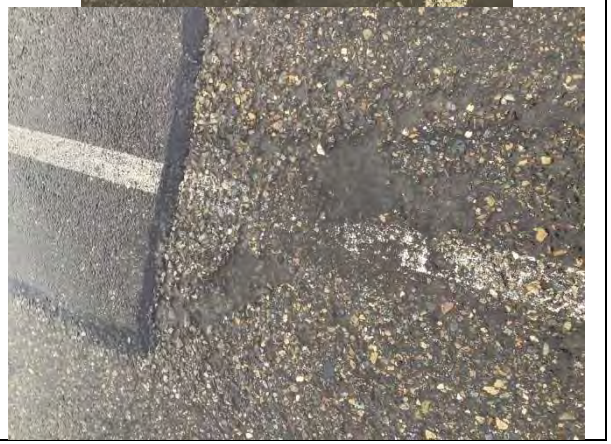
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P39	pavement	repaired asphalt; approximately 10-foot-by-10-foot area; approximately 2-foot-long gouge adjacent to repair	monitor and reevaluate edge of repair during next inspection cycle	 

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Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P40	pavement	repaired asphalt; approximately 20-foot-by-10-foot area	none	
P41	pavement	repaired asphalt; approximately 5-foot-by-15-foot area	none	

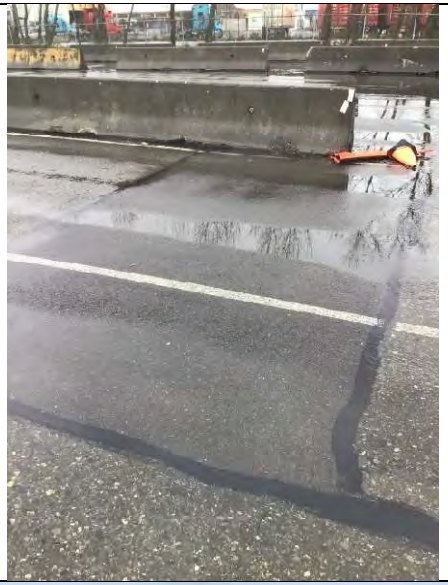
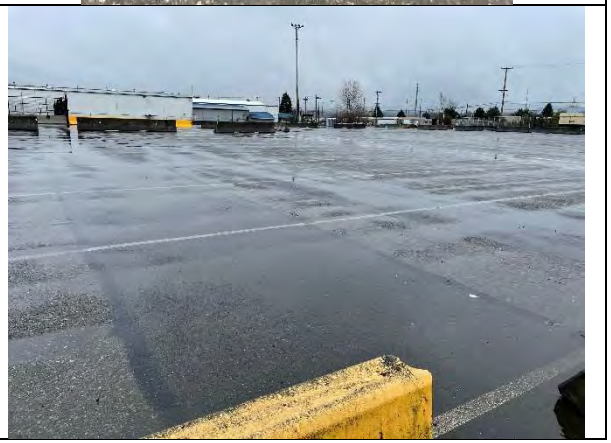
Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P42	pavement	repaired asphalt; approximately 5 feet wide extending several hundred feet southwest along drive lane from this point; includes asphalt around electric and communication maintenance holes	none	

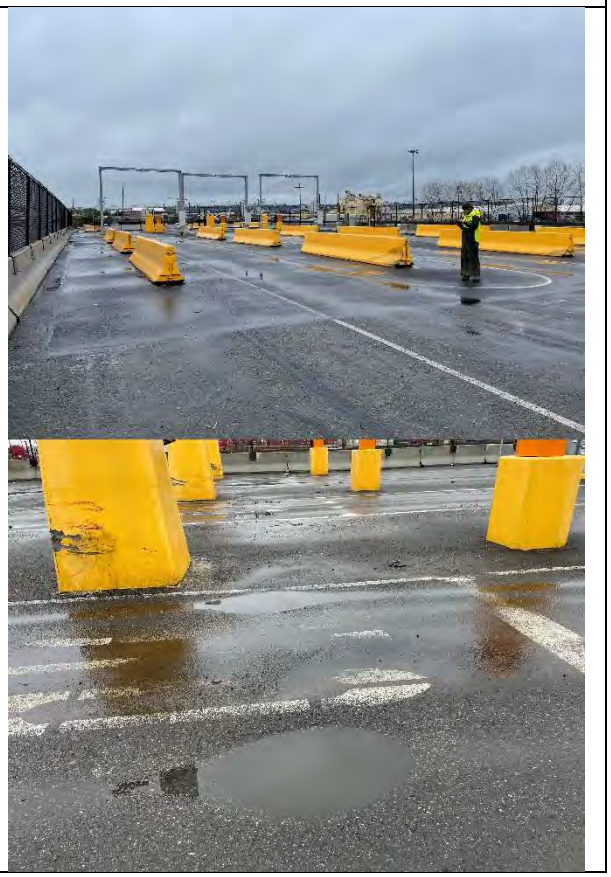
Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P43	pavement	repaired asphalt; approximately 4-foot-by-80-foot area; extending north from this point	none	

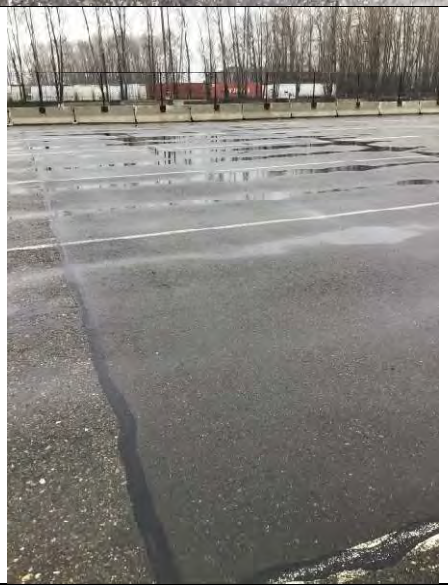
Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P44	pavement	repaired asphalt; approximately 6-foot-by-15-foot area	none	
P45	pavement	two adjacent asphalt patches; approximately 5 feet wide (each) and extending several hundred feet south of this point	none	

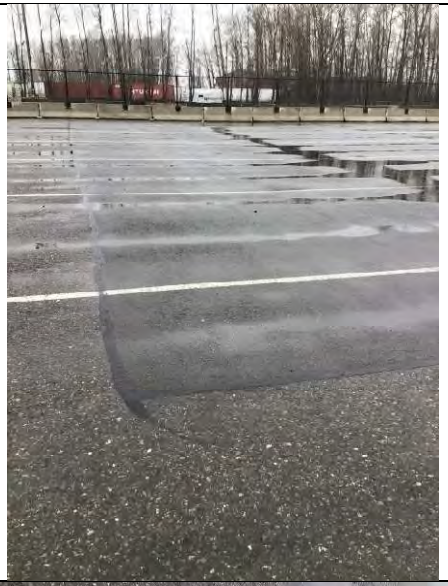
Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P46	pavement	large asphalt repair near truck scale area; approximately 250-foot-by-150-foot area; wheel ruts present, but no visible cracking	monitor and reevaluate wheel ruts during next inspection cycle	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P47	pavement	sealed cracks; sealant in good condition	none	
P48	pavement	repaired asphalt; approximately 20-foot-by-50-foot area	none	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P49	pavement	repaired asphalt; approximately 30-foot-by-60-foot area	none	
P50	pavement	sealed cracks; approximately 20 lf; sealant in good condition	none	

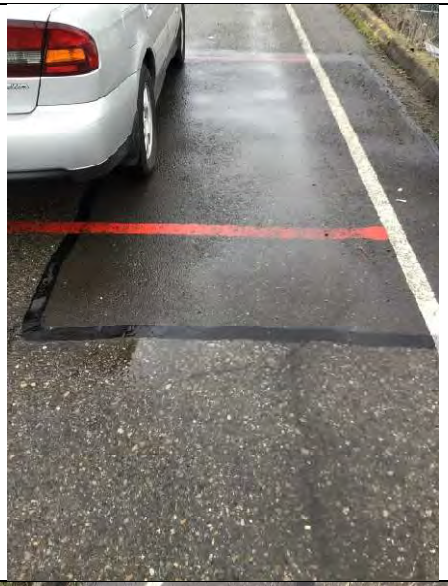
Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P51	pavement	repaired asphalt; approximately 8-foot-by-8-foot area	none	
P52	pavement	repaired asphalt; approximately 5-foot-by-5-foot area	none	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P53	pavement	repaired asphalt; approximately 5-foot-by-10-foot area	none	
P54	pavement	repaired asphalt; approximately 5-foot-by-30-foot area; adjacent to catch basin CB4	none	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P55	pavement	repaired asphalt; approximately 5-foot-by-15-foot area	none	
P56	pavement	repaired asphalt; approximately 5-foot-by-10-foot area	none	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observation	Recommended Actions	Photographs
P57	pavement	repaired asphalt; approximately 5-foot-by-8-foot area	none	
P58	pavement	repaired asphalt; approximately 5-foot-by-8-foot area	none	

NOTES:
C = curb
ID = location identification number
lf = linear feet
P = pavement

Table 3: Stormwater Drainage System Issues Observed During 2022 Inspection

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photographs
CB2	catch basin	minor cracking in concrete structure; functioning normally	water in structure and too deep to measure	damaged filter insert	replace insert	
CB3	catch basin	structurally sound; functioning normally	4-6 inches accumulation in insert; water in structure and too deep to measure	none	replace insert	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photographs
CB4	catch basin	structurally sound; functioning normally	insert clogged with sediment accumulation; water in structure and too deep to measure	slight sheen observed in insert; no floatables or sheen observed on surface	replace insert	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photographs
CB5	catch basin	unable to inspect structure due to integrity of insert	nm	damaged insert; some sheet flow from site appeared to bypass basin and run off site to Maxwell Way	replace insert; observe site stormwater flow during rain event and evaluate structural best management practices to keep stormwater from sheet flowing off site	

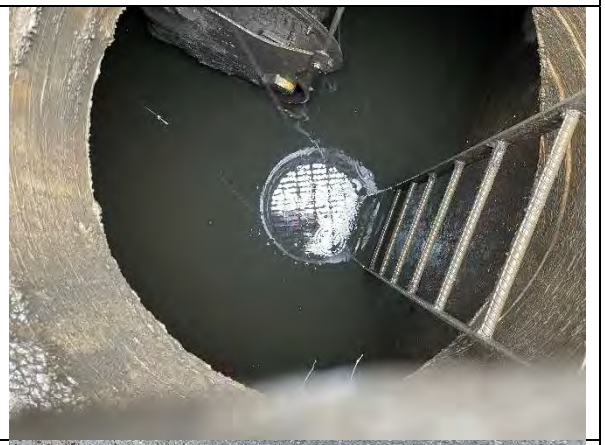
Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photographs
CB6	catch basin	exposed rebar in structure; functioning normally	insert clogged with sediment accumulation; water in structure and too deep to measure	none	replace insert	
CB7	catch basin	unable to inspect structure due to integrity of insert	nm	damaged insert	replace insert	

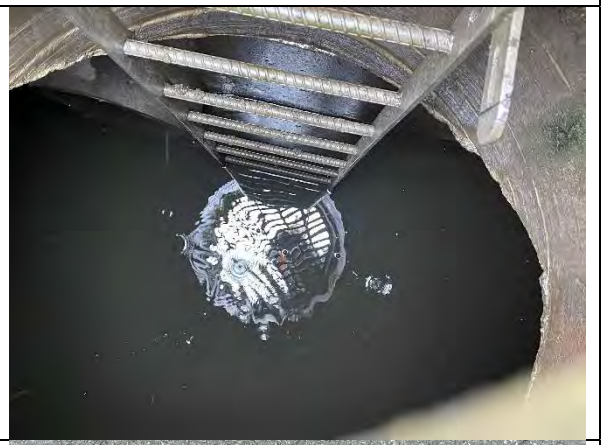
Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photographs
WMH	maintenance hole	unable to inspect due to access restrictions	nm	maintenance hole is behind secured fence, Port Security, WUT, and Husky Terminals did not have key	identify party who has access to maintenance hole to facilitate observation during next inspection cycle	 

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photographs
OWS1	oil/water separator	unable to fully inspect structure due to tight fit of grate; visible structure appeared sound	water in structure and too deep to measure	no floatables observed on water surface	observe during next inspection cycle	
OWS2	oil/water separator	unable to inspect due to tight fit of lid	nm	unable to observe due to tight fit of lid	observe during next inspection cycle	

Project Name: Environmental Cap and Drainage System Inspection Report
Project Number: M0615.17.002
Location: Cascade Timber

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photographs
SV1	spill containment vessel	unable to fully inspect structure due to tight fit of grate; visible structure appeared sound	water in structure and too deep to measure	no floatables observed on water surface	observe during next inspection cycle	
SV2	spill containment vessel	unable to inspect due to tight fit of lid	nm	unable to observe due to tight fit of lid	observe during next inspection cycle	

NOTES:
CB = catch basin
ID = location identification number
nm = not measured
OWS = oil/water separator
SV = spill containment vessel
WMH = west maintenance hole

APPENDIX

ENVIRONMENTAL CAP REPAIRS

INTEROFFICE MEMORANDUM

TO: PROJECT FILE

FROM: SARAH WEEKS

SUBJECT: CASCADE TIMBER 2020 CAP REPAIRS

DATE: APRIL 22, 2021

CC: ROB HEALY & DAVE MYERS

In 2020 the Port's tenant ITS Husky installed a new remote gate and truck at Port Parcel 30 (also known as "Lot F") to reduce terminal and street congestion from queueing trucks. Approximately 10-acres of the 18-acre property is the Cascade Timber No. 3 environmental cap. The new gate and new utilities were installed within cap limits. The utility work, electrical and storm drainage, was installed within the set aside utility corridors. During the same period the Port of Tacoma (Port) installed new fiber optic lines between the Husky Administration Building and Lot F, the new fiber optic lines were installed within the utility corridors. Per the terms of the Consent Decree the integrity of the cap was restored to its original condition and soil spoils were handled and disposed of in accordance with State Law. The scope of work was shared with Ecology on December 18, 2019. Ecology approved the proposed work on December 30, 2019.

The follow measures were taken to minimize disruption to the contaminated soils beneath the cap:

- All conduits were installed in shallow excavations, with the top of conduit approximately 24-inches from the top of asphalt.
- Many of the structures were designed to maintain the foundations in the clean pit run material in place over the contaminated soils.
- Soil samples were collected for characterization and appropriate disposal.

The environmental cap was restored per the original design requirements:

- The low permeability asphalt cap was restored to the original thickness
- The low permeability asphalt cap mix was comparable to the mix of the original cap design and was based on current WSDOT classifications. Permeability test results indicated a permeability of less than 10^{-9} cm/s. This is within the permeability range required by the Construction Completion Report (10^{-7} to 10^{-9} cm/s).
- An impervious fabric layer was installed between asphalt lifts per the original cap design.
- Edges were sealed with rubberized mastic to prevent intrusion of water along the pavement seams.

Sarah Weeks
Environmental Project Manager
Port of Tacoma

Attachments:
A – Project Overview
B – Drawings: Lot F Redevelopment, Husky Processing Lanes, ITS Husky. December 11, 2019.
C – Drawings: Fiber to Lot F, Project No. 101286.01, Port of Tacoma. December 9, 2019
D – Lot F Redevelopment Soil Sampling Plan, WSP. May 14, 2020.
E – Ecology Approval

Legend

Blue = Environmental cap boundary

Red dash = Lot F construction project (2020)

Yellow dash = cap repairs

Aerial photograph from Nearmap, date August 27, 2020

From: Balaraju, Panjini (ECY)
To: Weeks, Sarah
Cc: Smith, Andrew (ECY); Myers, David; Healy, Rob
Subject: RE: Cascade Timber No. 3 - Construction in January 2020
Date: Monday, December 30, 2019 11:15:25 AM

Good morning Sarah,

I reviewed the work proposed at the Cascade Timber No. 3 site. I understand that the Port of Tacoma's tenant, ITS Husky would like to install a new remote gate and truck queue to reduce terminal and street congestion from queueing trucks. As part of this work, some of the capped areas will be stripped to install a new gate, new utilities, and structures. Also the excavated material/soil will be tested for proper disposal and the excavated capped areas will be restored to the original condition.

The proposed procedure for conducting this work is okay with Ecology and Ecology is hear by approve the work proposal.

Once all the work is completed, please send me a letter/e-mail regarding the following information for our files:

- Approximate quantity of excavated material
- Analytical results
- Name of the disposal facility
- Any other relevant information

Thanks.

Panjini Balaraju

From: Weeks, Sarah <sweeks@portoftacoma.com>
Sent: Wednesday, December 18, 2019 3:29 PM
To: Balaraju, Panjini (ECY) <PBAL461@ECY.WA.GOV>
Cc: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>; Myers, David <dmyers@portoftacoma.com>; Healy, Rob <rhealy@portoftacoma.com>
Subject: Cascade Timber No. 3 - Construction in January 2020

Good Afternoon, Panjini –

We've got some worked planned at Cascade Timber No. 3 that requires your review and approval. The Cascade Timber No. 3 Site is known to the rest of Port staff as "Lot F." Lot F includes the Cascade Timber No. 3 environmental cap and adjacent acreage between the northeast boundary of the environmental cap and Port of Tacoma Road. Lot F is operated as a trucking queue, a portion of which is leased to ITS Husky. ITS Husky is planning to install a new remote gate and truck queue to reduce terminal and street congestion from queueing trucks. The scope of work includes disturbance of the Cascade Timber environmental cap. Per the Cascade Timber No.3 log yard Consent Decree – "The Port shall obtain approval from Ecology prior to initiating any disturbance of the cap stormwater drainage and/or monitoring system. Ecology shall not deny approval if the Port can show (1) that no releases of hazardous materials will occurs; (2) integrity of the cap and stormwater draining and monitoring systems will be restored to their original condition in a timely manner; and (3) that material will be handled and disposed of in accordance with State law."

I've communicated these requirements to the Port engineer, Dave Myers. Dave and I work together on the Port's environmental cap maintenance program and he is familiar with the restrictions. The team hopes to begin construction in January. Please see Dave's email below describing the scope of work. I've uploaded the drawing sets to our FTP site. Let Dave and I know if you have any questions. We'd also be happy to set up a meeting if you'd like to review the material with us in more detail.

https://webftp.portoftacoma.com/#/
username: envtransfer
password: W1nt3r14

Thank you,
Sarah

Sarah Weeks | Environmental Project Manager | Port of Tacoma | 253.383.9450 |
www.portoftacoma.com

From: Myers, David <dmyers@portoftacoma.com>
Sent: Monday, December 16, 2019 3:51 PM
To: Weeks, Sarah <sweeks@portoftacoma.com>
Subject: Lot F work

Sarah,

Please see below for a description of work:

At lot F the Port's tenant ITS Husky is planning to install a new remote gate and truck queue to reduce terminal and street congestion from queueing trucks. Much of the site will remain as is with the exception of some striping and barricades to keep various terminal trucks separated from each

other. As part of the new gate however there are some new utilities and structures that will be installed within the cap limits. Most of the utilities including electrical, communications and storm drainage will be maintained with the set aside utility corridors. However there are some limited structures and conduit that will be installed outside these corridors.

To minimize impacts to the capped material all conduits will be kept in shallow excavations with the top of conduit 24" from the top of asphalt. This means that the trenches will likely only be 12" to 16" below paving. Likewise, many of the structures are designed to incorporate spread footings in order to maintain the foundations in the clean pit run material that was placed over the contaminated soils. There is a small conduit trench and two vaults that will be installed near light pole 12 that are outside of the utility corridors but very close to the edge of the cap. Again the conduits and vaults will be held close to the bottom of existing paving to minimize depth of excavation.

In any areas where contaminated material is contacted it will be staged on site, placed on plastic and covered with plastic, until proper characterization and disposal permits can be obtained. Areas will be over excavated to allow for a layer of clean material between contamination and installed structures. After backfill, the pavement will be restored to original thickness with a impervious fabric layer installed within the section as shown on the details. All edges will be sealed with rubberized mastic to prevent intrusion of water along the seam.

Trenches will be scrutinized more extensively and evaluated for routine maintenance under the Port's cap repair program. Additional mastic will be added to the cracks as needed and seal coating will be considered to ensure a watertight system is maintained.

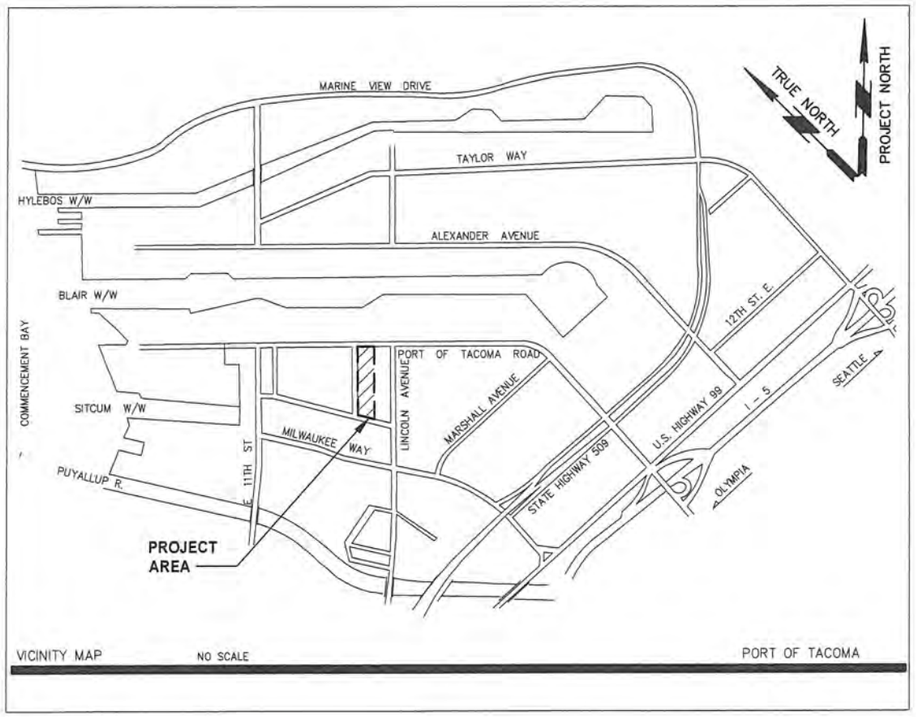
I have provide two sets of drawings, one from the tenant representing their contract work and one from the Port representing Port work. I have highlighted the areas and items in orange that are on or affect the cap. Items that are not highlighted are not on the cap. Again, please keep in mind that much of the corridor work and even some of the foundations and fence work are within the prescribed "Clean Utility Corridors" that were set aside when the cap was put in place.

Please let me know if you have any questions.

David R. Myers Architect, CSI, NCARB / Engineering Project Manager / Port of Tacoma /
w)253.428.8612 / c) 253.405.5593 / dmyers@portoftacoma.com

BINDING EDGE

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES



VICINITY MAP NO SCALE PORT OF TACOMA

CONSULTANT:

PRIME/CIVIL ENGINEER

moffatt & nichol
600 UNIVERSITY STREET
SUITE# 610
SEATTLE, WA 98101
(206) 622-0222

ELECTRICAL AND COMMUNICATIONS

CROSS ENGINEERS, INC
923 MLK Jr. Way
Tacoma, WA 98405
Phone: (253) 759-0118
info@crossengineers.com

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moffatt & nichol
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MARK:	REVISION:	BY:	APPR:	DATE:
A	SCALE REVISIONS	JAT	BJH	12/11/19

12/20/19

S. GRAY 11/19/19 DATE
CHECKED BY
B. HALEY 11/19/19 DATE
PROJ. ENGR

PRINTED BY: BHaley Dec 11, 2019
SITE ADDRESS: 1754 THORNE RD TACOMA, WA 98421

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
COVER SHEET AND SHEET INDEX

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PHASE: BID | PARCEL: LOT F | DRAWING SCALE: AS NOTED

G1.01
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PORT OF TACOMA FILE: Q:\LB\8897-07\CADD_Active_SheetSet\8897707-G01.01

BINDING EDGE

ABBREVIATIONS

ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASPHALT CONCRETE PAVEMENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
BOT, BOTT, BTM	BOTTOM
C-	C-CHANNEL
CB	CATCH BASIN
℄	CENTERLINE
CTL	CENTERLINE
CLR	CLEAR
COMM	COMMUNICATIONS
CONC	CONCRETE (PORTLAND CEMENT CONCRETE)
COORD	COORDINATE
CU	COPPER
C/C	CENTER TO CENTER
DI, DIP	DUCTILE IRON PIPE
DIA	DIAMETER
DIM	DIMENSION
E	EAST OR EASTING
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
ENV	ENVIRONMENTAL
EQ	EQUAL
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
FT	FEET
G or GA	GAUGE
GALV	GALVANIZED
HMA	HOT MIX ASPHALT
HORIZ OR HOR	HORIZONTAL
IE	INVERT ELEVATION
IN	INCH OR INCHES
KIPS	KILO-POUND (THOUSANDS OF POUNDS)
KSI	KIPS PER SQUARE INCH
LB/FT	POUNDS PER FOOT
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
M	METER
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH OR NORTHING
NAD	NORTH AMERICAN DATUM
NE	NORTHEAST
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OCR	OPTICAL CHARACTER RECOGNITION
OD	OUTSIDE DIAMETER
OWS	OIL-WATER SEPARATOR
PG	PERFORMANCE GRADE
PORT	PORT OF TACOMA
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PVC	POLYVINYL CHLORIDE
R	RADIUS
REINF	REINFORCEMENT
REQ'D	REQUIRED
ROW	RIGHT OF WAY
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAINAGE
SE	SOUTHEAST
SIM	SIMILAR
SPA	SPACING OR SPACED
SQ	SQUARE
ST	STREET
STL	STEEL
STD	STANDARD
SW	SOUTHWEST

ABBREVIATIONS (CONT'D)

TC	TOP OF CONCRETE
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
T&B	TOP AND BOTTOM
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
VERT OR V	VERTICAL
WIM	WEIGH IN MOTION
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WUT	WASHINGTON UNITED TERMINAL
WWM	WELDED WIRE MESH
W/	WITH
W/C	WATER/CEMENT RATIO
W/W	WATERWAY
&	AND
@	AT
*	ASTERISK
L	ANGLE
℄	CENTERLINE
Ø	NOMINAL DIAMETER OR PHASE
°	DEGREES
'	MINUTES OR FEET
#	NUMBER OR POUNDS
%	PERCENT
℗	PROPERTY LINE OR PLATE
"	SECONDS OR INCH

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		FOUND MONUMENT AS NOTED
		SET REBAR W/ CONTROL CAP
		SANITARY SEWER MANHOLE
		UTILITY CLEAN OUT
		STORM MANHOLE
		STORM CATCH BASIN
		STORM CULVERT
		ROOF DRAIN
		WATER MANHOLE
		WATER VALVE
		WATER METER
		FIRE HYDRANT
		THRUST BLOCK
		WATER VAULT
		FIRE DEPARTMENT CONNECTION
		WATER BLOW OFF
		POST INDICATOR VALVE
		IRRIGATION CONTROL VALVE
		GAS VALVE
		GAS METER
		POWER METER
		POWER CABINET
		UTILITY POLE
		GUY ANCHOR
		JUNCTION BOX
		POWER VAULT
		POWER TRANSFORMER
		POWER MANHOLE
		LIGHT POLE
		TRAFFIC LOOP
		UTILITY VAULT
		UTILITY MANHOLE
		COLUMN
		BOLLARD
		UTILITY POLE
		SIGN
		TRAFFIC SIGNAL
		MONITORING WELL
		TAX PARCEL NUMBER
		TELECOM VAULT
		TELECOM MANHOLE
		TELECOM CABINET
		MAILBOX
	SD	STORM DRAIN LINE
		SANITARY SEWER LINE
		BURIED WATER LINE
		BURIED GAS LINE

LEGEND (CONT'D)

EXISTING	PROPOSED	DESCRIPTION
		BURIED POWER LINE
		RECORD BURIED POWER
		BURIED TELECOM LINE
		RECORD TELECOM LINE
		OVERHEAD POWER LINE
		CHAIN LINK FENCE
		WOOD OR SPLIT RAIL FENCE
		RAILROAD TRACKS
		CONCRETE SURFACE
	OR	ASPHALT SURFACE

REFERENCE CALLOUTS

PLAN/SECTION/DETAIL LETTER/NUMBER CALLOUT

XX X##.# **VIEW TITLE** SCALE: ##:##

SHEET WHERE PLAN/SECTION/DETAIL IS TAKEN*

XX X##.# PLAN/DETAIL NUMBER CALLOUT

SHEET WHERE PLAN/DETAIL IS SHOWN*

REFERENCE TO ENLARGED PLAN OR DETAIL

*NOTE: DASH (–) INDICATES SECTION OR DETAIL FROM SAME SHEET

XX X##.# SECTION LETTER CALLOUT

SHEET WHERE SECTION IS SHOWN*

P## X##.# PHOTOGRAPH NUMBER CALLOUT

SHEET WHERE PHOTOGRAPH IS SHOWN*

NOTES:

1. ADDITIONAL LEGEND FOR SURVEY ITEMS SHOWN ON SV1.0.

ITS Husky

MARK:	REVISION:	BY:	APPR:	DATE:

moffatt & nichol

600 UNIVERSITY STREET SUITE 610 SEATTLE, WA 98101 (206) 622-0222

S. GRAY 11/19/19 DATE

CHECKED BY B. HALEY 11/19/19 DATE

PROJ. ENGR

PRINTED BY: mcoker Dec 02, 2019

SITE ADDRESS: 1754 THORNE RD TACOMA, WA 98421

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
LEGEND & ABBREVIATIONS

TOWNSHIP: 21N RANGE: 3E SECTION: 34

DAT-HRZ: WA83/2011-SF VERT: MLLW

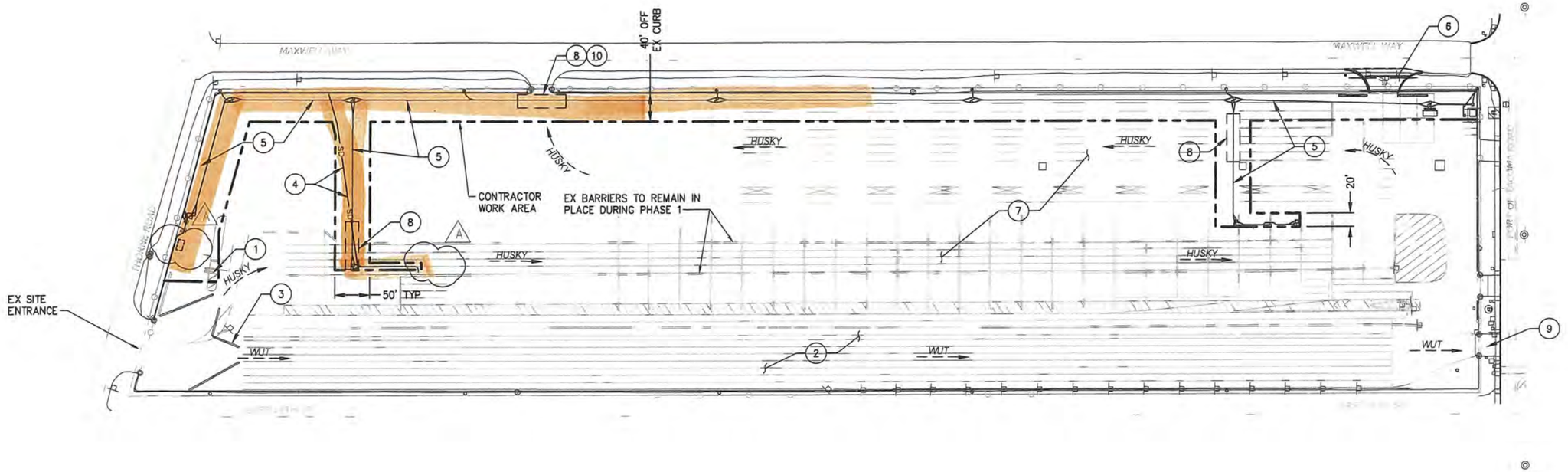
PARCEL: LOT F DRAWING SCALE: AS NOTED

PHASE: BID

G1.03
3 OF 59

PORT OF TACOMA FILE: Q:\LB\8897-07\CADD_Active_SheetSet\889707-G01.03

BINDING EDGE



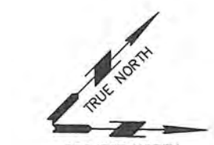
1 PHASE 1 - UTILITIES & DRIVEWAY
SCALE: 1" = 80'

PHASING NOTES:

1. TEMPORARY FENCING AND/OR CONCRETE BARRIERS SHALL BE USED TO CORDON OFF THE CONTRACTOR WORK AREAS FROM THE ACTIVE TRUCK QUEUE AND CIRCULATION AREAS.
2. THE TRUCK CIRCULATION AND QUEUE AREAS SHALL BE OPERATIONAL AND CLEAR OF MATERIALS AND EQUIPMENT DURING ALL OPERATING HOURS. THE PORT AND/OR THEIR TENANTS WILL COORDINATE THE TRUCK QUEUE AND CIRCULATION WITHIN AREAS INDICATED.
3. PHASING KEY NOTES INDICATE GENERAL WORK REQUIRED. SEE REMAINING DOCUMENTS FOR EXTENT AND DETAILS.
4. WORK AREA EXTENDS 5' MAX BEYOND PROPOSED IMPROVEMENTS UNLESS OTHERWISE INDICATED.

PHASING KEY NOTES:

(1) REMOVE EX ELEC PANEL
(2) EX WUT QUEUE LANES TO REMAIN OPERATIONAL
(3) EX BARRIERS PLACED AS TEMPORARY CHANNELIZATION TO REMAIN
(4) CONSTRUCT WIM SCALE SUMP DRAIN LINE
(5) CONSTRUCT ELECTRICAL AND COMMUNICATIONS INFRASTRUCTURE
(6) CONSTRUCT NEW MAXWELL DRIVEWAY
(7) EX HUSKY QUEUE LANES TO REMAIN OPERATIONAL
(8) PROVIDE 60' MIN OF STEEL PLATES OVER OPEN TRENCH DURING OPERATIONAL HOURS
(9) EX WUT EXIT LANES TO REMAIN OPEN DURING CONSTRUCTION
(10) EX HUSKY EXIT TO REMAIN OPERATIONAL DURING CONSTRUCTION



80' 0' 80' 160'
SCALE: 1"=80'

GHD
Husky
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222
moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:
A	SCALE REVISIONS	JAT	BJH	12/11/19

12/02/19

11/19/19 S. GRAY
DATE CHECKED BY
11/19/19 B. HALEY
DATE PROJ. ENGR

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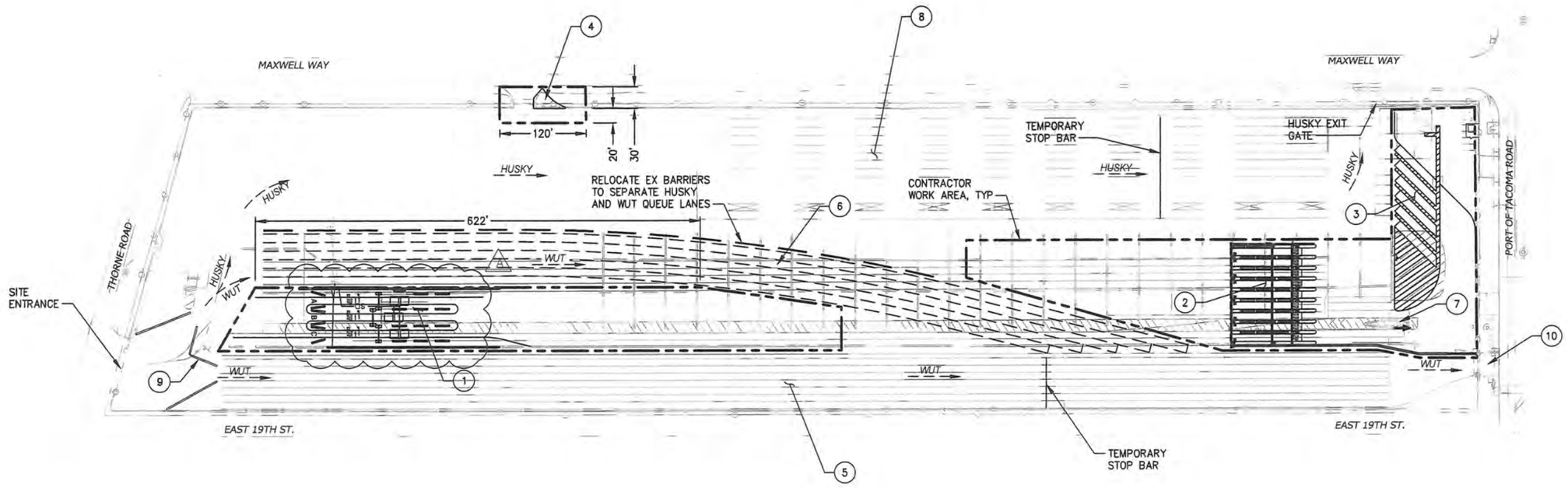
SITE ADDRESS: 1754 THORNE RD TACOMA, WA 98421

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PARCEL: LOT F | DRAWING SCALE: AS NOTED
PHASE: BID

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
PHASE 1 - UTILITIES & DRIVEWAY

G2.01
4 OF 59

PORT OF TACOMA FILE: Q:\LB8897-07\CADD_Active_SheetSet\889707-G02.01



1 PHASE 2 - PROCESSING AREAS

SCALE: 1" = 80'

PHASING NOTES:

1. TEMPORARY FENCING AND/OR RELOCATED EX JERSEY BARRIERS SHALL BE USED TO CORDON OFF THE CONTRACTOR WORK AREAS FROM THE ACTIVE TRUCK QUEUE AND CIRCULATION AREAS.
2. THE TRUCK CIRCULATION AND QUEUE AREAS SHALL BE OPERATIONAL AND CLEAR OF MATERIALS AND EQUIPMENT DURING ALL OPERATING HOURS. THE PORT AND/OR THEIR TENANTS WILL COORDINATE THE TRUCK QUEUE AND CIRCULATION WITHIN AREAS INDICATED.
3. PHASING KEY NOTES INDICATE GENERAL WORK REQUIRED. SEE REMAINING DOCUMENTS FOR EXTENT AND DETAILS.
4. WORK AREA EXTENDS 5' MAX BEYOND PROPOSED IMPROVEMENTS UNLESS OTHERWISE INDICATED.

PHASING KEY NOTES:

(1) CONSTRUCT WIM SCALES AND OCR GATES

(2) CONSTRUCT INTERCOM AND CAMERA FOUNDATIONS

(3) CONSTRUCT TROUBLE AREA

(4) CONSTRUCT MAXWELL ENTRANCE WIDENING

(5) EX WUT QUEUE LANES TO REMAIN OPERATIONAL (7 LANES)

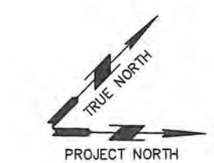
(6) TEMPORARY STRIPING FOR WUT QUEUE LANES, 5 12'-WIDE LANES; FIELD VERIFY LOCATION WITH ENGINEER; WORK TO BE DONE BETWEEN PHASES 1 AND 2 DURING NON OPERATING HOURS

(7) REMOVE EX ELEC PANEL

(8) EX HUSKY QUEUE LANES WITH REVERSE TRUCK CIRCULATION (TRUCKS EXITING NEW DRIVEWAY); FIELD VERIFY LOCATION WITH ENGINEER

(9) EX BARRIERS PLACED AS TEMPORARY CHANNELIZATION TO REMAIN

(10) EX WUT GATE TO REMAIN OPERATIONAL



80' 0' 80' 160'

SCALE: 1"=80'

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11/19/19 B. HALEY
DATE PROJ. ENGR

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TACOMA, WA 98421

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
PHASE 2 - PROCESSING AREAS

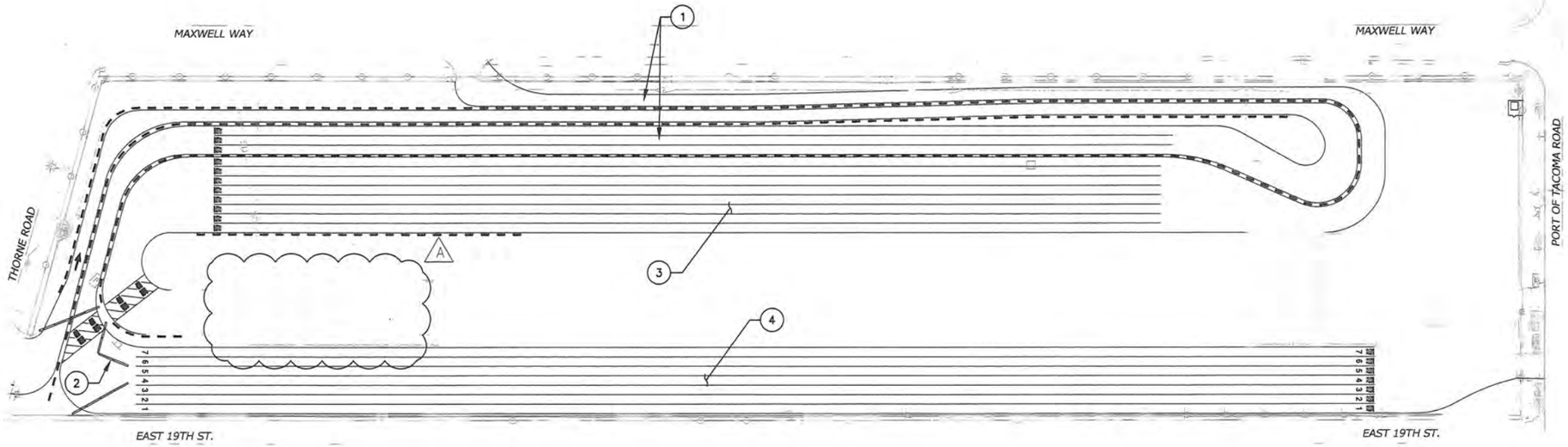
TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PHASE: BID | PARCEL: LOT F | DRAWING SCALE: AS NOTED

G2.02
5 OF 69

BINDING EDGE

PORT OF TACOMA FILE: Q:\LB\8897-07\CADD_Active_SheetSet\8897707-G02.02

BINDING EDGE



1 — **PHASE 3 - STRIPING (BY OTHERS)**
SCALE: 1" = 80'

PHASING NOTES:

1. PHASE 3 WORK TO BE COMPLETED OVER A WEEKEND OUTSIDE OF OPERATIONAL HOURS BY OTHERS.
2. CONTRACTOR SHOULD ANTICIPATE A DELAY OF WORK OF UP TO ONE (1) WEEK BETWEEN PHASES 2 AND 4

PHASING KEY NOTES:

(1) STRIPE NEW WUT ENTRANCE CORRIDOR (BY OTHERS)
(2) REMOVE TEMPORARY BARRIERS (BY OTHERS)
(3) STRIPE HUSKY ENTRANCE CORRIDOR (BY OTHERS)
(4) RESTRIPE WUT QUEUING LANES (BY OTHERS)

80' 0' 80' 160'
SCALE: 1"=80'

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(206) 622-0222

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A	SCALE REVISIONS	JAT	BJH	12/11/19

12/02/19

11/19/19 S. GRAY
DATE CHECKED BY
11/19/19 B. HALEY
DATE PROJ. ENGR

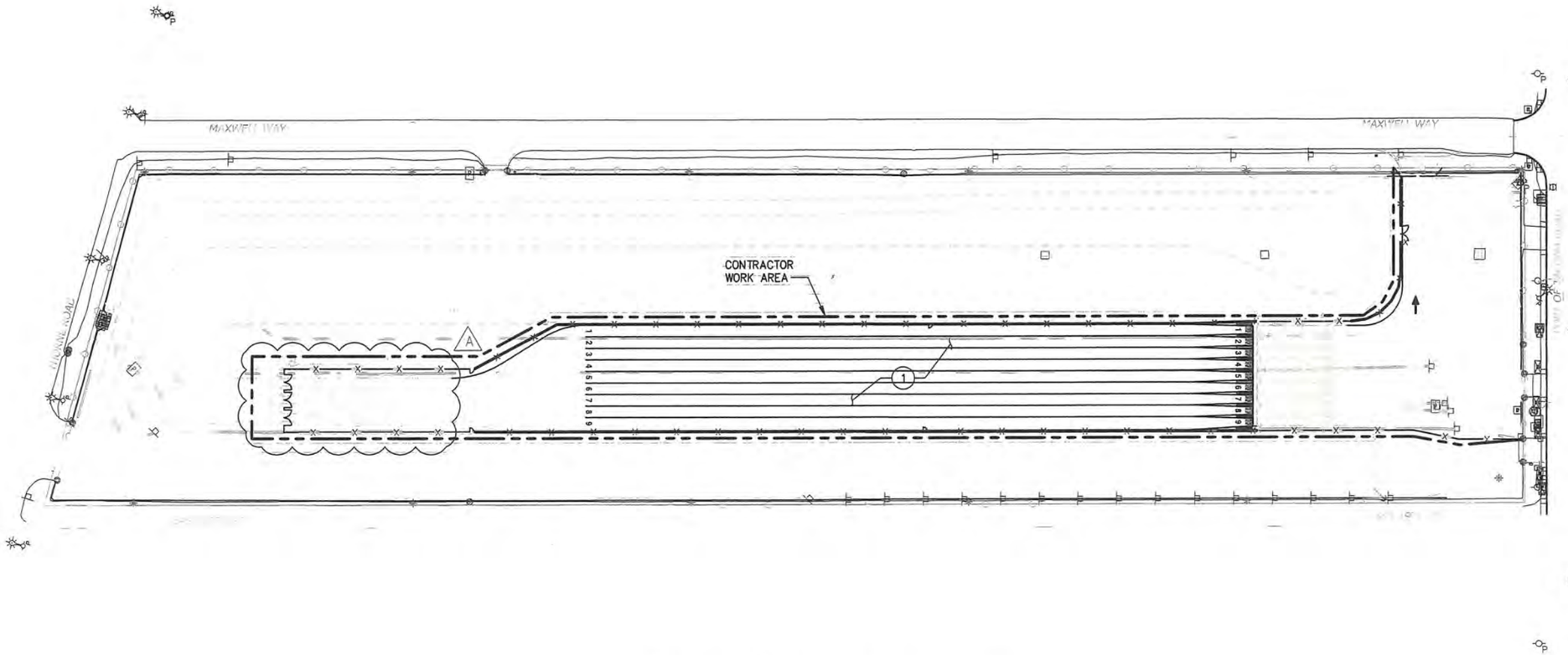
PRINTED BY: BHaley Dec 11, 2019
SITE ADDRESS: 1754 THORNE RD
TACOMA, WA 98421

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
PHASE 3 - STRIPING (BY OTHERS)

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PARCEL: LOT F | DRAWING SCALE: AS NOTED
PHASE: BID

G2.03
6 OF 69

PORT OF TACOMA FILE: Q:\LB\68897-07\CADD_Active_SheetSet\68897707-G02.03



1 / – **PHASE 4 - BARRIERS AND FENCING**
SCALE: 1" = 80'

PHASING NOTES:

1. TEMPORARY FENCING AND/OR RELOCATED EX JERSEY BARRIERS SHALL BE USED TO CORDON OFF THE CONTRACTOR WORK AREAS FROM THE ACTIVE TRUCK QUEUE AND CIRCULATION AREAS.
2. THE TRUCK CIRCULATION AND QUEUE AREAS SHALL BE OPERATIONAL AND CLEAR OF MATERIALS AND EQUIPMENT DURING ALL OPERATING HOURS. THE PORT AND/OR THEIR TENANTS WILL COORDINATE THE TRUCK QUEUE AND CIRCULATION WITHIN AREAS INDICATED.
3. PHASING KEY NOTES INDICATE GENERAL WORK REQUIRED. SEE REMAINING DOCUMENTS FOR EXTENT AND DETAILS.
4. WORK AREA EXTENDS 5' MAX BEYOND PROPOSED IMPROVEMENTS UNLESS OTHERWISE INDICATED.

PHASING KEY NOTES:

(1) COMPLETE HUSKY QUEUING AND PROCESSING LANES, GATES, AND FENCE ON BARRIERS. CONTRACTOR SHALL ALLOW FOR A MINIMUM OF ONE 12'–WIDE TRUCK LANE THROUGH THE WORK AREA. COORDINATE WITH HUSKY.

PROJECT NORTH

80' 0' 80' 160'
SCALE: 1"=80'

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SUITE# 610
SEATTLE, WA 98101
(206) 622-0222

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A	SCALE REVISIONS	JAT	BJH	12/11/19

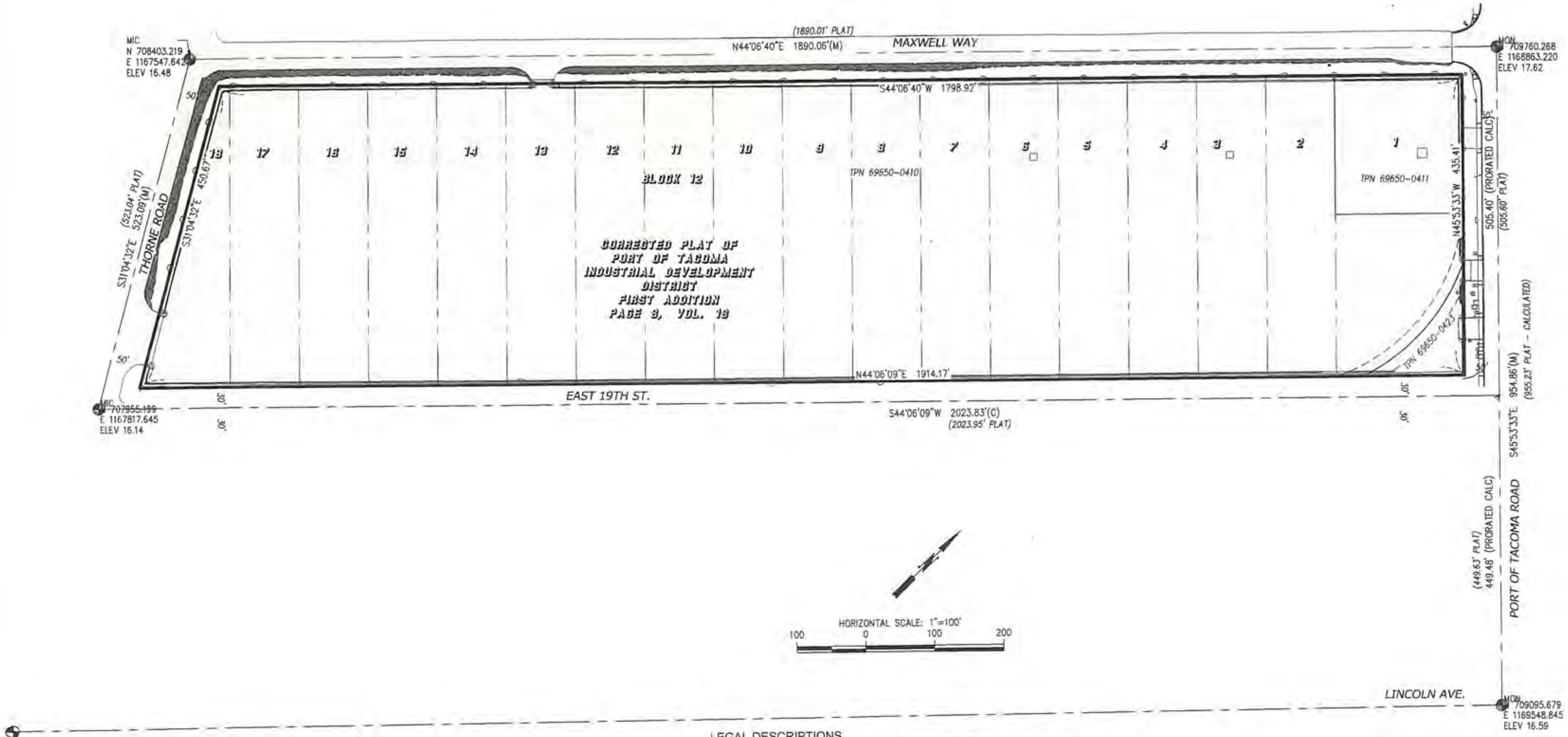
12/02/19

11/19/19 DATE
S. GRAY
CHECKED BY
11/19/19 DATE
B. HALEY
PROJ. ENGR

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
PHASE 4 - BARRIERS AND FENCING

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	PRINTED BY: BHaley Dec 11, 2019
DAT-HRZ: WA83/2011-SF	VERT: MLLW		SITE ADDRESS: 1754 THORNE RD
PARCEL: LOT F	DRAWING SCALE: AS NOTED		TACOMA, WA 98421
PHASE: BID			

G2.04
7 OF 59



HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83/2011
(PER PORT OF TACOMA SURVEY CONTROL MAP – 2016)

MEASURED NORTH 44°06'40" EAST BETWEEN MONUMENTS #104 AND "L" LOCATED ON MAXWELL WAY AT THE INTERSECTIONS OF PORT OF TACOMA ROAD AND THORNE ROAD

VERTICAL DATUM

MLLW (PER PORT OF TACOMA 2016 SURVEY CONTROL MAP)

TIDE 22 1933 BENCHMARK: LOCATED AT NE CORNER OF 11TH ST. BRIDGE AT THE INTERSECTION OF E. 11TH ST. AND MILWAUKEE WAY
ELEVATION = 19.18
(BASED ON 1983–2001 TIDAL EPOCH)

SITE DATA

TAX PARCEL NOS. 6965000410, 6965000411, 6965000423
AREA: 18.6± ACRES

NOTES

1. EQUIPMENT USED: TOPCON QS ROBOTIC TOTAL STATION
2. THIS SURVEY WAS PERFORMED BY FIELD TRAVERSE WITH THE FINAL RESULTS MEETING OR EXCEEDING THE CURRENT TRAVERSE STANDARDS CONTAINED IN W.A.C. 332–130–090. ALL MEASUREMENTS WERE MADE WITH A TOPCON QS ROBOTIC TOTAL STATION IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON (R.C.W.) 58.09 AND THE WASHINGTON ADMINISTRATIVE CODE (W.A.C.) 332–130, THIS SURVEY MAY DEPICT OCCUPATIONAL INDICATORS THAT DIFFER FROM THE DEEDED LOT LINES. THESE INDICATORS, IF AT ALL PRESENT, MAY REPRESENT A POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE. THIS SURVEY DOES NOT PURPORT TO RESOLVE SUCH ITEMS.
4. FIELD WORK PERFORMED IN MARCH THROUGH MARCH AND SEPTEMBER 2017, UNDER SITTS & HILL PROJECT NUMBER 17537.
5. UTILITIES AS SHOWN HEREON ARE BASED ON FIELD SURVEY OBSERVATION OF UTILITY LOCATE SERVICES PERFORMED BY MOUNTAIN VIEW LOCATING SERVICES LLC. IN SEPTEMBER 2017 FOR THIS SURVEY. THIS HAS BEEN SUPPLEMENTED BY PUBLIC RECORDS. RECORD UTILITY LINES SHOWN HEREON ARE DEPICTED WITH THE STANDARD LINETYPE WITH A "– R" AS SHOWN IN THE LEGEND. UTILITIES OTHER THAN SHOWN MAY EXIST ON THE SITE. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR DOES CERTIFY THAT THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY AND PAINTED UTILITY LOCATE LINES. COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA IS CONSISTENT WITH QUALITY LEVEL (B) OF THE ASCE STANDARD GUIDELINES 38–02.
6. SITTS & HILL ENGINEERS, INC. HAS RELIED UPON TITLE INFORMATION NOTED IN COMMITMENT FOR TITLE INSURANCE PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY OF WASHINGTON, COMMITMENT NUMBER 2940659, DATED SEPTEMBER 12TH 2017. IN PREPARATION OF THIS SURVEY, SITTS AND HILL ENGINEERS, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS SITTS AND HILL ENGINEERS, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND/OR DISCLOSED BY SAID TITLE COMPANY'S ORDER. SITTS & HILL ENGINEERS, INC. HAS RELIED WHOLLY ON SAID TITLE COMPANY'S REPORT AND THEREFORE QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
7. THIS SURVEY COMPLIES WITH W.A.C. 332–130–145. THE CONTOURS DEPICTED HEREON ARE BASED ON DATA FROM DIRECT FIELD MEASUREMENTS. SPOT ELEVATIONS ARE BASED ON DIRECT FIELD MEASUREMENTS AND ARE DEPICTED FOR REFERENCE. THE PURPOSE OF THIS TOPOGRAPHIC MAP IS TO SERVE AS A BASE MAP FOR CONTEMPLATED SITE IMPROVEMENTS AND DESIGN.

SCHEDULE B EXCEPTIONS

PER FIRST AMERICAN TITLE INSURANCE COMPANY OF WASHINGTON, COMMITMENT NUMBER 2940659, DATED SEPTEMBER 12TH 2017

EXCEPTION NUMBER	AFN	DESCRIPTION
1.	**8012010130	FACILITY CHARGES, IF ANY, INCLUDING BUT NOT LIMITED TO HOOK–UP, OR CONNECTION CHARGES AND LATECOMER CHARGES FOR SEWER, WATER AND PUBLIC FACILITIES OF THE CITY OF TACOMA AS DISCLOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 2864651 AND AS AMENDED BY INSTRUMENTS RECORDED UNDER RECORDING NUMBERS 2881434 AND 8012010130.
2.	**––	PROVISIONS AND CONDITIONS OF TITLE 53 RCW RELATING TO THE USE OF LANDS WITHIN PORT DISTRICTS, CHAPTER 73, SESSION LAWS 1955, AS AMENDED, OR IF APPLICABLE, CHAPTER 45, SESSION LAWS 1939, AS AMENDED.
3.	2526942	COVENANT FOR CONSTRUCTION OF SANITARY SEWERS IN THE PORT INDUSTRIAL AREA, CITY OF TACOMA; MULTIPLE LOCATIONS INCLUDED IN DOCUMENT; LIES WITHIN THE RIGHTS OF WAY OF THORNE ROAD AND PORT OF TACOMA ROAD.
4.	2781220	DEED FOR PIPELINE GRANTED TO US OIL; 60' WIDE STRIP OF LAND OVER BLOCK 13 OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT FIRST ADDITION; LOCATED WITHIN THE SOUTH RIGHT OF WAY OF THE UNNAMED ROAD ON SAID PLAT BETWEEN BLOCKS 12 AND 14; EXTENTS OF DEEDED AREA LIES SOUTHEAST OF THE SUBJECT SITE.
5.	*9408020435	DECLARATION OF RESTRICTIVE COVENANT FOR REMEDIAL ACTION OF INDUSTRIAL SOIL CLEAN UP; AFFECTS THE ENTIRE SITE AND NOTES A CAP SYSTEM WITH MONITORING

* BLANKET IN NATURE OF AFFECTS ENTIRE PROPERTY
** INDICATES TITLE EXCEPTION WHICH CANNOT BE SHOWN HEREON DUE TO INSUFFICIENT LEGAL DESCRIPTION OR LACK OF OBSERVABLE PHYSICAL EVIDENCE.

REFERENCES

1. PORT OF TACOMA SURVEY CONTROL MAP; DATED 2016
2. CITY OF TACOMA HISTORIC QUARTER SECTION MAP
3. PIERCE COUNTY QUARTER SECTION MAP
4. CORRECTED PLAT OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT FIRST ADDITION; VOL. 18, PG. 8 BOOK OF RECORDS

LEGAL DESCRIPTIONS

PER FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT 2940659; DATED 09/12/2017

PARCEL A (696500–0410):

LOT 1, BLOCK 12, CORRECTED PLAT OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 18 OF PLATS, PAGES 8 AND 8A, RECORDS OF THE PIERCE COUNTY AUDITOR;

TOGETHER WITH THAT PORTION OF THE VACATED RIGHT OF WAY ABUTTING THEREON AND ATTACHED THERETO BY OPERATION OF LAW, AS VACATED BY CITY OF TACOMA ORDINANCE NO. 21116 AND RECORDED UNDER RECORDING NUMBER 2772670;

EXCEPT THAT PORTION LYING WITHIN THE NORTHWESTERLY 200 FEET OF SAID LOT 1;

TOGETHER WITH ALL OF LOTS 2 THROUGH 18, INCLUSIVE, OF SAID BLOCK 12;

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

PARCEL B (696500–0411):

THE NORTHWESTERLY 200 FEET OF LOT 1, BLOCK 12, CORRECTED PLAT OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 18 OF PLATS, PAGES 8 AND 8A, RECORDS OF THE PIERCE COUNTY AUDITOR, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHERLY CORNER OF SAID LOT 1 AND THE SOUTHWESTERLY RIGHT OF WAY LINE OF PORT OF TACOMA ROAD, BEING THE TRUE POINT OF BEGINNING OF THIS DESCRIPTION;
THENCE SOUTHWESTERLY ALONG THE NORTHWESTERLY LINE OF SAID LOT TO THE WESTERLY CORNER THEREOF;
THENCE SOUTHEASTERLY ALONG THE SOUTHWESTERLY LINE OF SAID LOT A DISTANCE OF 200 FEET;
THENCE ON AN ANGLE TO THE LEFT OF 90° AND PARALLEL TO THE NORTHWESTERLY LINE OF SAID LOT TO INTERSECT THE NORTHEASTERLY SIDE OF SAID LOT;
THENCE ALONG THE NORTHEASTERLY LINE OF SAID LOT TO THE TRUE POINT OF BEGINNING;

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

PARCEL C: (696500–0423)

THAT PORTION OF BLOCK 13, CORRECTED PLAT OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 18 OF PLATS, PAGES 8 AND 8A, RECORDS OF THE PIERCE COUNTY AUDITOR, LYING NORTHERLY OF THE PROLONGATION OF THE NORTHWESTERLY BOUNDARY LINE OF LOTS 2 THROUGH 19, BLOCK 14 OF SAID PLAT;

TOGETHER WITH THAT PORTION OF THE VACATED RIGHT OF WAY ABUTTING THEREON AND ATTACHED THERETO BY OPERATION OF LAW, AS VACATED BY CITY OF TACOMA ORDINANCE NO. 21116 AND RECORDED UNDER RECORDING NUMBER 2772670;

EXCEPT THAT PORTION THEREOF CONVEYED TO THE CITY OF TACOMA BY WARRANTY DEED RECORDED NOVEMBER 28, 1977 UNDER RECORDING NUMBER 2781220;

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

SITTS & HILL ENGINEERS, INC.
CIVIL • STRUCTURAL • SURVEYING

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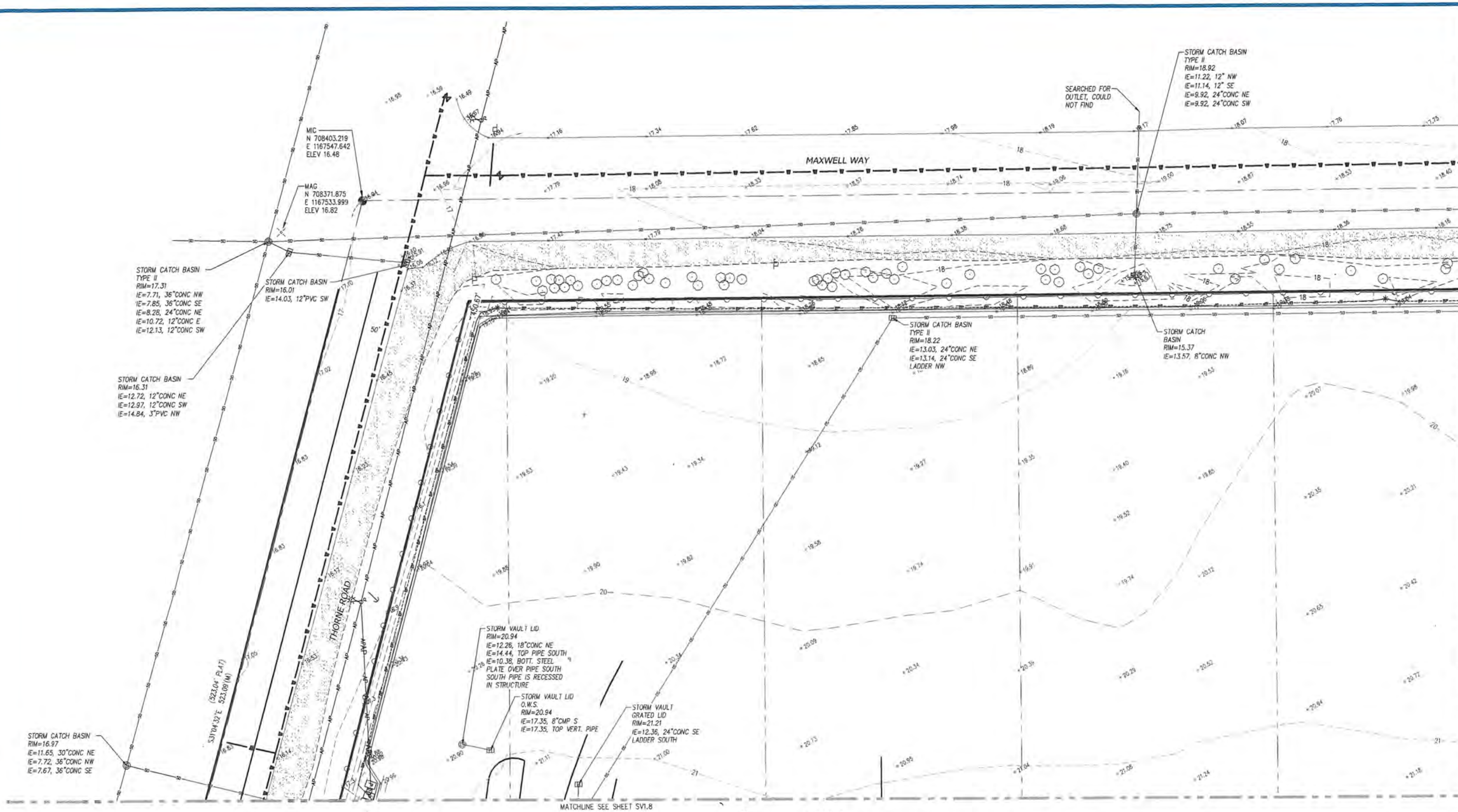
APPROVED: M.A.M. 00/00/00
CHECKED BY DATE
DIRECTOR ENG. DATE | PROJ. ENGR DATE

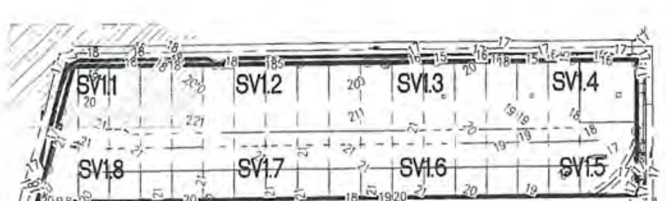
PRINTED BY: schillingd Nov 19, 2019
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401–1837

PARCEL F
TOPOGRAPHIC SURVEY

TOWNSHIP: 21 NORTH | RANGE: 3 EAST | SECTION: 34
DAT–HRZ: WA83/2011–SF | VERT: MLLW 19.18' @ Tide 22 1933
PARCEL: N/A | DRAWING SCALE: AS NOTED

SV1.0
SH 1 OF 9
CONT/CONS:
M. ID:
PHASE:





KEY MAP
SCALE 1"=300'

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- UTILITY CLEAN OUT
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- ROOF DRAIN
- WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- FIRE DEPARTMENT CONNECTION
- WATER BLOW OFF
- POST INDICATOR VALVE
- IRRIGATION CONTROL VALVE
- GAS VALVE
- GAS METER
- POWER METER
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- POWER MANHOLE
- LIGHT POLE
- TRAFFIC LOOP
- UTILITY VAULT
- UTILITY MANHOLE
- COLUMN
- BOLLARD
- ASPHALT SURFACE
- CONCRETE SURFACE
- RIP-RAP SURFACE
- UTILITY POLE
- SIGN
- MAILBOX
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM VAULT
- TELECOM MANHOLE
- TELECOM CABINET
- SCHED. B EXCEPTION NUMBER
- STORM DRAIN LINE
- RECORD STORM LINE
- SANITARY SEWER LINE
- RECORD SANITARY LINE
- BURIED WATER LINE
- RECORD WATER LINE
- BURIED GAS LINE
- RECORD GAS LINE
- BURIED POWER LINE
- RECORD BURIED POWER
- BURIED TELECOM LINE
- RECORD TELECOM LINE
- OVERHEAD POWER LINE
- CHAIN LINK FENCE
- WOOD OR SPLIT RAIL FENCE
- RAILROAD TRACKS

SEE SHEET SV1.0 FOR SURVEY CONTROL, NOTES AND BOUNDARY INFORMATION

PARCEL F
TOPOGRAPHIC SURVEY

SV1.1 SH 2 OF 9

CONT/CONS:	TOWNSHIP: 21 NORTH	RANGE: 3 EAST	SECTION: 34
M. ID:	DAT-HRZ: WA83/2011-SF	VERT: MLLW 19.18' @ Tide 22 1933	
PHASE:	PARCEL: N/A	DRAWING SCALE: AS NOTED	

APPROVED:

M.A.M. 00/00/00	
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DIRECTOR ENG. DATE	PROJ. ENGR DATE
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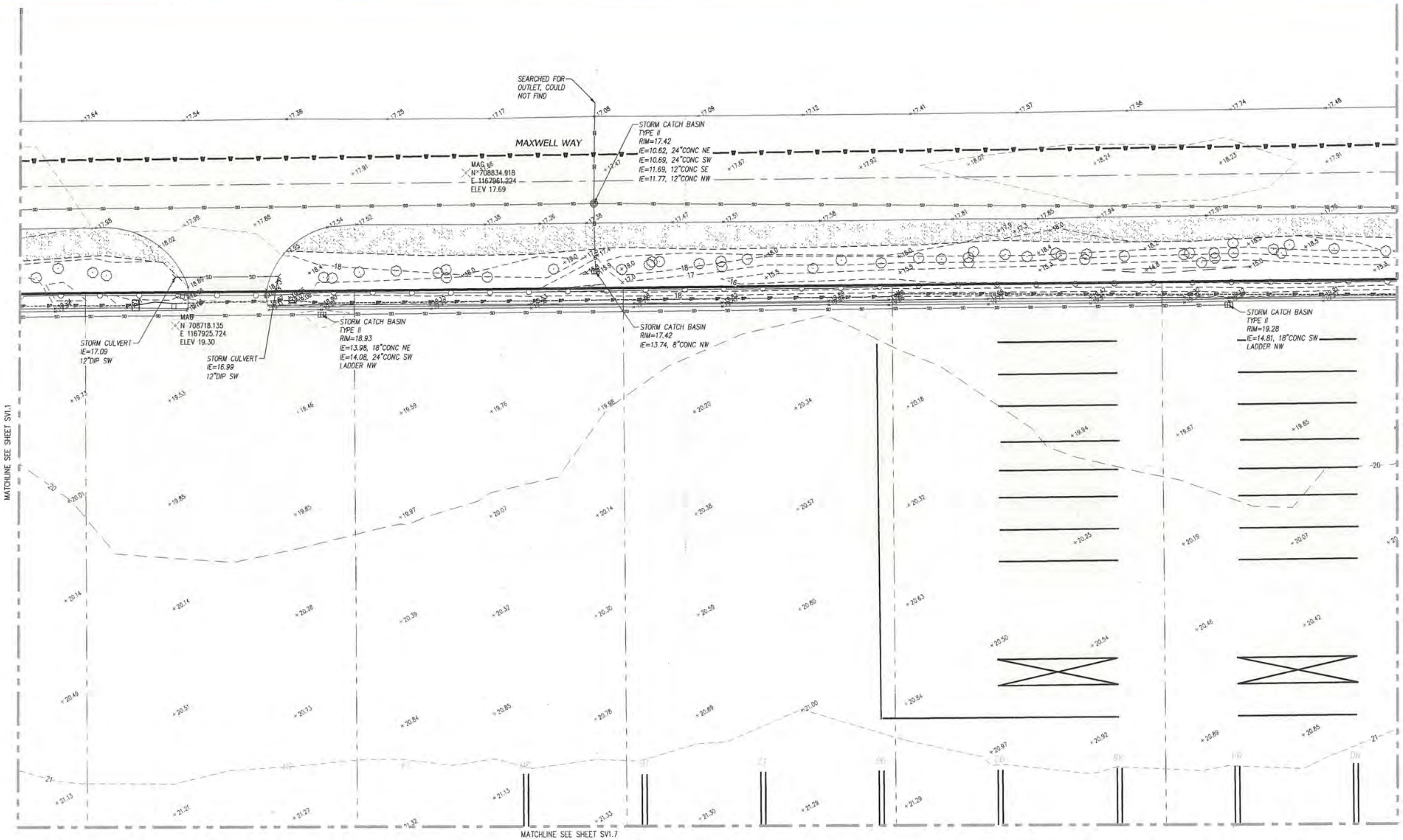
BINDING EDGE



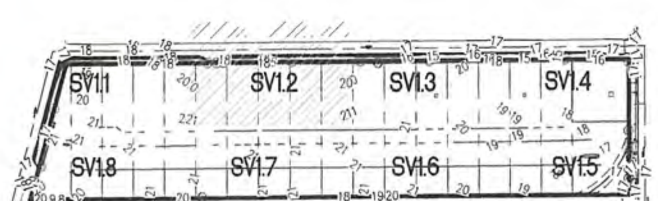
HORIZONTAL SCALE: 1"=20'

20 0 20 40

LEGEND

FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED	IRRIGATION CONTROL VALVE
SET REBAR W/ CONTROL CAP	GAS VALVE
SURVEY CONTROL POINT	GAS METER
SANITARY SEWER MANHOLE	POWER METER
UTILITY CLEAN OUT	POWER CABINET
STORM MANHOLE	UTILITY POLE
STORM CATCH BASIN	GUY ANCHOR
STORM CULVERT	JUNCTION BOX
ROOF DRAIN	POWER VAULT
WATER MANHOLE	POWER TRANSFORMER
WATER VALVE	POWER MANHOLE
WATER METER	LIGHT POLE
FIRE HYDRANT	TRAFFIC LOOP
WATER VAULT	UTILITY VAULT
FIRE DEPARTMENT CONNECTION	UTILITY MANHOLE
WATER BLOW OFF	COLUMN
POST INDICATOR VALVE	BOLLARD

UTILITY POLE	STORM DRAIN LINE
SIGN	RECORD STORM LINE
MAILBOX	SANITARY SEWER LINE
MONITORING WELL	RECORD SANITARY LINE
TPN TAX PARCEL NUMBER	BURIED WATER LINE
TELECOM VAULT	RECORD WATER LINE
TELECOM MANHOLE	BURIED GAS LINE
TELECOM CABINET	RECORD GAS LINE
SCHED. B EXCEPTION NUMBER	BURIED POWER LINE
	RECORD BURIED POWER
	BURIED TELECOM LINE
ASPHALT SURFACE	RECORD TELECOM LINE
CONCRETE SURFACE	OVERHEAD POWER LINE
RIP-RAP SURFACE	CHAIN LINK FENCE
	WOOD OR SPLIT RAIL FENCE
	RAILROAD TRACKS



KEY MAP

SCALE 1"=300'

SEE SHEET SV1.0 FOR SURVEY CONTROL, NOTES AND BOUNDARY INFORMATION

PORT OF TACOMA FILE: P:\17500\17537\Drawings\17537 - Topo SV1.2

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PRINTED BY: schillingd Nov 25, 2019

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PARCEL F
TOPOGRAPHIC SURVEY

TOWNSHIP: 21 NORTH | RANGE: 3 EAST | SECTION: 34

DAT-HRZ: WA83/2011-SF | VERT: MLLW 19.18' @ Tide 22 1933

PARCEL: N/A | DRAWING SCALE: AS NOTED

SV1.2

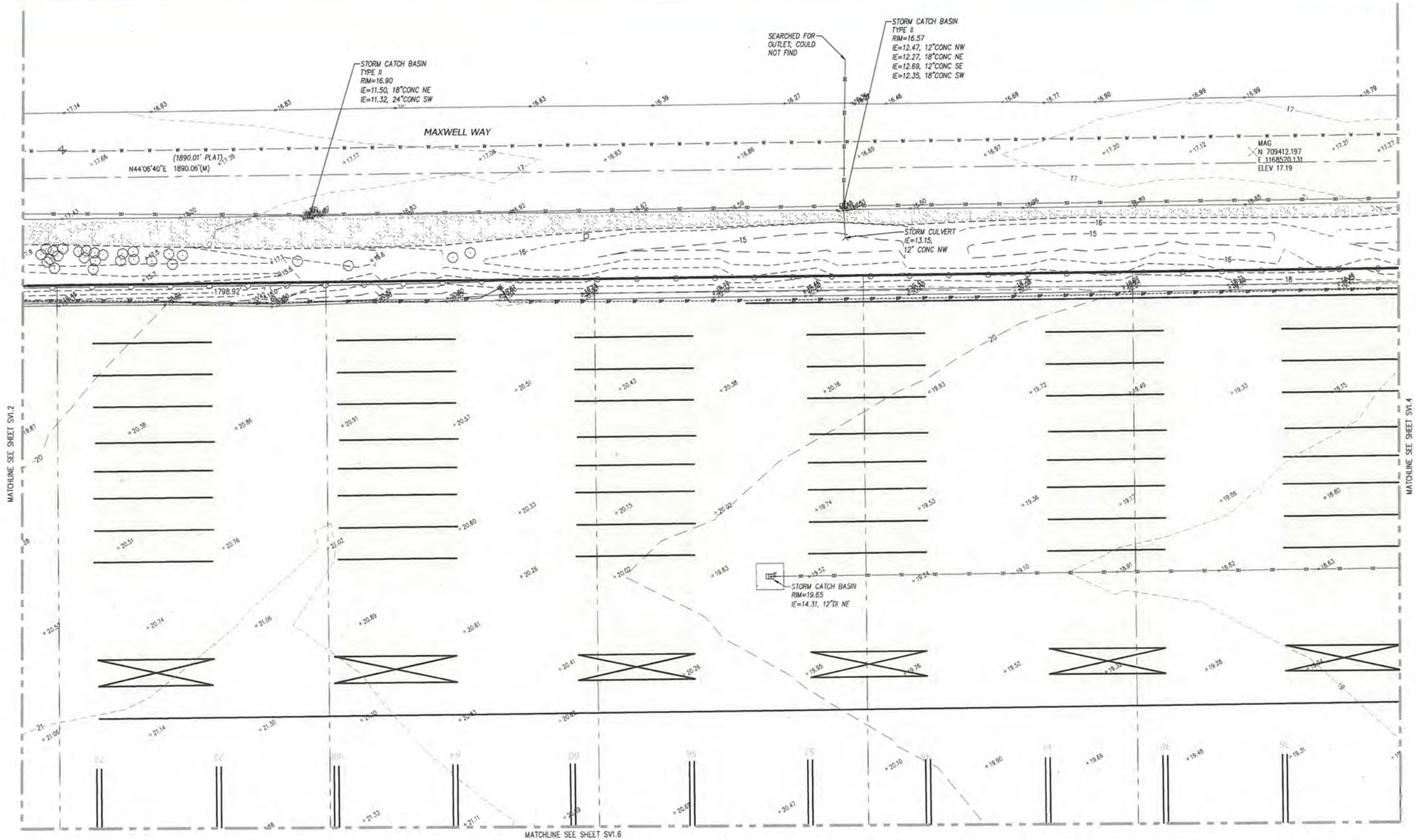
SH 3 OF 9

CONT/CONS:

M. ID:

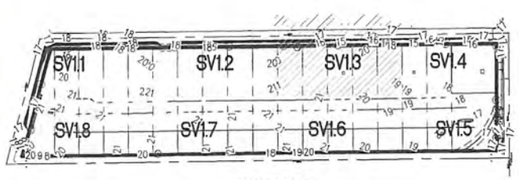
PHASE:

BINDING EDGE



HORIZONTAL SCALE: 1"=20'

20 0 20 40



KEY MAP
SCALE 1"=300'

SEE SHEET SV1.0 FOR SURVEY CONTROL, NOTES AND BOUNDARY INFORMATION

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- UTILITY CLEAN OUT
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- ROOF DRAIN
- WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- FIRE DEPARTMENT CONNECTION
- WATER BLOW OFF
- POST INDICATOR VALVE
- IRRIGATION CONTROL VALVE
- GAS VALVE
- GAS METER
- POWER METER
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- POWER MANHOLE
- LIGHT POLE
- TRAFFIC LOOP
- UTILITY VAULT
- UTILITY MANHOLE
- COLUMN
- BOLLARD
- UTILITY POLE
- SIGN
- MAILBOX
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM VAULT
- TELECOM MANHOLE
- TELECOM CABINET
- SCHED. B EXCEPTION NUMBER
- ASPHALT SURFACE
- CONCRETE SURFACE
- RIP-RAP SURFACE
- STORM DRAIN LINE
- RECORD STORM LINE
- SANITARY SEWER LINE
- RECORD SANITARY LINE
- BURIED WATER LINE
- RECORD WATER LINE
- BURIED GAS LINE
- RECORD GAS LINE
- BURIED POWER LINE
- RECORD BURIED POWER
- BURIED TELECOM LINE
- RECORD TELECOM LINE
- OVERHEAD POWER LINE
- CHAIN LINK FENCE
- WOOD OR SPLIT RAIL FENCE
- RAILROAD TRACKS

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PARCEL F
TOPOGRAPHIC SURVEY

APPROVED:

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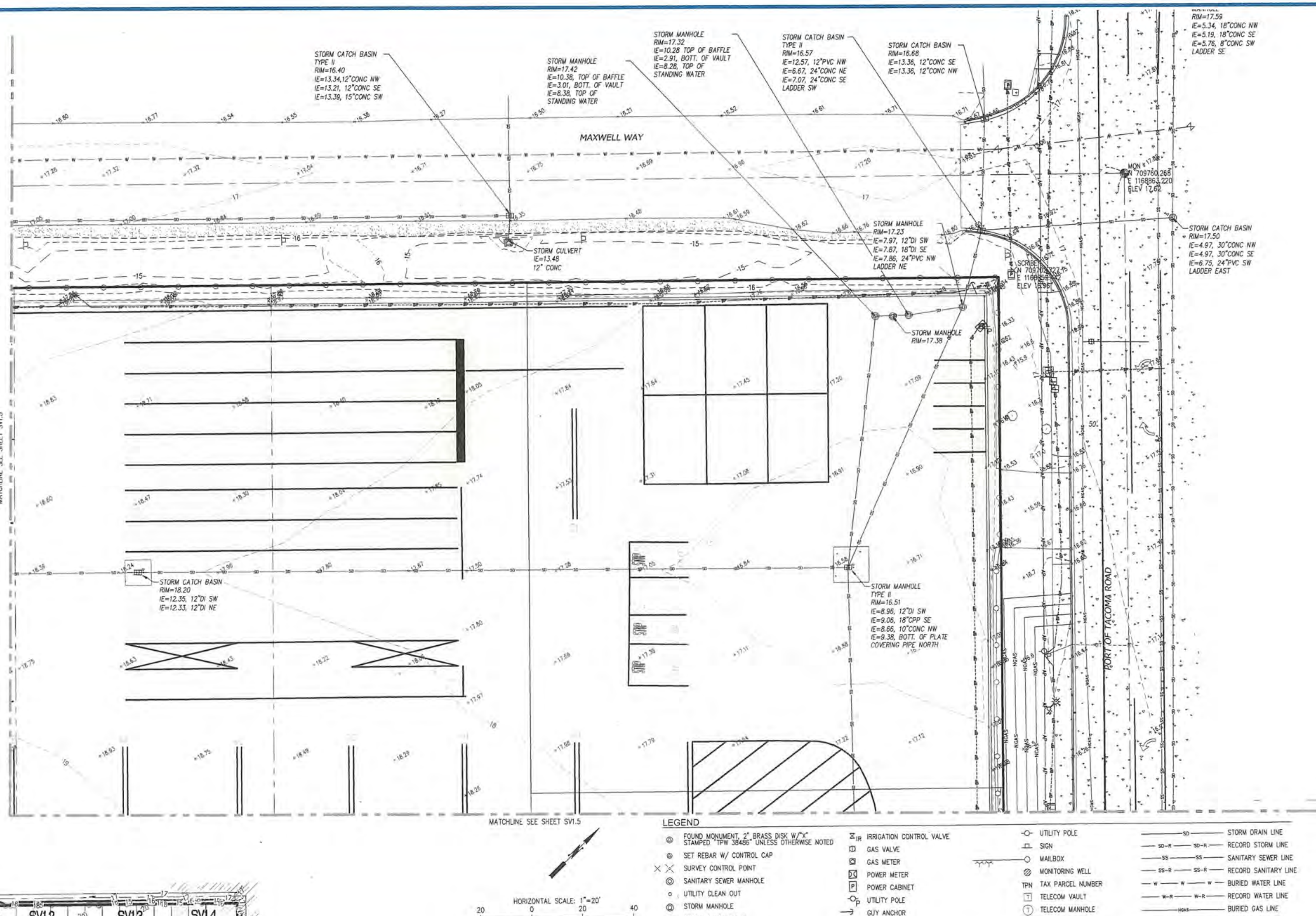
SV1.3
SH 4 OF 9

CONT/CONS:	TOWNSHIP: 21 NORTH	RANGE: 3 EAST	SECTION: 34
M. ID:	DAT-HRZ: WA83/2011-SF	VERT: MLLW 19.18' @ Tide 22 1933	
PHASE:	PARCEL: N/A	DRAWING SCALE: AS NOTED	

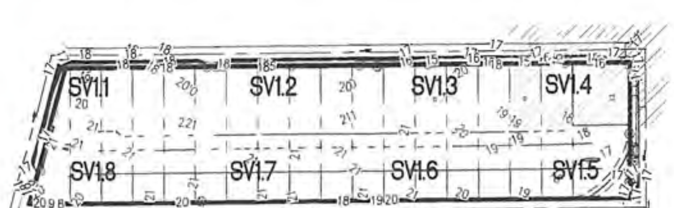
PORT OF TACOMA FILE: P:\17500\17537\Drawings\17537 - Topo SV1.3

BINDING EDGE



LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- UTILITY CLEAN OUT
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- RD ROOF DRAIN
- W WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- W WATER VAULT
- FIRE DEPARTMENT CONNECTION
- WATER BLOW OFF
- POST INDICATOR VALVE
- IR IRRIGATION CONTROL VALVE
- GAS VALVE
- GAS METER
- POWER METER
- P POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- J JUNCTION BOX
- P POWER VAULT
- POWER TRANSFORMER
- P POWER MANHOLE
- LIGHT POLE
- TRAFFIC LOOP
- U UTILITY VAULT
- U UTILITY MANHOLE
- COLUMN
- BOLLARD
- UTILITY POLE
- SIGN
- MAILBOX
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- T TELECOM VAULT
- T TELECOM MANHOLE
- TELECOM CABINET
- SCHED. B EXCEPTION NUMBER
- ASPHALT SURFACE
- CONCRETE SURFACE
- RIP-RAP SURFACE
- SD STORM DRAIN LINE
- SD-R RECORD STORM LINE
- SS SANITARY SEWER LINE
- SS-R RECORD SANITARY LINE
- W BURIED WATER LINE
- W-R RECORD WATER LINE
- NGAS BURIED GAS LINE
- NGAS-R RECORD GAS LINE
- BP BURIED POWER LINE
- BP-R RECORD BURIED POWER
- BT BURIED TELECOM LINE
- BT-R RECORD TELECOM LINE
- AP OVERHEAD POWER LINE
- CHAIN LINK FENCE
- WOOD OR SPLIT RAIL FENCE
- RAILROAD TRACKS



KEY MAP
SCALE 1"=300'

SEE SHEET SV1.0 FOR SURVEY CONTROL, NOTES AND BOUNDARY INFORMATION

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PARCEL F
TOPOGRAPHIC SURVEY

TOWNSHIP: 21 NORTH | RANGE: 3 EAST | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW 19.18' @ Tide 22 1933
PARCEL: N/A | DRAWING SCALE: AS NOTED

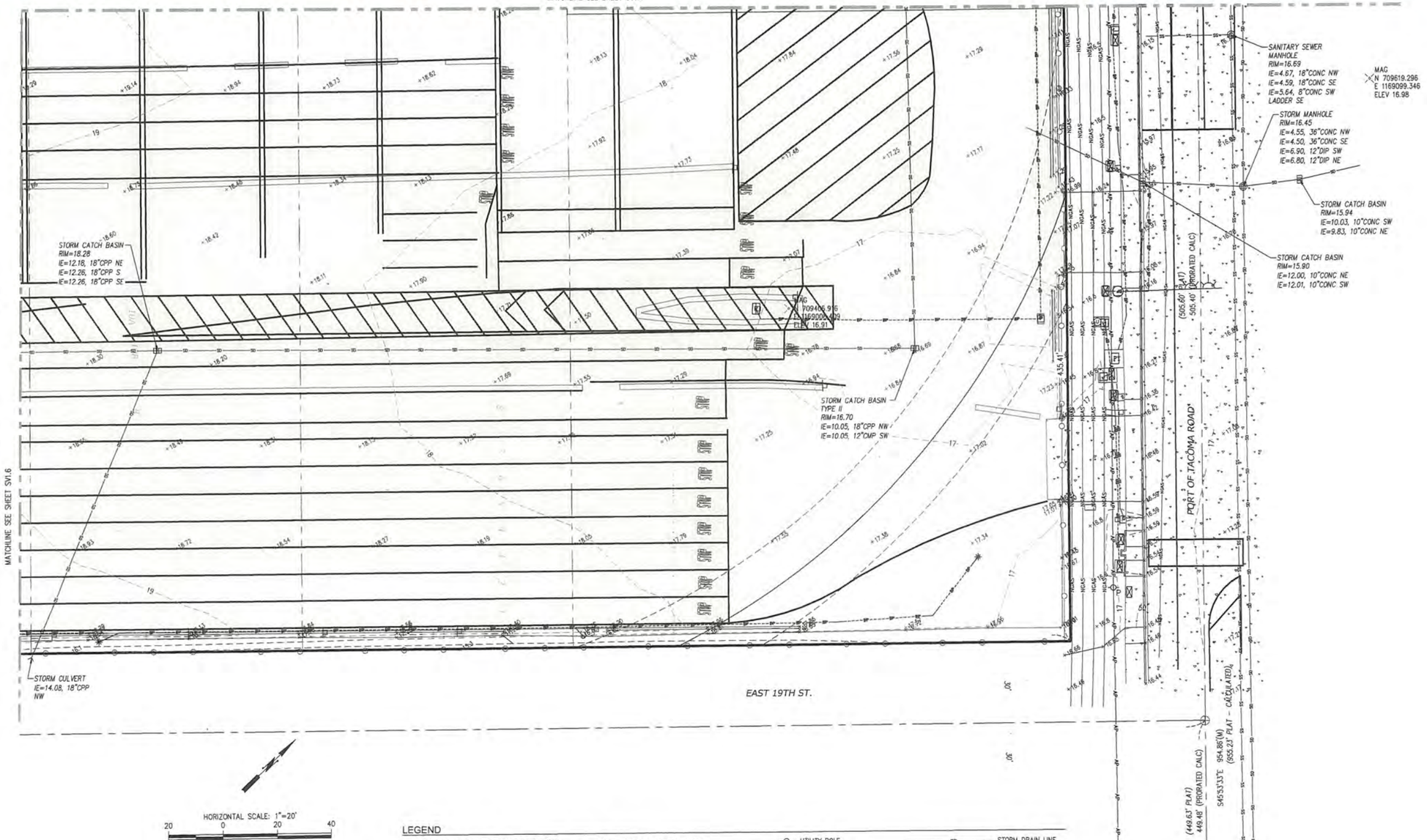
SV1.4
SH 5 OF 9

CONT/CONS:
M. ID:
PHASE:

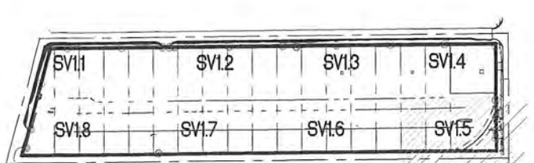
BINDING EDGE

MATCHLINE SEE SHEET SV1.4

MATCHLINE SEE SHEET SV1.6



HORIZONTAL SCALE: 1"=20'
20 0 20 40



KEY MAP
SCALE 1"=300'

SEE SHEET SV1.0 FOR SURVEY CONTROL, NOTES AND BOUNDARY INFORMATION

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- UTILITY CLEAN OUT
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- ROOF DRAIN
- WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- FIRE DEPARTMENT CONNECTION
- WATER BLOW OFF
- POST INDICATOR VALVE
- IRRIGATION CONTROL VALVE
- GAS VALVE
- GAS METER
- POWER METER
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
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- POWER TRANSFORMER
- POWER MANHOLE
- LIGHT POLE
- TRAFFIC LOOP
- UTILITY VAULT
- UTILITY MANHOLE
- COLUMN
- BOLLARD
- UTILITY POLE
- SIGN
- MAILBOX
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM VAULT
- TELECOM MANHOLE
- TELECOM CABINET
- SCHED. B EXCEPTION NUMBER
- ASPHALT SURFACE
- CONCRETE SURFACE
- RIP-RAP SURFACE
- STORM DRAIN LINE
- RECORD STORM LINE
- SANITARY SEWER LINE
- RECORD SANITARY LINE
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- RECORD TELECOM LINE
- OVERHEAD POWER LINE
- CHAIN LINK FENCE
- WOOD OR SPLIT RAIL FENCE
- RAILROAD TRACKS

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PARCEL F
TOPOGRAPHIC SURVEY

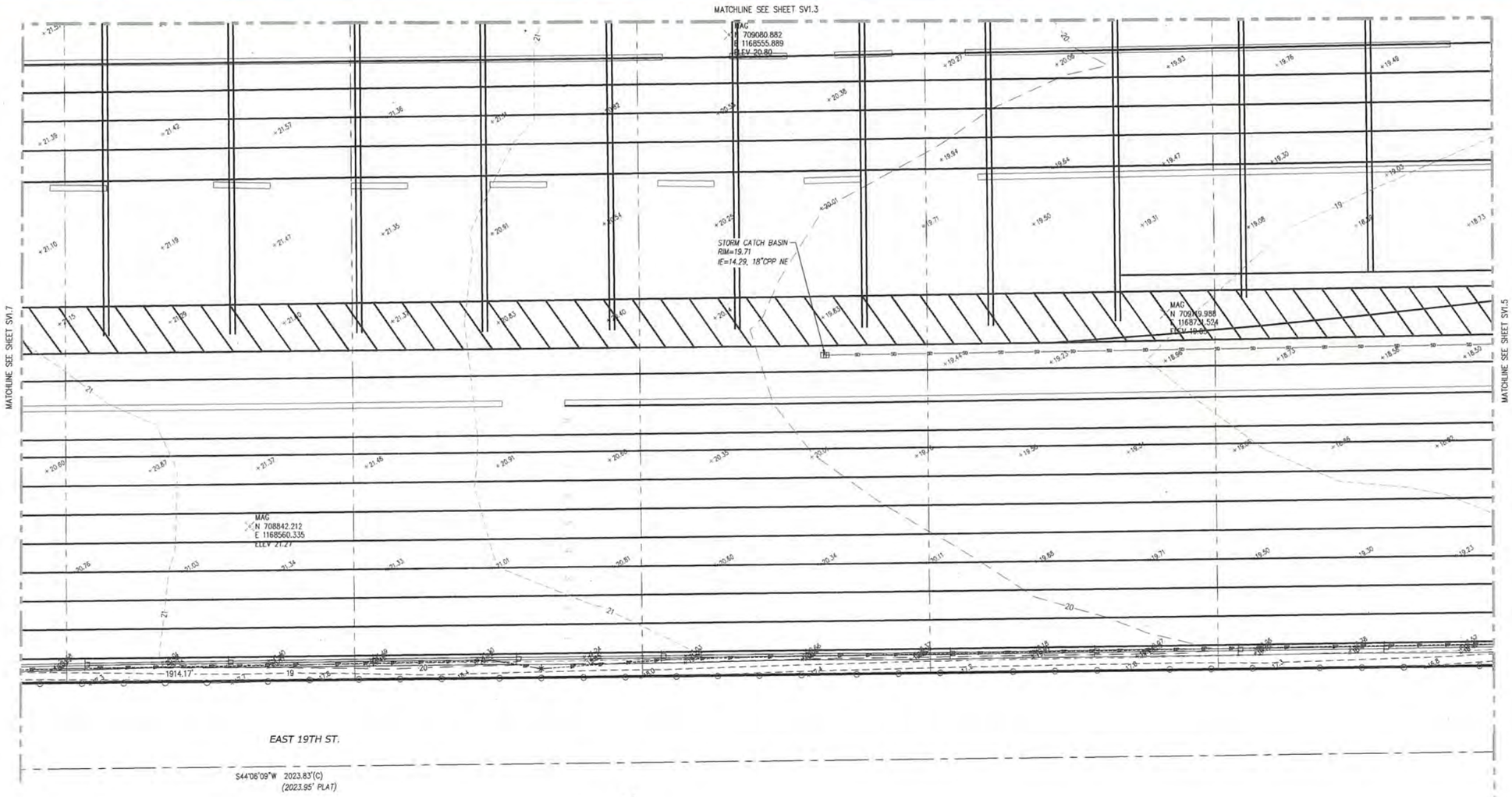
TOWNSHIP: 21 NORTH	RANGE: 3 EAST	SECTION: 34	PRINTED BY: schillingd Nov 25, 2019
DAT-HRZ: WA83/2011-SF	VERT: MLLW 19.18' @ Tide 22 1933		PORT ADDRESS: ONE SITCUM PLAZA
PARCEL: N/A	DRAWING SCALE: AS NOTED		TACOMA, WA 98401-1837

SV1.5
SH 6 OF 9

CONT/CONS:
M. ID:
PHASE:

PORT OF TACOMA FILE: P:\17500\17537\Drawings\17537 - Topo SV1.5

BINDING EDGE



HORIZONTAL SCALE: 1"=20'
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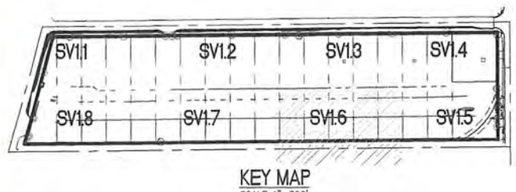

KEY MAP
SCALE 1"=300'

SEE SHEET SV1.0 FOR SURVEY CONTROL, NOTES AND BOUNDARY INFORMATION

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- UTILITY CLEAN OUT
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- ROOF DRAIN
- WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- FIRE DEPARTMENT CONNECTION
- WATER BLOW OFF
- POST INDICATOR VALVE
- IRRIGATION CONTROL VALVE
- GAS VALVE
- GAS METER
- POWER METER
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
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- UTILITY MANHOLE
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- SIGN
- MAILBOX
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM VAULT
- TELECOM MANHOLE
- TELECOM CABINET
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TACOMA, WA 98401-1837
DRAWING SCALE: AS NOTED

PARCEL F
TOPOGRAPHIC SURVEY

SV1.6
SH 7 OF 9

TOWNSHIP: 21 NORTH	RANGE: 3 EAST
SECTION: 34	
DAT-HRZ: WA83/2011-SF	VERT: MLLW 19.18' @ Tide 22 1933
CONT/CONS:	
M. ID:	
PHASE:	PARCEL: N/A

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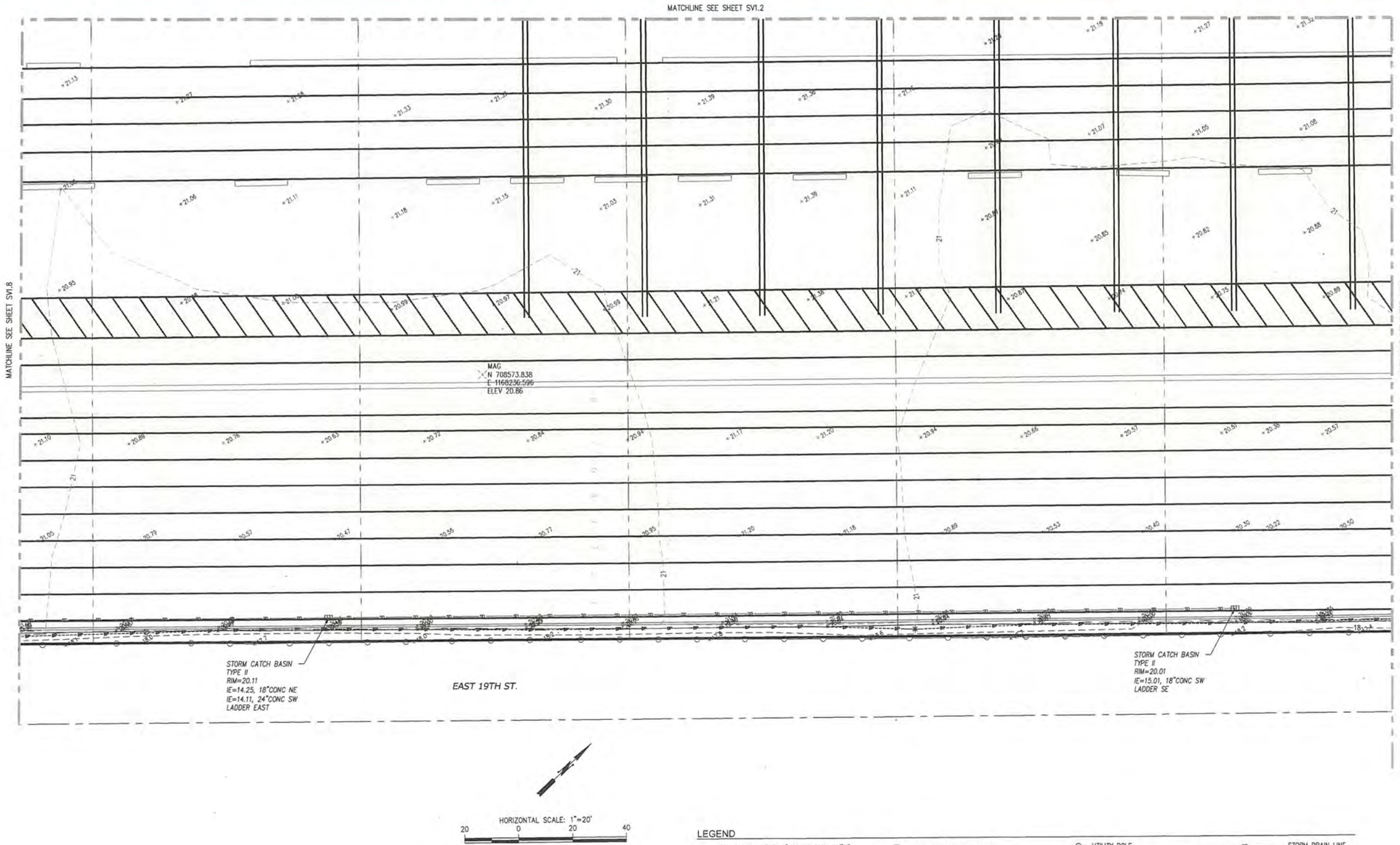
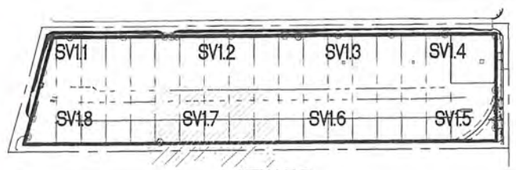
BINDING EDGE



HORIZONTAL SCALE: 1"=20'

20 0 20 40



KEY MAP
SCALE 1"=300'

SEE SHEET SV1.0 FOR SURVEY CONTROL, NOTES AND BOUNDARY INFORMATION

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- UTILITY CLEAN OUT
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- ROOF DRAIN
- WATER MANHOLE
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- WOOD OR SPLIT RAIL FENCE
- RAILROAD TRACKS

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http://www.sitts-hill.com

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PRINTED BY: schillingd Nov 25, 2019
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TACOMA, WA 98401-1837

PARCEL F
TOPOGRAPHIC SURVEY

TOWNSHIP: 21 NORTH	RANGE: 3 EAST	SECTION: 34	
DAT-HRZ: WA83/2011-SF	VERT: MLLW 19.18' @ Tide 22 1933		
PARCEL: N/A	DRAWING SCALE: AS NOTED		

SV1.7
SH 8 OF 9

CONT/CONS:
M. ID:
PHASE:

BINDING EDGE

MATCHLINE SEE SHEET SV1.1

MATCHLINE SEE SHEET SV1.7

THORNE ROAD

STORM CATCH BASIN
RIM=16.08
IE=12.45, 12"CONC NE
IE=12.45, 12"CONC SW

STORM CATCH BASIN
RIM=16.15
IE=13.55, 12"CONC SW

STORM CATCH BASIN
RIM=21.18
IE=13.78, 18"CONC NE
IE=11.83, 30"CMP SW
GATE VALVE

STORM VAULT LID
RIM=21.29
IE=12.27, 24"CONC NE
IE=15.05, 18"CONC SW
IE=12.39, 24"DIP NW
W/GATE VALVE

450.67'

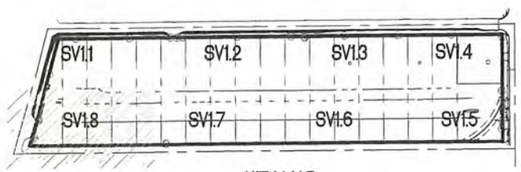
MAG
N 708178.768
E 1167869.102
ELEV 20.36

STORM CATCH BASIN
RIM=19.75
IE=12.99, 24"CONC NE
IE=12.82, 24"CONC NW

EAST 19TH ST.

MIC
N 707955.199
E 1167817.645
ELEV 16.14

30'



KEY MAP
SCALE 1"=300'

HORIZONTAL SCALE: 1"=20'
20 0 20 40

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- UTILITY CLEAN OUT
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- ROOF DRAIN
- WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- FIRE DEPARTMENT CONNECTION
- WATER BLOW OFF
- POST INDICATOR VALVE
- IRRIGATION CONTROL VALVE
- GAS VALVE
- GAS METER
- POWER METER
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- POWER MANHOLE
- LIGHT POLE
- TRAFFIC LOOP
- UTILITY VAULT
- UTILITY MANHOLE
- COLUMN
- BOLLARD
- UTILITY POLE
- SIGN
- MAILBOX
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM VAULT
- TELECOM MANHOLE
- TELECOM CABINET
- SCHED. B EXCEPTION NUMBER
- ASPHALT SURFACE
- CONCRETE SURFACE
- RIP-RAP SURFACE
- SD STORM DRAIN LINE
- SD-R SD-R RECORD STORM LINE
- SS SANITARY SEWER LINE
- SS-R SS-R RECORD SANITARY LINE
- W BURIED WATER LINE
- W-R W-R RECORD WATER LINE
- NGAS BURIED GAS LINE
- NGAS-R NGAS-R RECORD GAS LINE
- BP BURIED POWER LINE
- BP-R BP-R RECORD BURIED POWER
- BT BURIED TELECOM LINE
- BT-R BT-R RECORD TELECOM LINE
- AP OVERHEAD POWER LINE
- CHAIN LINK FENCE
- WOOD OR SPLIT RAIL FENCE
- RAILROAD TRACKS

SEE SHEET SV1.0 FOR SURVEY CONTROL, NOTES AND BOUNDARY INFORMATION

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PARCEL F
TOPOGRAPHIC SURVEY

SV1.8
SH 9 OF 9

CONT/CONS:	TOWNSHIP: 21 NORTH	RANGE: 3 EAST	SECTION: 34
M. ID:	DAT-HRZ: WA83/2011-SF	VERT: MLLW 19.18' @ Tide 22 1933	
PHASE:	PARCEL: N/A	DRAWING SCALE: AS NOTED	

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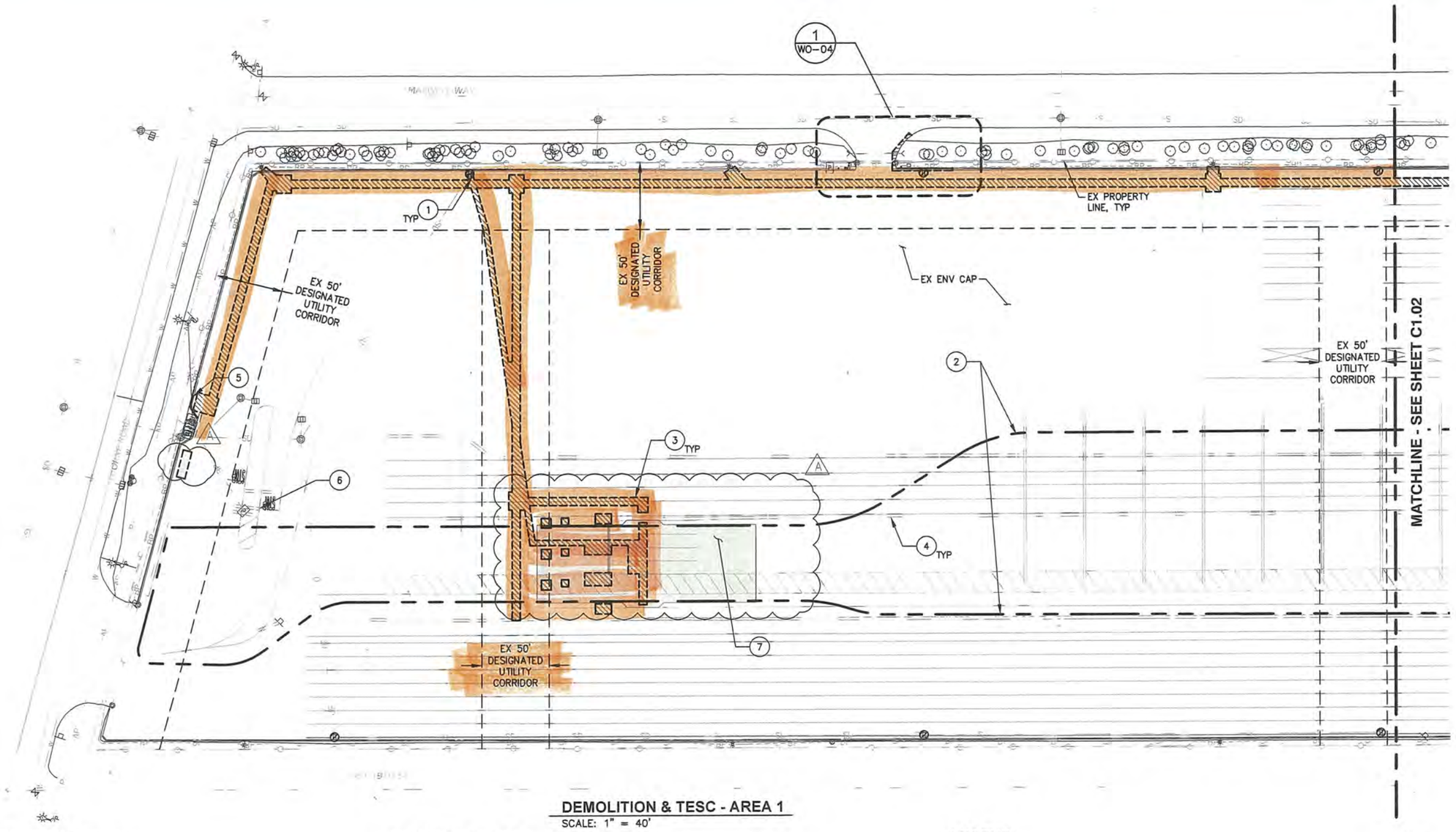

DEMOLITION & TESC - AREA 1

SCALE: 1" = 40'

DEMOLITION/TESC NOTES:

1. SEE ELECTRICAL PLANS FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
2. SEE SHEET C1.03 FOR TESC NOTES.
3. ALL UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
4. SAWCUT AREAS SHOWN DO NOT INCLUDE ALL SAWCUTTING REQUIRED FOR UTILITY WORK. REFER TO THE ELECTRICAL PLANS FOR EXTENT OF BURIED UTILITY WORK. EXTENTS WILL VARY WITH CONTRACTOR MEANS AND METHODS.

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DEMOLITION/TESC KEY NOTES:

(1) PROVIDE DRAINAGE STRUCTURE INSERT, SEE SHEET C1.03 DETAIL 1

(2) REMOVE EX PAVEMENT STRIPING WITHIN THE INDICATED IMPROVEMENT AREAS; SEE LIMITS ON SHEET C2.01

(3) SAWCUT AND REMOVE EX ACP AT NEW FEATURES; SEE LIMITS ON SHEET C2.01

(4) CONTRACTOR SHALL REPOSITION EX BARRIERS DURING PHASES 1 AND 2 TO SEPARATE HUSKY AND WUT QUEUE LANES AND THE CONTRACTOR WORK AREAS. APPROXIMATELY 3,955LF OF EX CONCRETE BARRIERS ON SITE. CONTRACTOR RESPONSIBLE FOR ANY ADDITIONAL BARRIERS REQUIRED TO CORDON OFF THE CONTRACTOR WORK AREAS.

(5) REMOVE EX CONC CURB

(6) REMOVE ABOVE GRADE EQUIPMENT TO 2-FT BELOW GRADE. REMOVE WIRING BACK TO POLE/PANEL. ABANDON CONDUIT IN PLACE.

(7) GRIND ACP FOR PAVEMENT OVERLAY AT SCALE AREA

LEGEND:

- SAWCUT AND REMOVE FULL DEPTH ACP
- GRIND EX ACP
- CONCRETE SCALE PAD
- DRAINAGE STRUCTURE INSERT

TRUE NORTH
PROJECT NORTH

40' 0' 40' 80'
SCALE: 1"=40'

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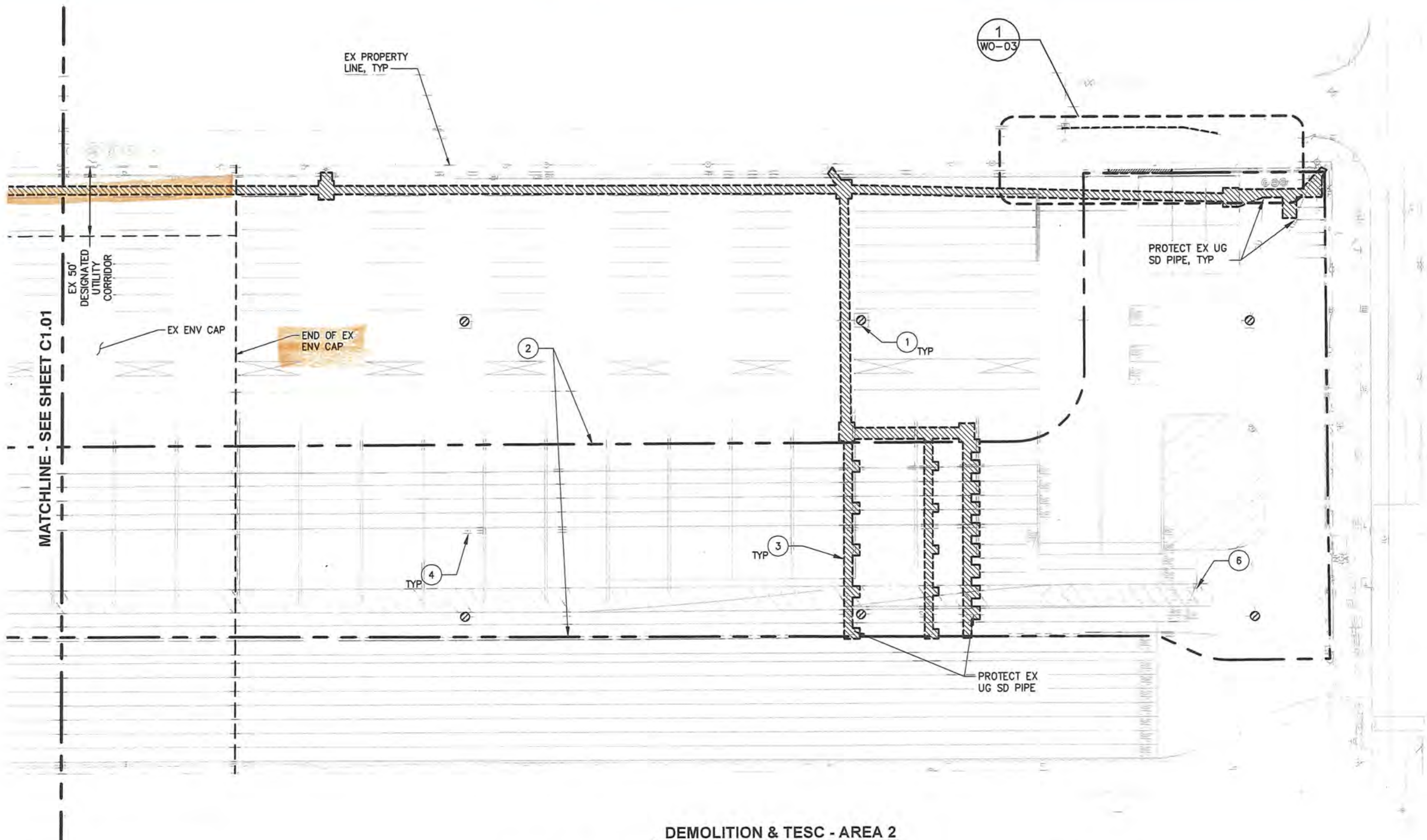
PARCEL: LOT F | DRAWING SCALE: AS NOTED
PHASE: BID

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DEMOLITION AND TESC - AREA 1

C1.01
17 OF 59



DEMOLITION & TESC - AREA 2

SCALE: 1" = 40'

DEMOLITION/TESC NOTES:

1. SEE ELECTRICAL PLANS FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
2. SEE SHEET C1.03 FOR TESC NOTES.
3. ALL UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
4. SAWCUT AREAS SHOWN DO NOT INCLUDE ALL SAWCUTTING REQUIRED FOR UTILITY WORK. REFER TO THE ELECTRICAL PLANS FOR EXTENT OF BURIED UTILITY WORK. EXTENTS WILL VARY WITH CONTRACTOR MEANS AND METHODS.

DEMOLITION/TESC KEY NOTES:

1. PROVIDE DRAINAGE STRUCTURE INSERT, SEE SHEET C1.03 DETAIL 1
2. REMOVE EX PAVEMENT STRIPING WITHIN THE INDICATED IMPROVEMENT AREAS; SEE LIMITS ON SHEET C2.02
3. SAWCUT AND REMOVE EX ACP AT NEW FEATURES; SEE LIMITS ON SHEET C2.02
4. CONTRACTOR SHALL REPOSITION EX BARRIERS DURING PHASES 1 AND 2 TO SEPARATE HUSKY AND WUT QUEUE LANES AND THE CONTRACTOR WORK AREAS. APPROXIMATELY 3,955LF OF EX CONCRETE BARRIERS ON SITE. CONTRACTOR RESPONSIBLE FOR ANY ADDITIONAL BARRIERS REQUIRED TO CORDON OFF THE CONTRACTOR WORK AREAS.
6. REMOVE ABOVE GRADE EQUIPMENT TO 2-FT BELOW GRADE. REMOVE WIRING BACK TO POLE/PANEL. ABANDON CONDUIT IN PLACE.

LEGEND:

- SAWCUT AND REMOVE ACP
- ⊘ DRAINAGE STRUCTURE INSERT

TRUE NORTH
PROJECT NORTH

40' 0' 40' 80'
SCALE: 1"=40'

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LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DEMOLITION AND TESC - AREA 2

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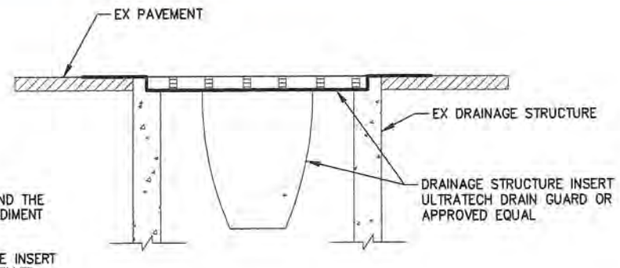
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PARCEL: LOT F | DRAWING SCALE: AS NOTED
PHASE: BID

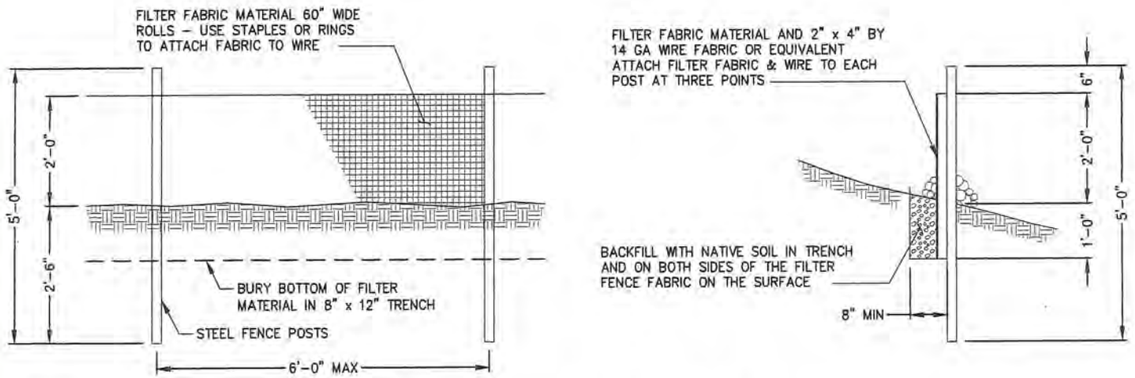
C1.02
18 OF 59



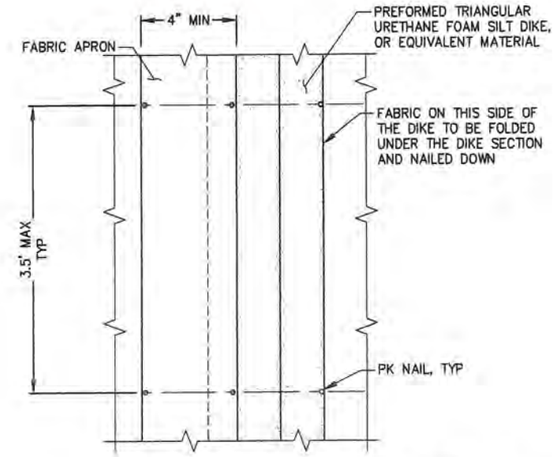
NOTES:

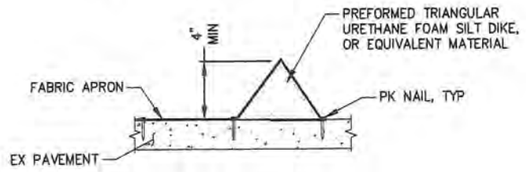
1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC SHALL BE REMOVED. ALL SEDIMENT SHALL BE DISPOSED OF OFF-SITE.
2. ANY SEDIMENT IN THE DRAINAGE STRUCTURE INSERT SHALL BE REMOVED WHEN SEDIMENT HAS FILLED ONE-THIRD OF THE INSERT. THE INSERT SHALL BE REPLACED MONTHLY OR AS DIRECTED BY THE ENGINEER.

1 – TEMPORARY DRAINAGE STRUCTURE INSERT DETAIL
SCALE: NTS



2 – TEMPORARY FILTER FABRIC FENCE - DETAIL
SCALE: NTS





NOTES:

1. PK NAILS SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF A 7-FOOT UNIT AS SHOWN ON THE DIKE PLAN.
2. ALTERNATE APPROVED HOLD DOWN DEVICE MAY BE SUBSTITUTED FOR PK NAILS (WIRE STAPLES, ETC).

3 – TEMPORARY TRIANGULAR SILT DIKE - DETAIL
SCALE: NTS

TESC NOTES:

1. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED FOR THE SITE TO PREVENT ERODED SEDIMENT AND TURBID WATER FROM ENTERING THE CITY STORM DRAINAGE SYSTEM, RIGHT-OF-WAY, AND/OR ADJACENT PROPERTY DURING AND FOLLOWING CONSTRUCTION UNTIL ENTIRE SITE HAS BEEN STABILIZED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM ON-SITE EROSION CAUSING SEDIMENT TO BE DEPOSITED OFF SITE. IF SEDIMENT IS TRANSPORTED ONTO A ROAD SURFACE, THE ROADS SHALL BE CLEANED IMMEDIATELY USING A METHOD ACCEPTABLE TO THE ENGINEER AND/OR THE CITY OF TACOMA. IF A SWEEPER IS USED, IT SHALL BE A REGENERATIVE AIR SWEEPER.
3. THE IMPLEMENTATION OF THESE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND ACCEPTED AND SHALL BE CONDUCTED IN ACCORDANCE WITH CITY OF TACOMA CONSTRUCTION STORMWATER CONTROL TECHNICAL REQUIREMENTS AND ALL OTHER APPLICABLE STANDARDS AND REGULATIONS.
4. THE BOUNDARIES OF THE PROJECT SITE (CONSTRUCTION LIMIT) SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS WILL BE PERMITTED WITHOUT PRIOR APPROVAL. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
5. THE TESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH CLEARING AND GRADING AND/OR DEMOLITION ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT ERODED SEDIMENT OR TURBID WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE TESC FACILITIES DEPICTED ON THESE DRAWINGS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE CONTRACTOR SHOULD ANTICIPATE THAT MORE EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE NECESSARY TO INSURE COMPLETE SILTATION CONTROL ON THE PROJECT SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY THE CONTRACTOR'S ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THESE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND WATER QUALITY OF THE RECEIVING DRAINAGE SYSTEM AND AS REQUIRED BY THE ENGINEER AND/OR CITY OF TACOMA.
7. THE TESC FACILITIES SHALL BE INSPECTED AS NOTED IN THE SPECIFICATIONS BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING UNTIL CONSTRUCTION IS COMPLETED AND POTENTIAL FOR ON-SITE EROSION HAS PASSED.
8. IF EROSION CONTROL FACILITIES FAIL, THEY SHALL BE REPAIRED OR REPLACED IMMEDIATELY UPON RECEIVING VERBAL NOTICE OF SAID FAILURE FROM ENGINEER OR CITY OF TACOMA.
9. ANY AREA STRIPPED OF VEGETATION OR PAVEMENT WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 15 DAYS OR MORE SHALL BE IMMEDIATELY STABILIZED WITH APPROVED TESC METHODS SUCH AS SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.
10. TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.
11. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN INSERT. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. STABILIZED CONSTRUCTION ENTRANCES AND TIRE WASH PADS SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED AND INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED TO MEET ALL APPLICABLE STANDARDS FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL OFFSITE WORK AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
13. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE, AS APPROVED BY THE CITY OF TACOMA.
14. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO INCHES.
15. THE CONTRACTOR SHALL PROTECT STOCK PILE AREAS FROM RELEASE OF ERODED SEDIMENT OR TURBID WATER. STOCK PILES SHALL BE COVERED AT ALL TIMES WHILE NOT IN USE TO KEEP THE STORED MATERIAL DRY.
16. ALL DISTURBED AREAS SHALL BE STABILIZED BY ACCEPTABLE METHODS FOR THE PREVENTION OF ON-SITE EROSION AFTER COMPLETION OF CONSTRUCTION.
17. ALL EROSION/SEDIMENT CONTROL PONDS WITH A DEAD STORAGE DEPTH EXCEEDING 6 INCHES MUST BE SURROUNDED WITH A FENCE WITH A MINIMUM HEIGHT OF 3 FEET.
18. EXISTING PAVED ROADS MAY BE USED AS CONSTRUCTION ENTRANCES.
19. CONTRACTOR SHALL REMOVE ALL TEMPORARY TESC FACILITIES PRIOR TO COMPLETION OF WORK.

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LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DEMOLITION AND TESC - NOTES & DETAILS

C1.03
19 OF 59

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DAT-HRZ: WA83/2011-SF VERT: MLLW
PARCEL: LOT F
PHASE: BID

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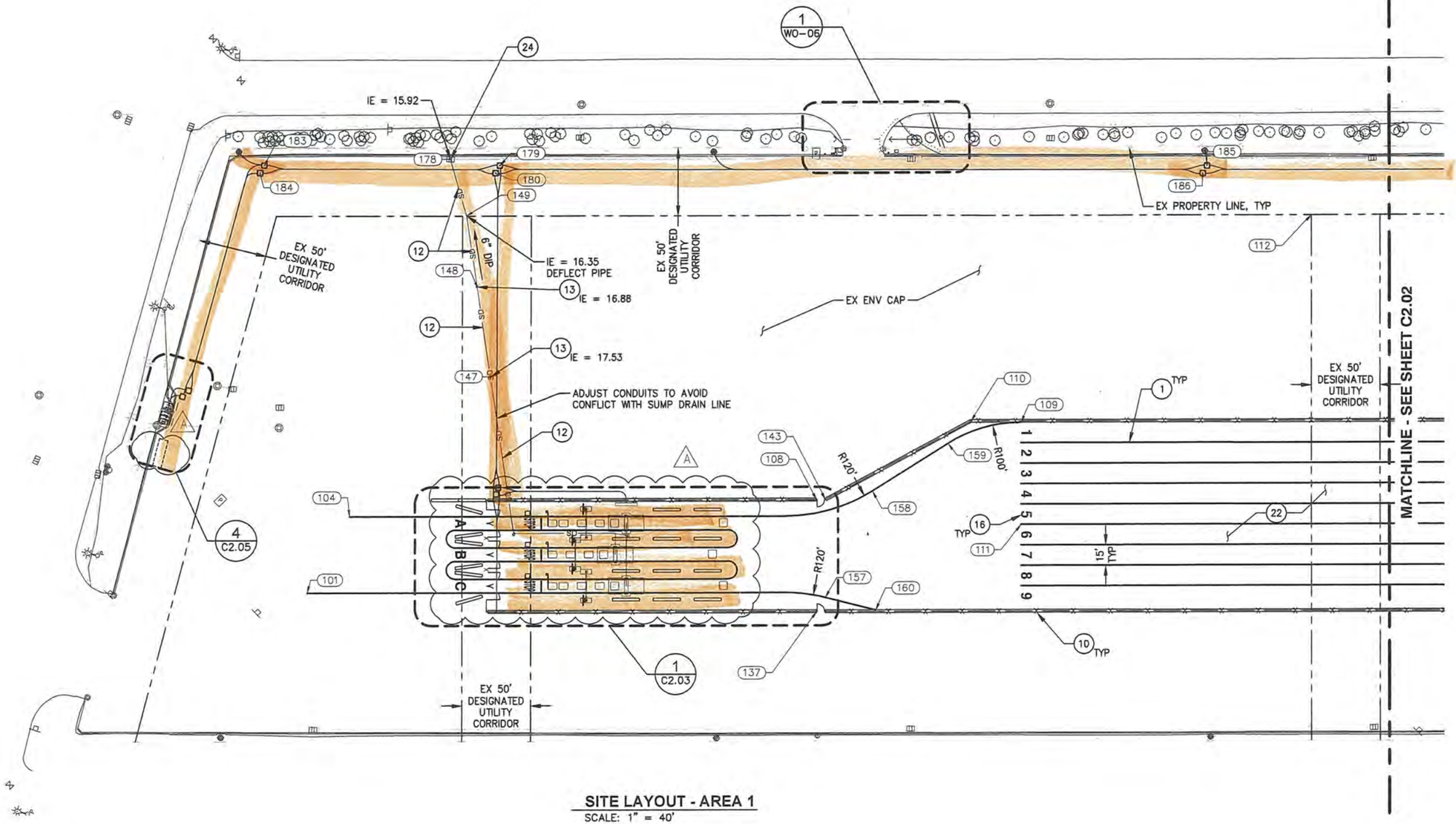


SITE LAYOUT - AREA 1

SCALE: 1" = 40'

KEY NOTES:

(1) 4" WIDE WHITE STRIPING

(10) 10' TYPE II CONC TRAFFIC BARRIER W/ FENCE, SEE C3.09 DETAIL 1

(12) SCALE SUMP DRAIN LINE, SEE NOTE 2

(13) SCALE SUMP DRAIN LINE CLEANOUT, SEE C3.10 DETAIL 2

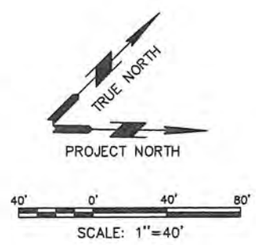
(16) LANE DESIGNATION, SEE C3.01 DETAIL 4

(22) SEAL EX ACP CRACKS GREATER THAN 1/4" WIDE WITHIN ENV CAP AREA AND BETWEEN TRAFFIC BARRIERS PER WSDOT SPECS SECTION 5-02.3(2)E CRACK SEALING (APPROX 1,500 LF). EXCLUDES AREA OF PAVEMENT OVERLAY AT THE NEW SCALES

(24) CONNECT SCALE SUMP DRAIN LINE AT EXISTING DRAINAGE STRUCTURE. CORE EXISTING STRUCTURE AND GROUT IN DRAIN LINE

NOTES:

1. EX STRIPING, EX BARRIERS, AND PHASE 3 WORK (BY OTHERS) NOT SHOWN FOR CLARITY.
2. SCALE SUMP DRAIN INVERTS SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED FOR COMPATIBILITY WITH DRAIN PAN MANUFACTURER. SUMP DRAIN PIPE SHALL BE 6" DIP. DRAIN LINE SLOPE SHALL BE 1% MIN.
3. FOUNDATION AND TRENCH EXCAVATIONS SHALL NOT EXTEND BEYOND OR DAMAGE THE GEOTEXTILE FABRIC AT THE LOWER EXTENT OF THE ENVIRONMENTAL CAP.



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12/02/19

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LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
SITE LAYOUT - AREA 1

C2.01
20 OF 59

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PHASE: BID | PARCEL: LOT F | DRAWING SCALE: AS NOTED

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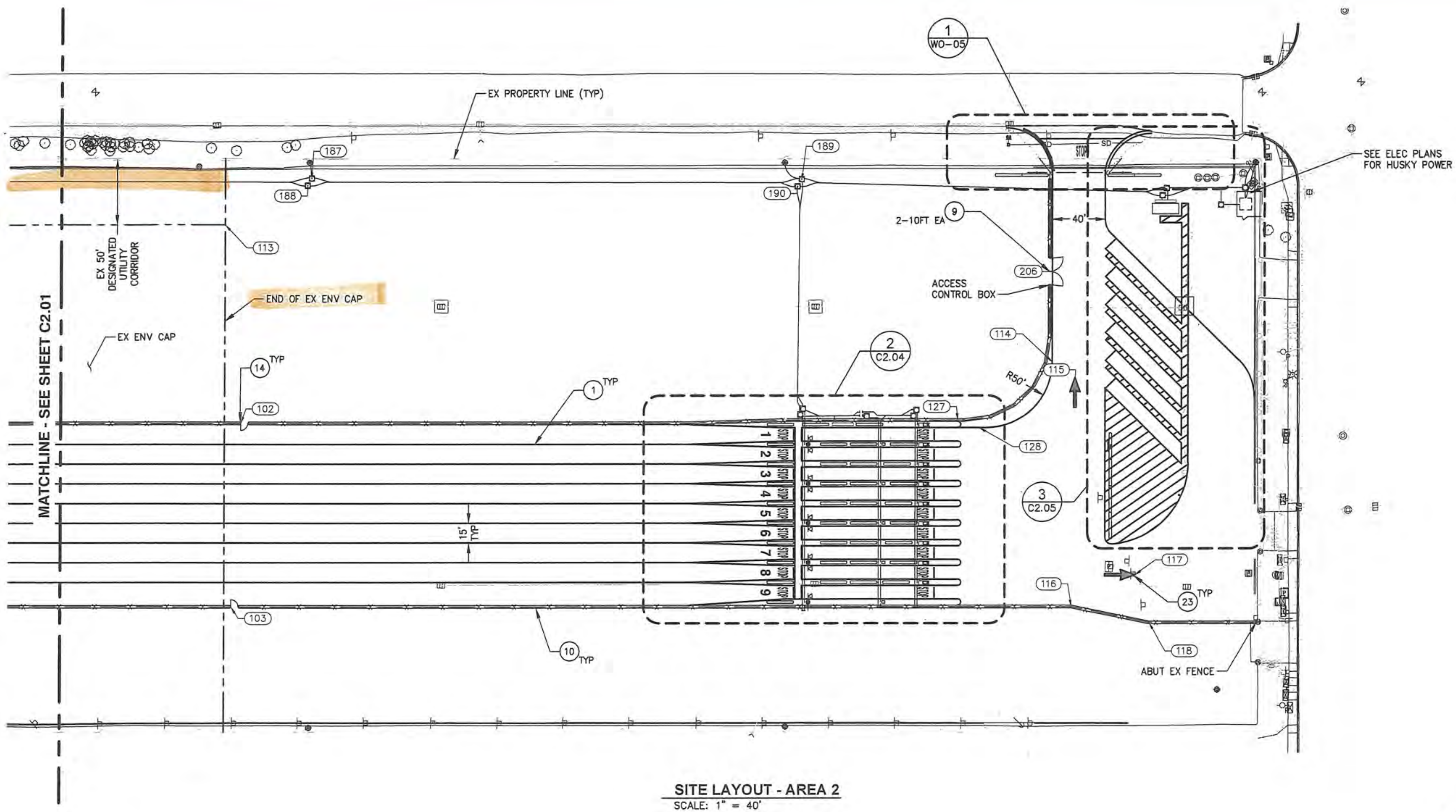

SITE LAYOUT - AREA 2

SCALE: 1" = 40'

KEY NOTES:

1. 4" WIDE WHITE STRIPING
9. CHAIN LINK GATE, SEE C3.09 DETAIL 3
10. 10' TYPE II CONC TRAFFIC BARRIER W/ FENCE, SEE C3.09 DETAIL 1
14. PERSONNEL WALK THROUGH GATE, SEE C3.09 DETAIL 2
23. CHANNELIZATION ARROW, SEE C3.01 DETAIL 5

NOTES:

1. EX STRIPING, EX BARRIERS, AND PHASE 3 WORK (BY OTHERS) NOT SHOWN FOR CLARITY.

TRUE NORTH

PROJECT NORTH

SCALE: 1"=40'

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LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
SITE LAYOUT - AREA 2

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DAT-HRZ: WA83/2011-SF | VERT: MLLW
PARCEL: LOT F | DRAWING SCALE: AS NOTED

PHASE: BID

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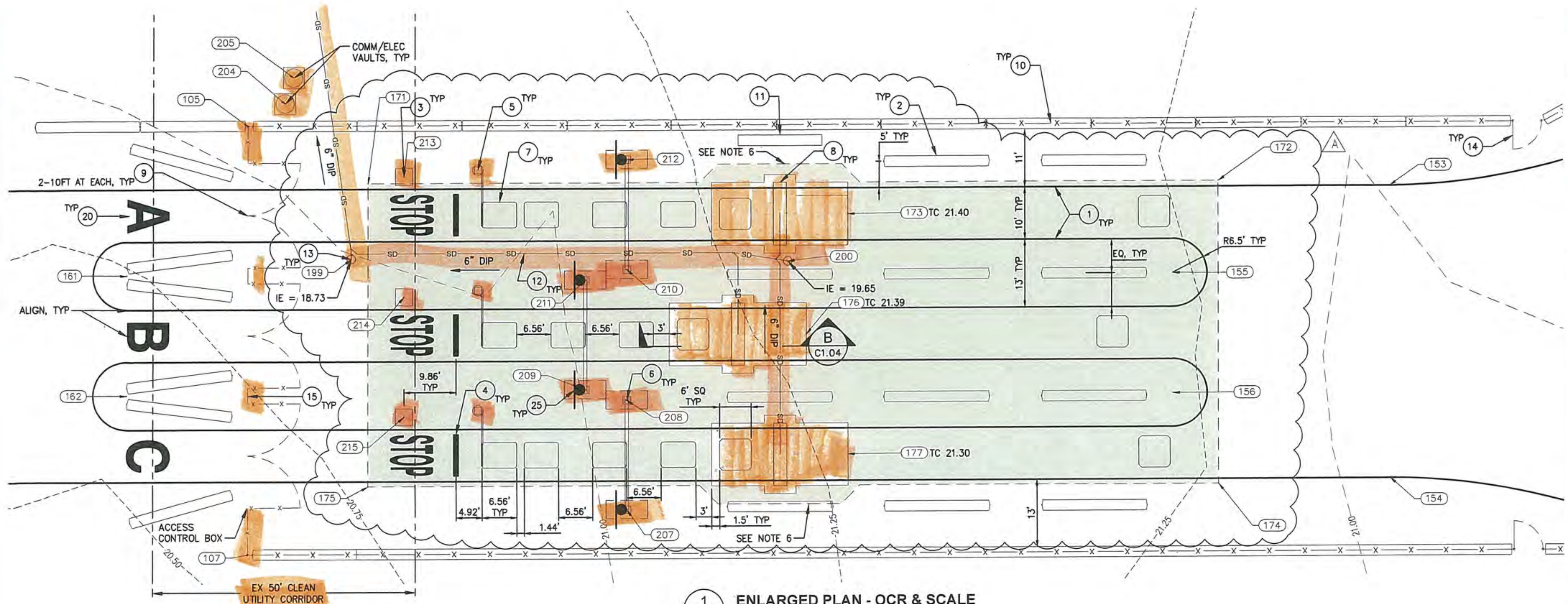

1 C2.01 **ENLARGED PLAN - OCR & SCALE**
SCALE: 1" = 10'

KEY NOTES:

1. 4" WIDE WHITE STRIPING
2. 20' TYPE II CONC TRAFFIC BARRIER, SEE C3.02 DETAIL 6
3. INTERCOM PEDESTAL, SEE C3.03 SECTION A
4. STOP BAR, SEE C3.01 DETAIL 1
5. GATE ARM, SEE C3.04 DETAIL 2
6. OCR PORTAL FRAME FOUNDATION, SEE C3.07
7. TRAFFIC LOOP
8. WIM TRUCK SCALE PER MANUFACTURER'S DETAILS
9. CHAIN LINK GATE, SEE C3.09 DETAIL 3
10. 10' TYPE II CONC TRAFFIC BARRIER W/ FENCE, SEE C3.09 DETAIL 1
11. COMM/ELEC PANEL ENCLOSURE, SEE ELECTRICAL PLANS
12. SCALE SUMP DRAIN, SEE NOTE 4
13. SCALE SUMP CLEANOUT, SEE C3.10 DETAIL 2
14. PERSONNEL WALK THROUGH GATE, SEE C3.09 DETAIL 2
15. CHAIN LINK SECURITY FENCE, SEE C3.08 DETAIL 1
20. LANE DESIGNATION, SEE SHEET C3.01 DETAIL 4
25. BARRIER MOUNTED SIGN, SEE SHEET C3.01 DETAIL 2

NOTES:

1. EX STRIPING NOT SHOWN FOR CLARITY.
2. CONSTRUCT WIM SCALE PAD PER MANUFACTURER'S DETAILS. CROSS SLOPE SHALL BE 0.00% AND LONGITUDINAL SLOPE AS DETERMINED BY ELEVATION POINTS GIVEN
3. GRIND 2 1/2" OF THE EX ACP WITHIN LIMITS SHOWN. OVERLAY TO MATCH ADJACENT EXISTING PAVEMENT AND THE ELEVATIONS OF THE PROPOSED SCALE PADS. SEE SHEET C3.02, DETAIL 1.
4. SCALE SUMP DRAIN INVERTS SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED FOR COMPATIBILITY WITH DRAIN PAN MANUFACTURER. SUMP DRAIN PIPE SHALL BE 6" DIP. DRAIN LINE SLOPE SHALL BE 1% MIN.
5. FOUNDATION AND TRENCH EXCAVATIONS SHALL NOT EXTEND BEYOND OR DAMAGE THE GEOTEXTILE FABRIC AT THE LOWER EXTENT OF THE ENVIRONMENTAL CAP.
6. WIDEN PAVEMENT OVERLAY 2' AT WIM SCALES AND TRANSITION FROM PAD TC TO EXISTING GRADE.
7. THE DISTANCES SHOWN FOR LANE "C" BETWEEN INTERCOM PEDESTALS, STOP BARS, GATE ARMS DETECTOR LOOPS, OCR SUPPORTS, AND WIM SCALES ARE TYPICAL FOR LANE "A". A SIMILAR CONFIGURATION AND SPACING SHALL BE CONSTRUCTED FOR LANE "B" EXCEPT AS NOTED.

LEGEND:

- ACP GRIND AND OVERLAY
- CONCRETE SCALE PAD
- SCALE SUMP DRAIN LINE

TRUE NORTH
PROJECT NORTH

10' 0' 10' 20'
SCALE: 1"=10'

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MARK:	REVISION:	BY:	APPR:	DATE:
A	SCALE REVISIONS	JAT	BJH	12/11/19

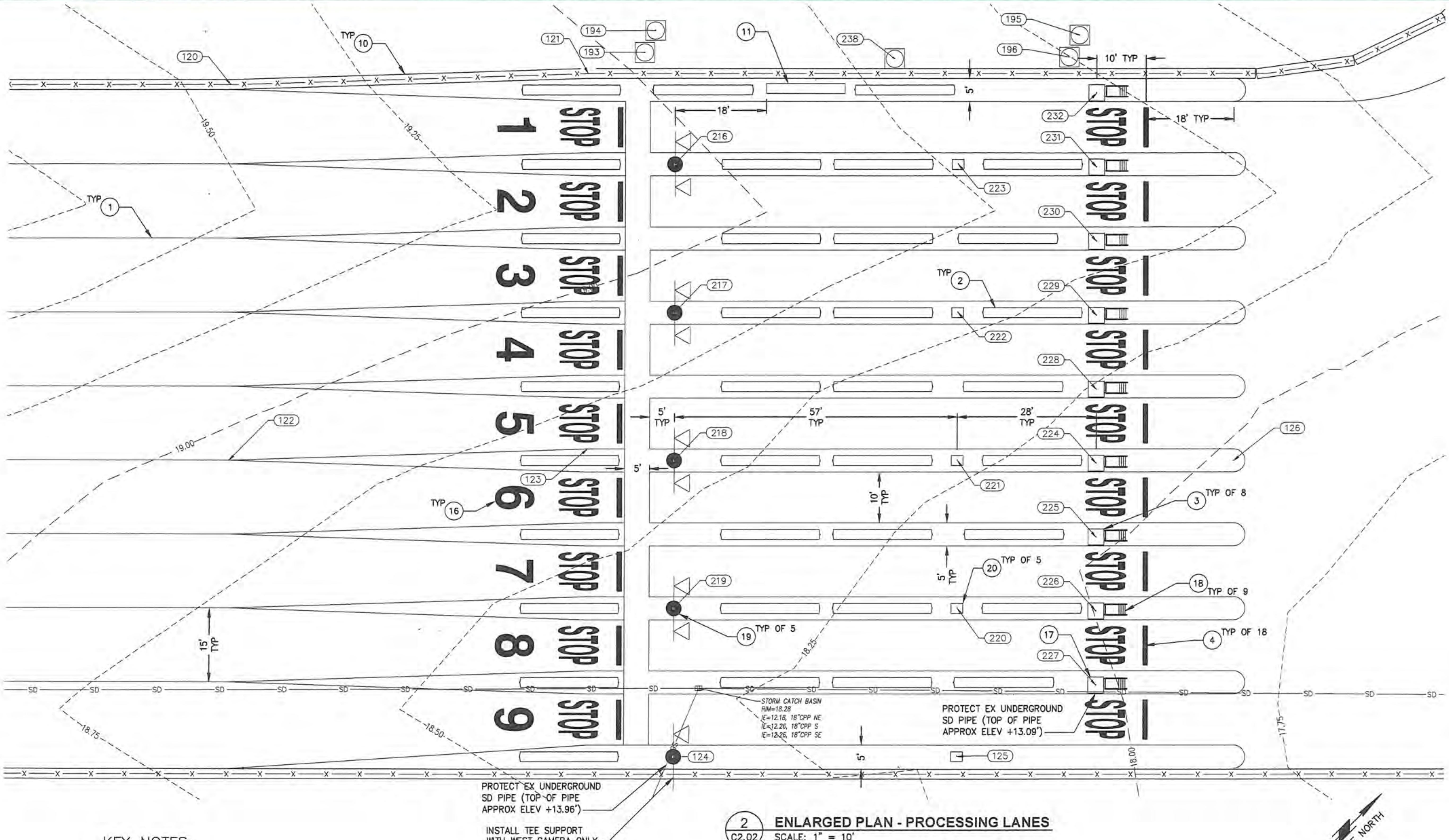
S. GRAY 11/19/19
CHECKED BY / DATE
B. HALEY 11/19/19
PROJ. ENGR / DATE
PRINTED BY: BHaley Dec 11, 2019
SITE ADDRESS: 1754 THORNE RD TACOMA, WA 98421

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
ENLARGED PLAN - OCR & SCALE

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
DAT-HRZ: WA83/2011-SF	VERT: MLLW	DRAWING SCALE: AS NOTED
PARCEL: LOT F		
PHASE: BID		

C2.03
22 OF 59

BINDING EDGE



2 (C2.02) ENLARGED PLAN - PROCESSING LANES

SCALE: 1" = 10'

KEY NOTES:

1. 4" WIDE WHITE STRIPING
2. 20' TYPE II CONC TRAFFIC BARRIER , SEE SHEET 3.02 DETAIL 6
3. INTERCOM PEDESTAL, SEE SHEET C3.03 SECTION A
4. STOP BAR AND SYMBOL, SEE SHEET C3.01 DETAIL 1
10. 10' TYPE II CONC TRAFFIC BARRIER W/ FENCE, SEE SHEET C3.09 DETAIL 1
11. COMM/ELEC PANEL ENCLOSURE, SEE ELECTRICAL PLANS
16. LANE DESIGNATION, SEE SHEET C3.01 DETAIL 4
17. MODIFIED INTERCOM PEDESTAL, SEE SHEET C3.03 SECTION B
18. PEDESTAL LADDER, SEE SHEET C3.03, DETAIL 2
19. CAMERA T-POLE, SEE SHEET C3.05
20. CHASSIS CAMERA PEDESTAL, SEE SHEET C3.04 DETAIL 1

NOTES:

1. EX STRIPING NOT SHOWN FOR CLARITY.

TRUE NORTH

PROJECT NORTH

10' 0' 10' 20'

SCALE: 1"=10'

CALL 2 DAYS BEFORE YOU DIG 1-800-424-5555

PORT OF TACOMA FILE: Q:\LB\8897-07\CADD_Active_SheetSet\889707-C02.04

ITS | Husky

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PRINTED BY: mcoker Dec 02, 2019
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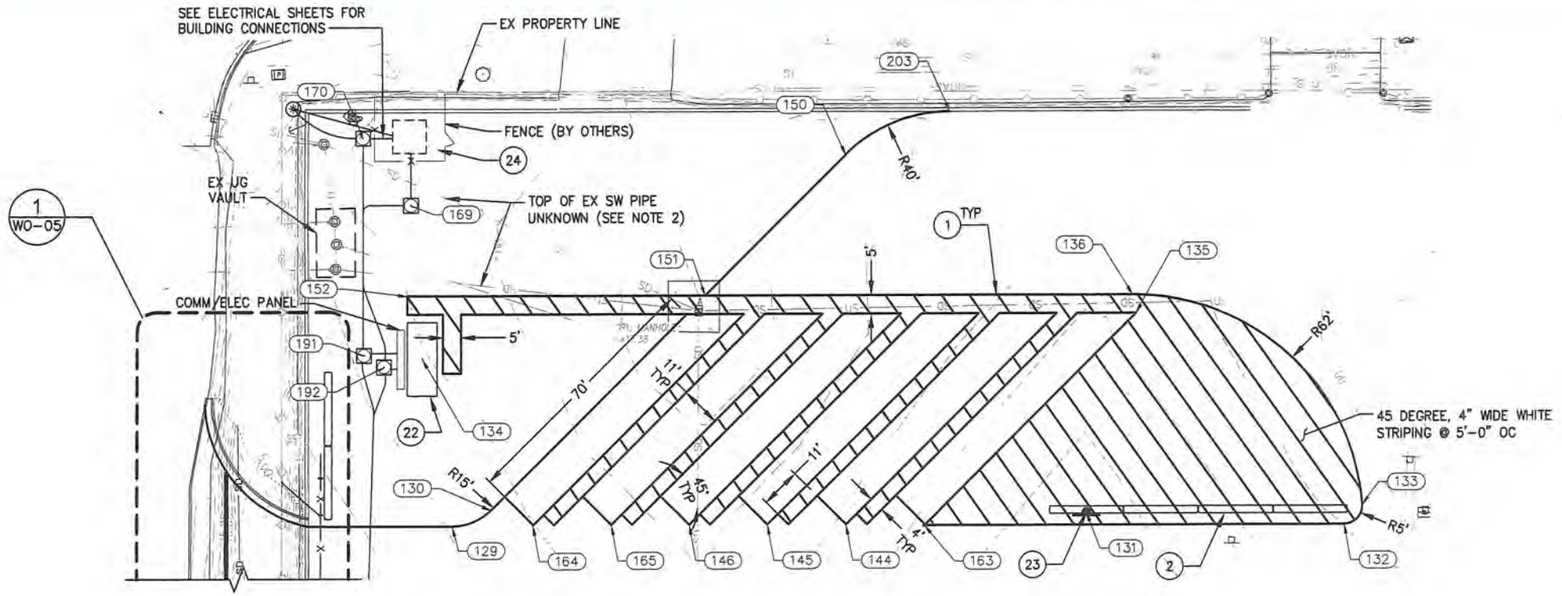
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
ENLARGED PLAN - PROCESSING LANES

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW | DRAWING SCALE: AS NOTED
PARCEL: LOT F
PHASE: BID

C2.04
23 OF 69

BINDING EDGE



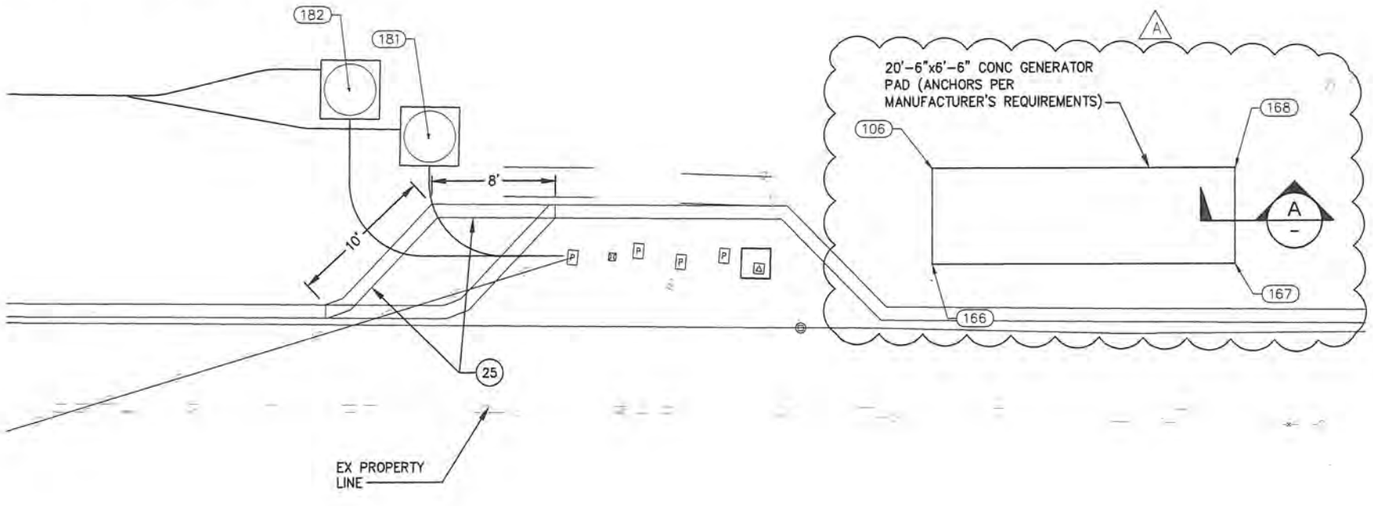
3 C2.02 **ENLARGED PLAN - TROUBLE RESOLUTION AREA**
SCALE: 1" = 20'

KEY NOTES:

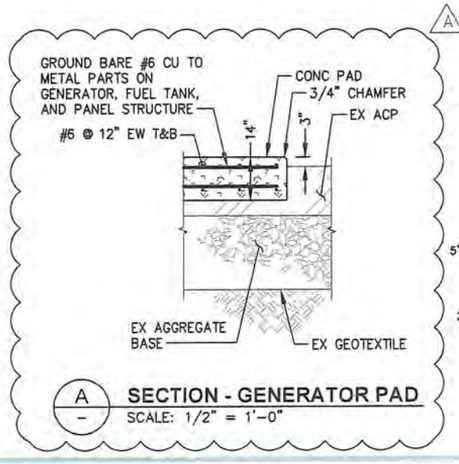
1. 4" WIDE WHITE STRIPING
2. 20' TYPE II CONC TRAFFIC BARRIER, SEE C3.02 DETAIL 6
22. DRIVER ASSISTANCE SHELTER, SEE SHEET C3.06
23. BARRIER MOUNTED SIGN, SEE SHEET C3.01, DETAIL 3
24. FIBER OPTIC HUT (BY OTHERS)
25. EXTRUDED CEMENT CONCRETE CURB, SEE SHEET C3.02, DETAIL 5

NOTES:

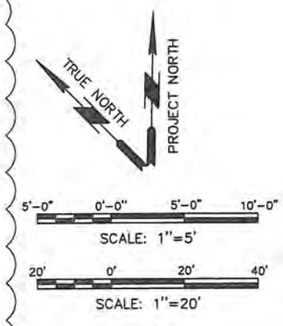
1. EX STRIPING NOT SHOWN FOR CLARITY.
2. CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES. ADJUST DEPTH OF PROPOSED CONDUITS AS NECESSARY.



4 C2.01 **ENLARGED PLAN - GENERATOR**
SCALE: 1" = 5'



A - **SECTION - GENERATOR PAD**
SCALE: 1/2" = 1'-0"



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PORT OF TACOMA FILE: Q:\LB8897-07\CADD_Active_SheetSet\889707-C02.05

DESIGNED BY	S. GRAY
CHECKED BY	B. HALEY
PROJ. ENGR	
PRINTED BY: BHaley Dec 12, 2019	
SITE ADDRESS: 1754 THORNE RD TACOMA, WA 98421	
TOWNSHIP: 21N	RANGE: 3E
SECTION: 34	
DAT-HRZ: WA83/2011-SF	VERT: MLLW
PARCEL: LOT F	
PHASE: BID	DRAWING SCALE: AS NOTED

11/19/19 DATE
11/19/19 DATE

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
ENLARGED PLAN - TROUBLE RESOLUTION AREA

C2.05
24 OF 59

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12/20/19

BINDING EDGE

CONTROL POINT DATA

POINT No.	NORTHING	EASTING	NOTES
101	708221.94	1167882.44	BEGIN STRIPING
102	709002.91	1168464.50	WALK THROUGH GATE
103	708900.84	1168559.86	WALK THROUGH GATE
104	708282.96	1167863.59	STRIPING TANGENT
105	708363.67	1167924.96	FENCE ON BARRIER CORNER
106	708227.81	1167732.61	GENERATOR CORNER
107	708306.59	1167983.84	FENCE ON BARRIER CORNER
108	708536.70	1168092.68	WALK THROUGH GATE
109	708683.19	1168155.99	STRIPING CTL
110	708657.72	1168129.90	TRAFFIC BARRIER CORNER
111	708630.99	1168209.84	BEGIN QUEUE LANE STRIPING
112	708941.07	1168194.37	DESIGNATED UTILITY CORRIDOR CORNER
113	709099.08	1168347.56	DESIGNATED UTILITY CORRIDOR CORNER
114	709476.05	1168858.12	STRIPING TANGENT
115	709480.23	1168878.71	ARROW CONROL POINT
116	709356.90	1169001.92	TRAFFIC BARRIER CORNER
117	709408.09	1169018.04	ARROW CONTROL POINT
118	709390.66	1169051.54	TRAFFIC BARRIER CORNER
119	709620.59	1168783.71	CONNECT TO EX FENCE
120	709246.79	1168700.90	TRAFFIC BARRIER CORNER
121	709300.40	1168749.62	TRAFFIC BARRIER CORNER
122	709193.89	1168755.47	STRIPING CONTROL POINT
123	709247.53	1168804.21	STRIPING CONTROL POINT
124	709216.76	1168861.21	CAMERA T-POLE
125	709257.80	1168900.84	CHASSIS CAMERA PEDESTAL
126	709339.42	1168896.54	STRIPING CTL
127	709393.94	1168840.29	END TRAFFIC BARRIER
128	709401.75	1168855.75	STRIPING TANGENT
129	709579.93	1168808.37	STRIPING TANGENT
130	709575.70	1168819.04	STRIPING CONTROL POINT
131	709462.54	1168934.52	SIGN
132	709411.68	1168981.98	STRIPING TANGENT
133	709412.08	1168989.30	STRIPING TANGENT
134	709618.17	1168834.25	DRIVER ASSISTANCE SHELTER CENTER
135	709492.02	1168981.86	STRIPING TANGENT
136	709496.19	1168984.73	STRIPING TANGENT
137	708479.61	1168151.54	WALK THROUGH GATE
138	709576.12	1168740.56	CONNECT TO EX FENCE
139	709574.43	1168753.61	END FENCE
140	709576.82	1168754.08	STRIPING TANGENT
141	709606.93	1168785.10	END FENCE
142	709606.92	1168780.50	STRIPING TANGENT
143	708541.41	1168097.09	TRAFFIC BARRIER CORNER
144	709505.74	1168885.36	STRIPING TANGENT
145	709520.50	1168870.12	STRIPING TANGENT
146	709535.26	1168854.89	STRIPING TANGENT
147	708428.74	1167861.74	SUMP DRAIN CLEANOUT
148	708467.67	1167807.35	SUMP DRAIN CLEANOUT
149	708498.38	1167764.54	SUMP DRAIN

CONTROL POINT DATA

POINT No.	NORTHING	EASTING	NOTES
150	709577.84	1168955.16	STRIPING TANGENT
151	709577.00	1168901.35	STRIPING TANGENT
152	709633.26	1168843.30	STRIPING TANGENT
153	708511.67	1168085.23	STRIPING TANGENT
154	708472.70	1168125.44	STRIPING TANGENT
155	708470.57	1168068.38	STRIPING CTL
156	708454.56	1168084.89	STRIPING CTL
157	708491.26	1168148.53	STRIPING TANGENT
158	708570.38	1168116.46	STRIPING TANGENT
159	708634.25	1168129.95	STRIPING TANGENT
160	708511.18	1168180.75	STRIPING TANGENT
161	708327.37	1167929.49	STRIPING CTL
162	708311.36	1167946.00	STRIPING CTL
163	709490.74	1168900.41	STRIPING TANGENT
164	709564.79	1168824.27	STRIPING TANGENT
165	709550.03	1168839.65	STRIPING TANGENT
166	708223.63	1167725.79	GENERATOR CORNER
167	708210.84	1167733.63	GENERATOR CORNER
168	708215.02	1167740.45	GENERATOR CORNER
169	709650.23	1168861.08	VAULT
170	709672.29	1168864.49	VAULT
171	708372.59	1167948.96	OVERLAY LIMITS
172	708488.98	1168061.76	OVERLAY LIMITS
173	708434.10	1168016.92	SCALE SLAB
174	708448.61	1168103.41	OVERLAY LIMITS
175	708332.22	1167990.62	OVERLAY LIMITS
176	708412.34	1168027.88	SCALE SLAB
177	708402.08	1168049.96	SCALE SLAB
178	708518.37	1167726.68	INVERT
179	708541.15	1167755.29	VAULT
180	708535.10	1167756.91	VAULT
181	708257.25	1167715.34	VAULT
182	708263.54	1167715.25	VAULT
183	708417.53	1167634.88	VAULT
184	708411.48	1167636.61	VAULT
185	708911.22	1168115.39	VAULT
186	708905.18	1168117.12	VAULT
187	709170.87	1168368.17	VAULT
188	709164.83	1168369.89	VAULT
189	709436.61	1168626.66	VAULT
190	709430.57	1168628.39	VAULT
191	709629.87	1168823.67	VAULT
192	709623.83	1168825.40	VAULT
193	709311.61	1168754.52	VAULT
194	709316.24	1168752.83	VAULT
195	709376.99	1168813.02	VAULT
196	709372.37	1168814.71	VAULT

CONTROL POINT DATA

POINT No.	NORTHING	EASTING	NOTES
199	708360.25	1167957.07	SUMP DRAIN CLEANOUT
200	708420.34	1168013.92	SUMP DRAIN CLEANOUT
203	709566.57	1168983.64	STRIPING TANGENT
204	708371.70	1167926.78	VAULT
205	708376.32	1167924.30	VAULT
206	709522.38	1168807.38	SWING GATE
207	708364.49	1168028.22	OCR FOUNDATION
208	708379.10	1168013.15	OCR FOUNDATION
209	708374.77	1168006.12	OCR FOUNDATION
210	708396.52	1167995.17	OCR FOUNDATION
211	708389.37	1167991.06	OCR FOUNDATION
212	708411.14	1167980.10	OCR FOUNDATION
213	708378.45	1167952.81	INTERCOM PEDESTAL
214	708362.44	1167969.33	INTERCOM PEDESTAL
215	708346.43	1167985.85	INTERCOM PEDESTAL
216	709300.26	1168775.02	CAMERA T-POLE
217	709279.38	1168796.56	CAMERA T-POLE
218	709258.50	1168818.10	CAMERA T-POLE
219	709237.63	1168839.65	CAMERA T-POLE
220	709278.68	1168879.30	CHASSIS CAMERA PEDESTAL
221	709299.56	1168857.76	CHASSIS CAMERA PEDESTAL
222	709320.44	1168836.22	CHASSIS CAMERA PEDESTAL
223	709341.32	1168814.68	CHASSIS CAMERA PEDESTAL
224	709319.18	1168877.67	INTERCOM PEDESTAL
225	709308.74	1168888.44	INTERCOM PEDESTAL
226	709298.30	1168899.21	INTERCOM PEDESTAL
227	709287.86	1168909.98	MODIFIED INTERCOM PEDESTAL
228	709329.62	1168866.90	INTERCOM PEDESTAL
229	709340.06	1168856.13	INTERCOM PEDESTAL
230	709350.52	1168845.38	INTERCOM PEDESTAL
231	709360.94	1168834.59	INTERCOM PEDESTAL
232	709371.38	1168823.82	INTERCOM PEDESTAL
238	709346.93	1168790.52	VAULT

CALL 2 DAYS
BEFORE YOU DIG
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PORT OF TACOMA FILE: Q:\LB\8897-07\CADD_Active_SheetSet\889707-C02.06

ITS Husky

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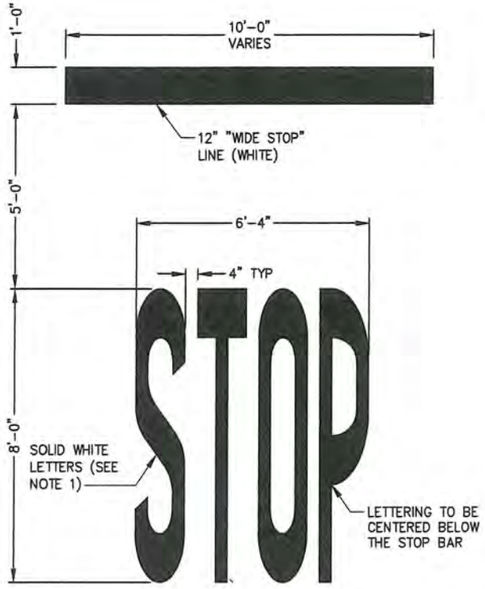
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
CONTROL POINT TABLE

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PARCEL: LOT F | DRAWING SCALE: AS NOTED
PHASE: BID

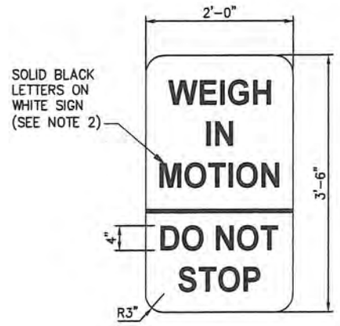
C2.06
25 OF 59



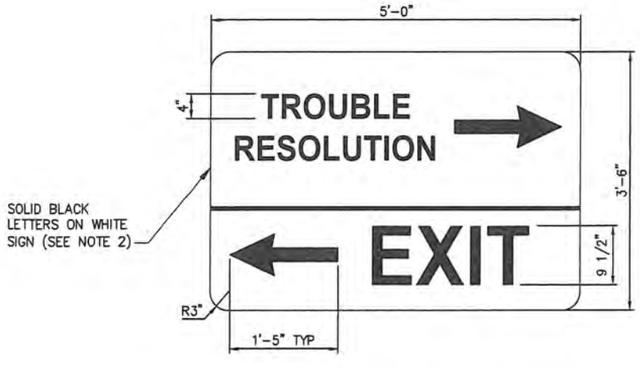
1 / – **STOP BAR AND SYMBOL DETAIL**
SCALE: NTS
C2.03, C2.04

NOTES:

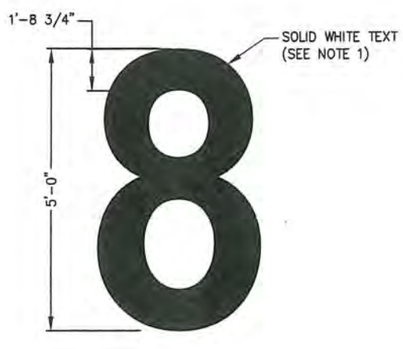
1. PAVEMENT MARKINGS SHALL BE PER THE MUTCD GUIDELINES. SUBMIT DETAILED MARKING DETAILS FOR APPROVAL.
2. SIGNS SHALL BE PER THE MUTCD GUIDELINES. SUBMIT DETAILED SIGN DETAILS FOR APPROVAL.



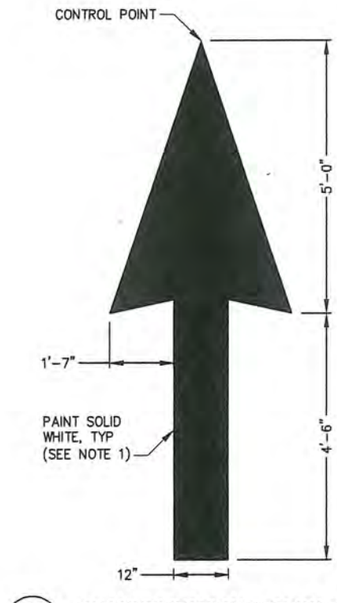
2 / C2.03 **WEIGH IN MOTION - DO NOT STOP SIGN**
SCALE: NTS



3 / C2.05 **TROUBLE RESOLUTION-EXIT SIGN**
SCALE: NTS



4 / – **LANE DESIGNATION DETAIL**
SCALE: NTS
C2.03, C2.04



5 / C2.02 **CHANNELIZATION ARROW DETAIL**
SCALE: NTS

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SEATTLE, WA 98101
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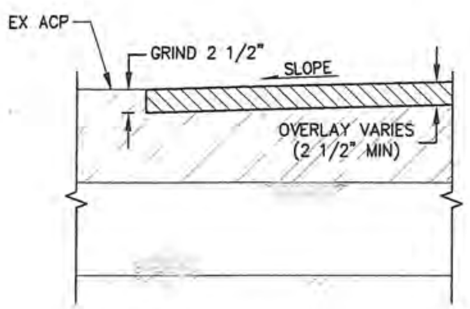
B. HALEY
PROJ. ENGR
DESIGNED BY: mcoker Dec. 02, 2019
DRAWN BY:
CHECKED BY:
SITE ADDRESS: 1754 THORNE RD
TACOMA, WA 98421

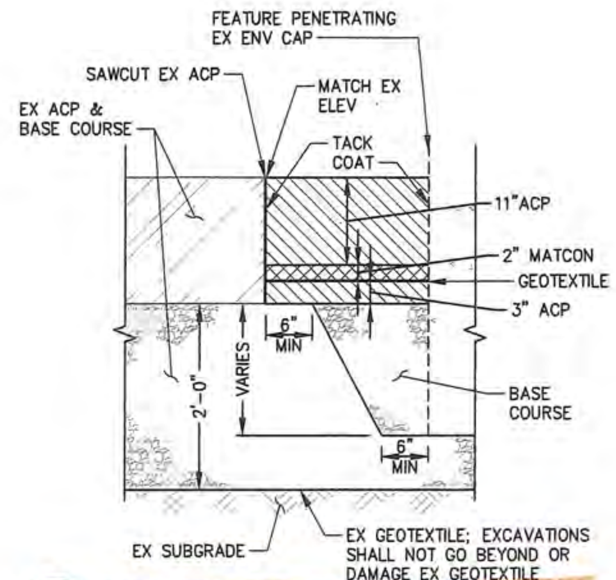
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - PAVEMENT MARKINGS & SIGNS

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PHASE: BID | PARCEL: LOT F | DRAWING SCALE: AS NOTED

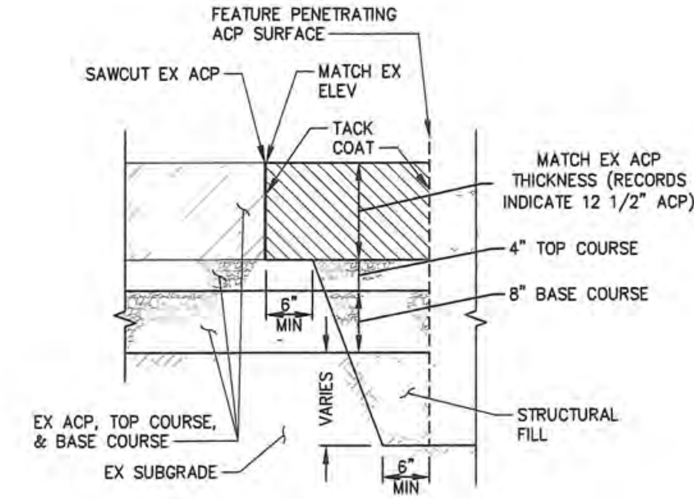
C3.01
26 OF 59



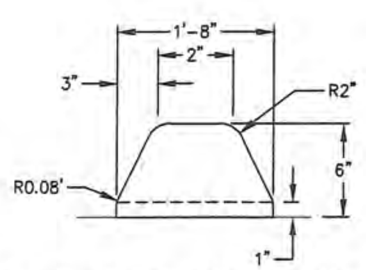
1 DETAIL
C2.03 SCALE: 1" = 1'-0"



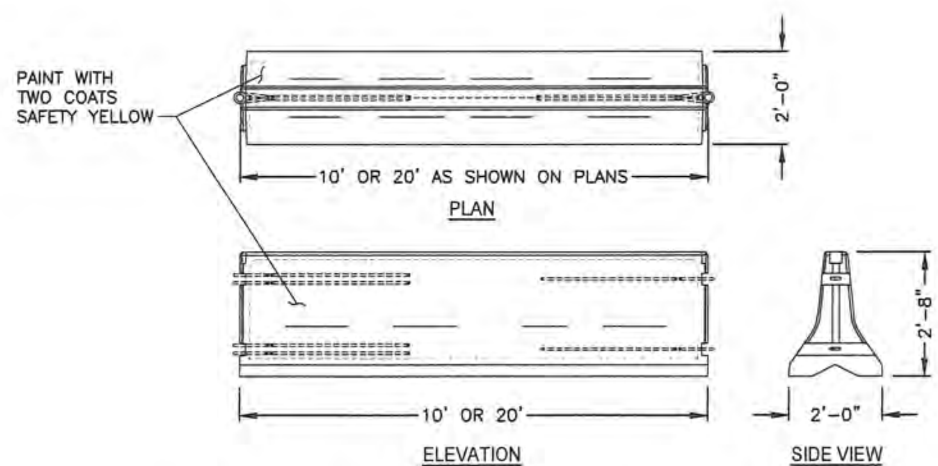
2 CAP RESTORATION - ABOVE SUBGRADE
VARIES SCALE: 1" = 1'-0"



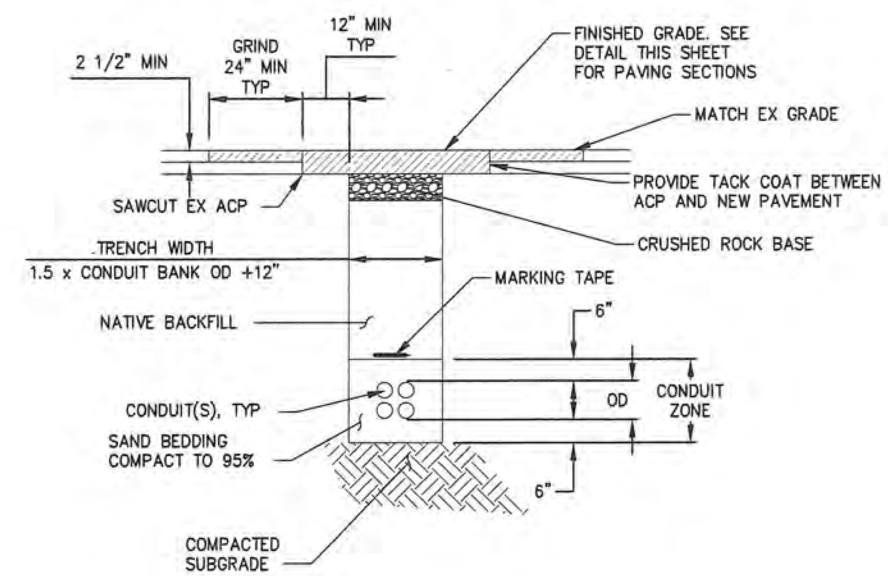
4 PAVEMENT RESTORATION
C2.01, C2.02, C2.03, C2.04 – SCALE: 1" = 1'-0"



5 EXTRUDED CEMENT CONC CURB
C2.05 SCALE: NTS



6 DETAIL - TYPE II CONC TRAFFIC BARRIER
C2.01, C2.02, C2.03, C2.04 – SCALE: NTS



7 TRENCH BACKFILL
C2.01, C2.02, C2.03, C2.04 – SCALE: NTS

NOTES:

1. PROVIDE PVC CONDUIT SADDLE SPACERS WHERE MULTIPLE CONDUITS ARE INSTALLED.
2. NATIVE BACKFILL SHALL BE CLEANED ORGANIC MATERIAL AND COBBLE LARGER THAN 3" AND SHALL BE COMPACTED TO 95% DRY DENSITY.

1' 0' 1' 2'
SCALE: 1"=1'

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PRINTED BY: mcoker Dec 02, 2019
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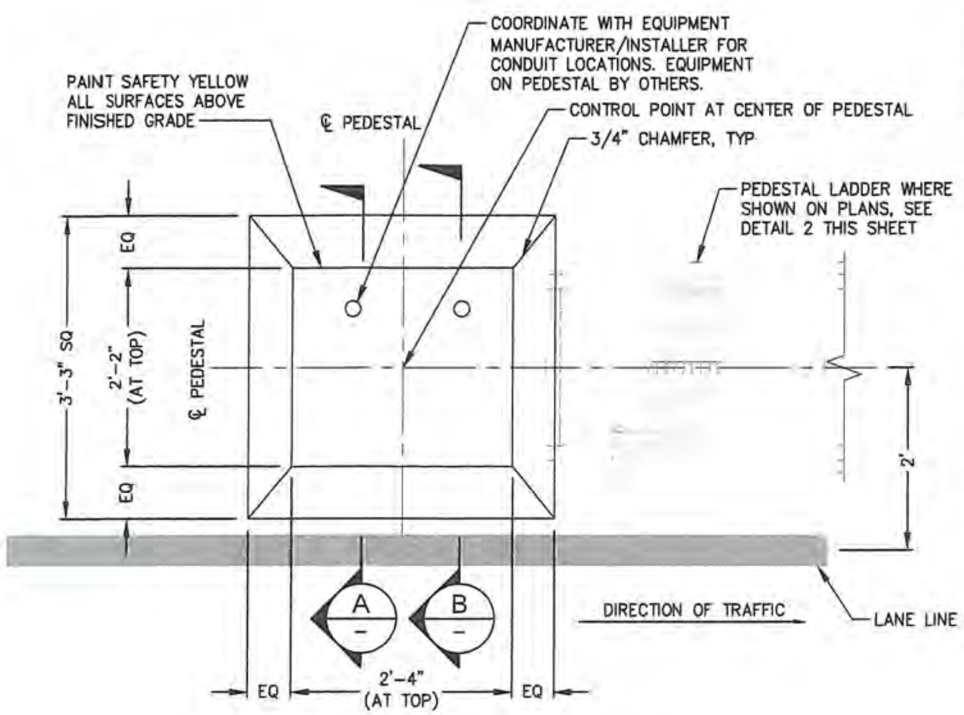
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - PAVEMENT & BARRIERS

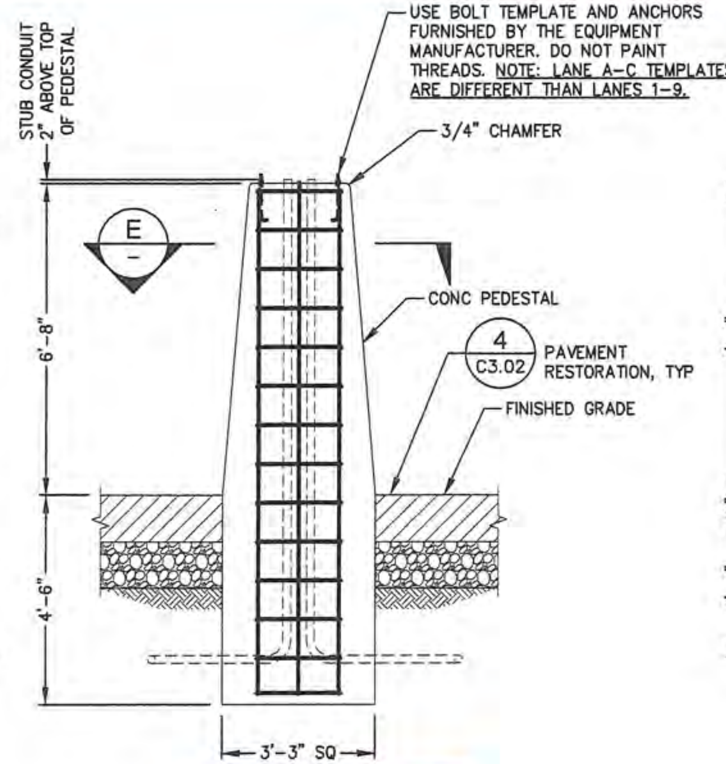
TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PARCEL: LOT F | DRAWING SCALE: AS NOTED
PHASE: BID

C3.02
27 OF 59

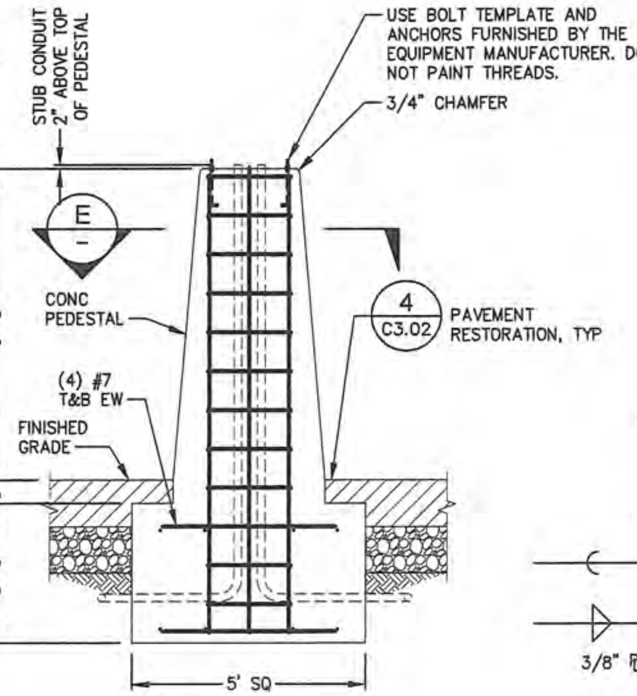
BINDING EDGE



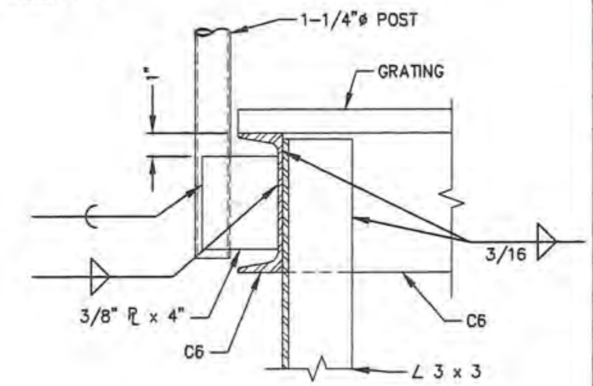
1 INTERCOM PEDESTAL PLAN
SCALE: 1" = 1'-0"



A SECTION - TYPICAL
C2.03 C2.04 SCALE: 1/2" = 1'-0"



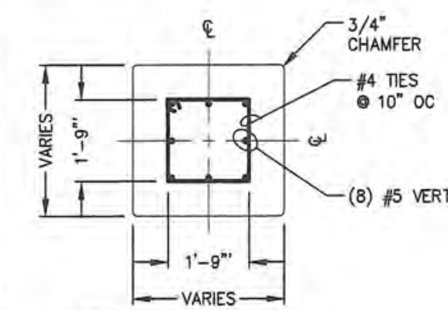
B SECTION - LANE 9
C2.04 SCALE: 1/2" = 1'-0"



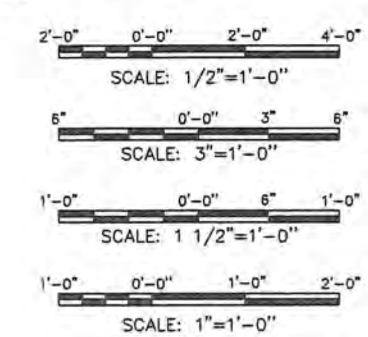
D HANDRAIL CONNECTION
SCALE: 3" = 1'-0"

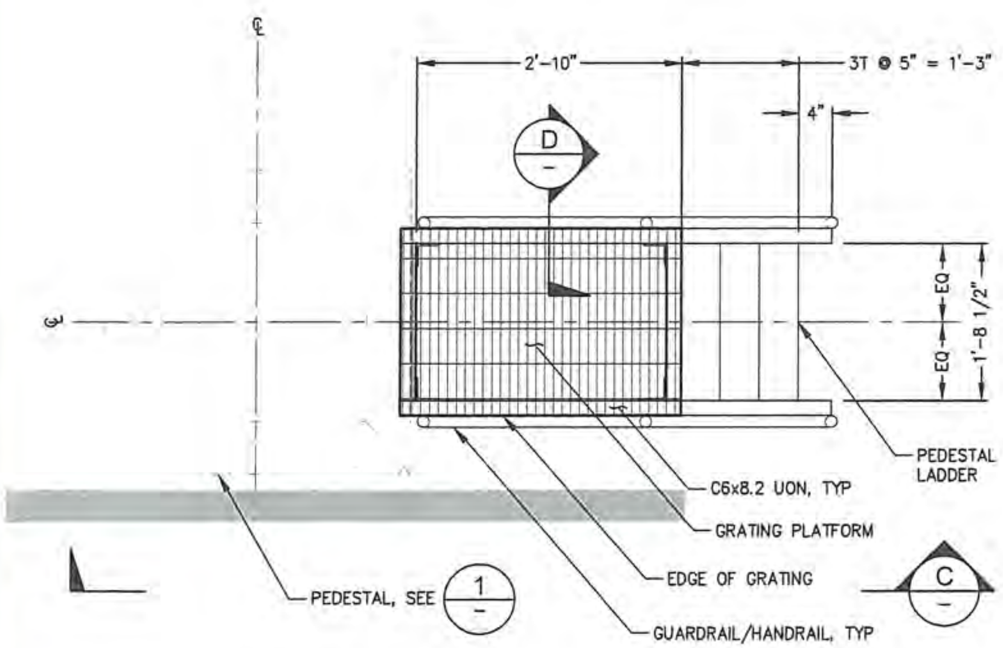
NOTE:

1. PEDESTAL LADDERS TO BE HOT DIP GALVANIZED AND PAINTED SAFETY YELLOW TO MATCH PEDESTAL.
2. COORDINATE GROUNDING REQUIREMENTS WITH ELEC PRIOR TO CONCRETE POUR.

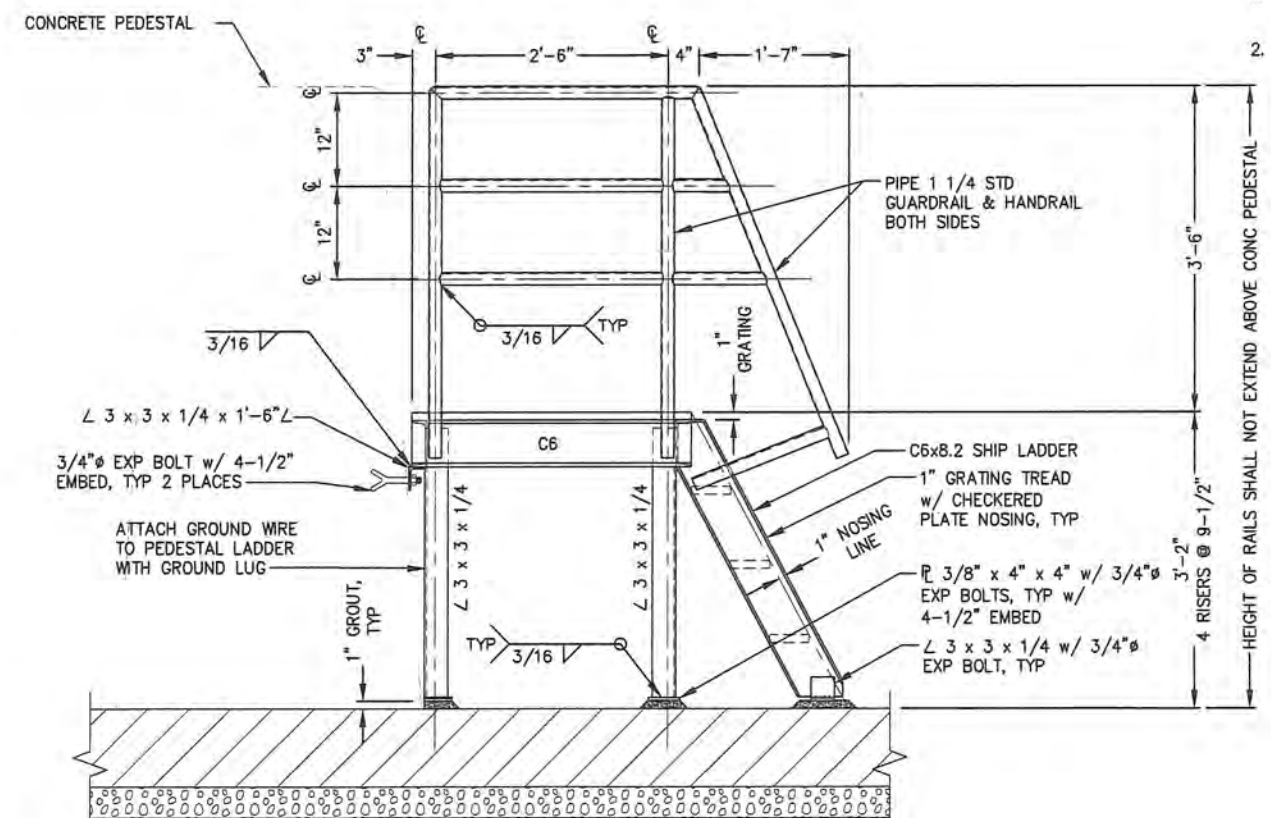


E SECTION
SCALE: 1" = 1'-0"





2 PEDESTAL LADDER PLAN
C2.04 SCALE: 1" = 1'-0"



NOTE:
SHOP WELD PLATFORM, LADDER, AND HANDRAIL.

C PEDESTAL LADDER ELEVATION
SCALE: 1/2" = 1'-0"

CALL 2 DAYS BEFORE YOU DIG
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PORT OF TACOMA FILE: Q:\LB\6897-07\CADD_Active_SheetSet\889707-C03.03

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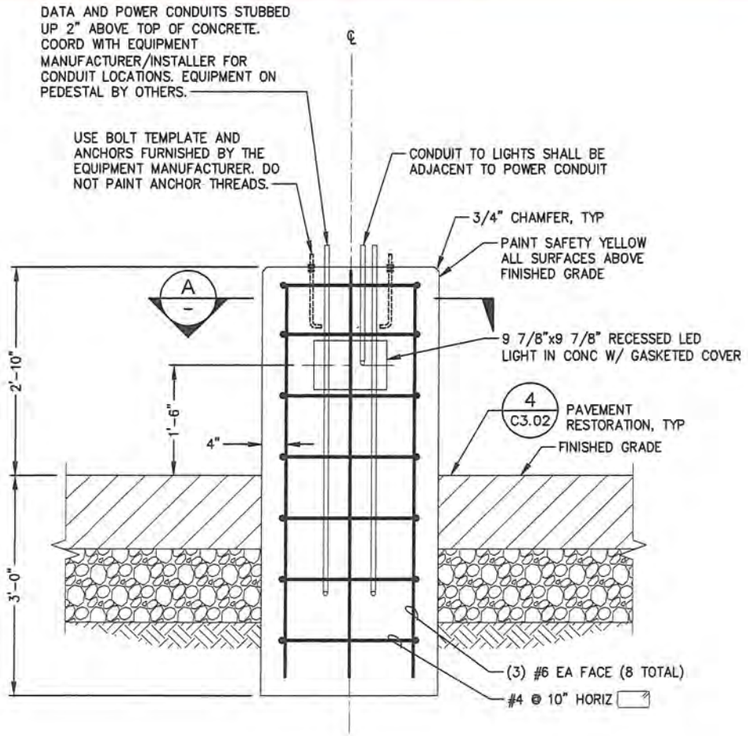
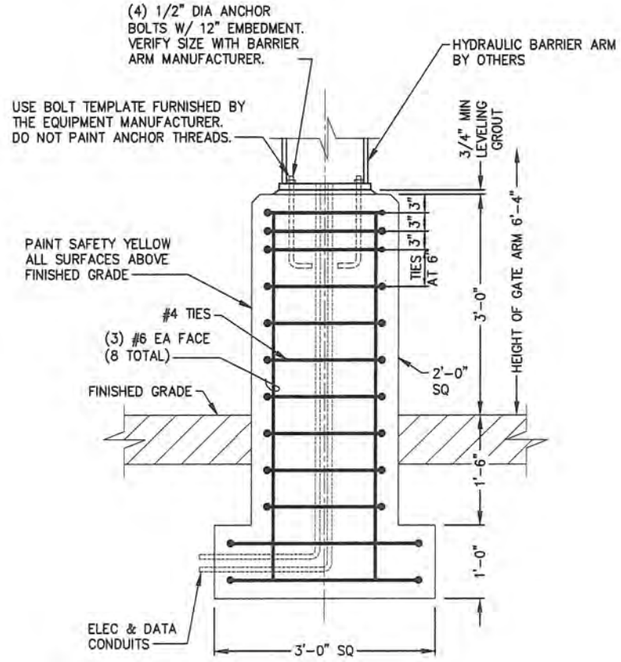
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - INTERCOM PEDESTAL DETAILS

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
DAT-HRZ: WA83/2011-SF	VERT: MLLW	
PARCEL: LOT F	DRAWING SCALE: AS NOTED	

C3.03
28 OF 59

PHASE: BID





NOTE:

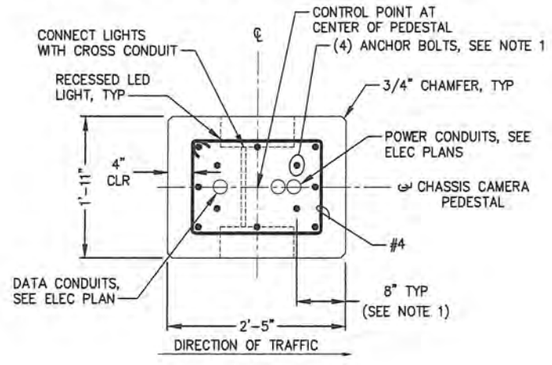
1. COORDINATE GROUNDING REQUIREMENTS WITH ELEC PRIOR TO CONCRETE POUR.

1 C2.04 CHASSIS CAMERA PEDESTAL DETAIL

SCALE: 1" = 1'-0"

NOTE:

1. COORDINATE WITH OWNER FOR CHASSIS CAMERA AND INTERCOM PEDESTAL ANCHOR BOLT LAYOUTS, PRIOR TO SUBMITTING SHOP DRAWINGS. OWNER TO SUPPLY ANCHOR BOLT TEMPLATE UPON REQUEST GIVEN 15 DAY NOTICE.

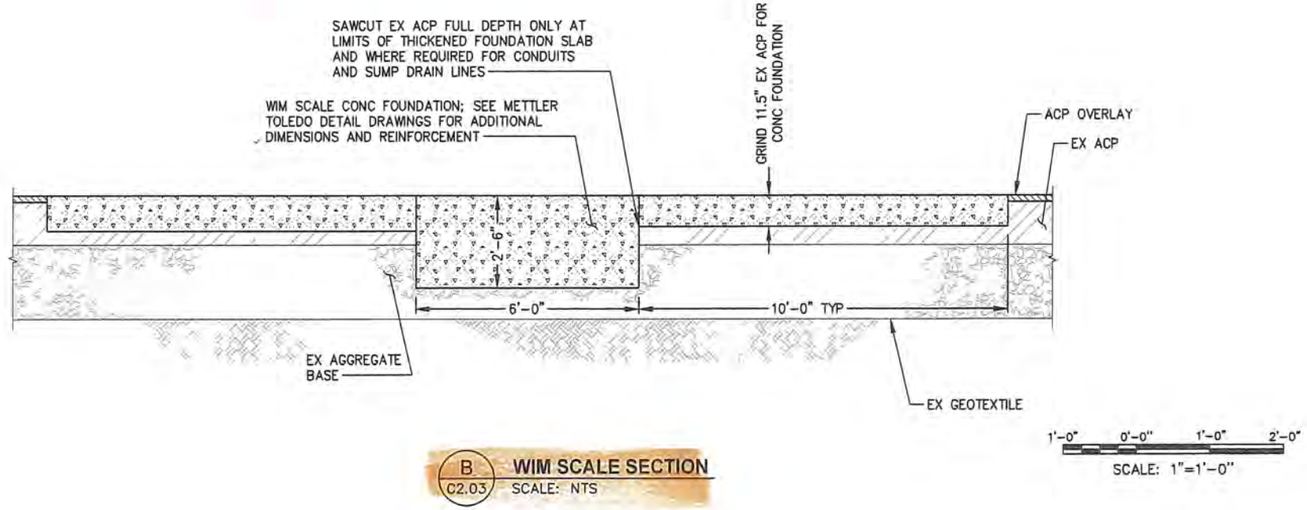


A – SECTION

SCALE: 1" = 1'-0"

2 C2.03 BARRIER ARM FOUNDATION DETAIL

SCALE: 1" = 1'-0"



B C2.03 WIM SCALE SECTION

SCALE: NTS

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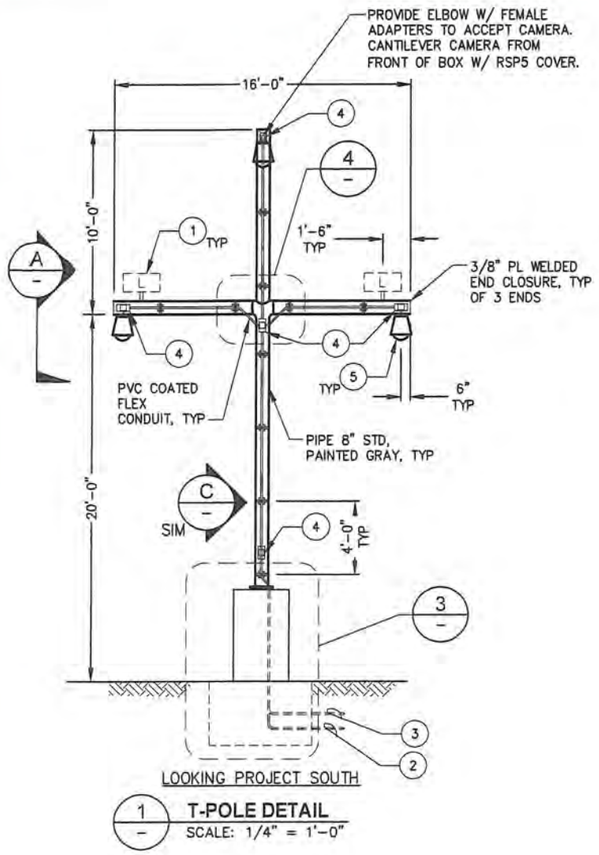
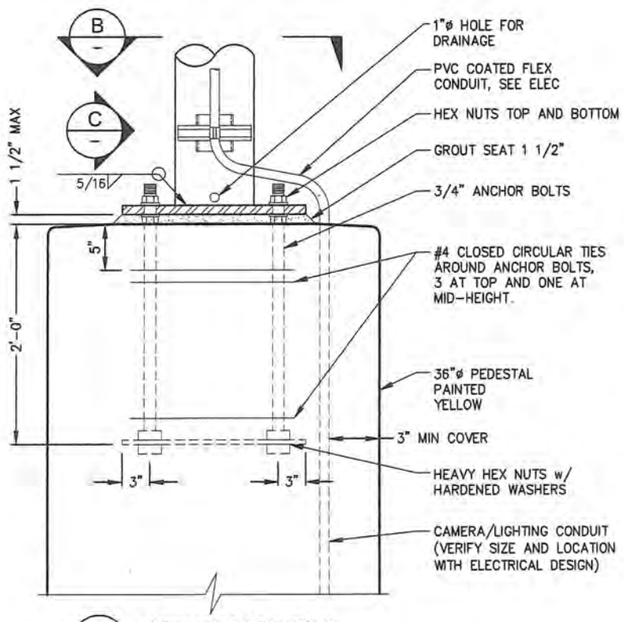
TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
DAT-HRZ: WA83/2011-SF	VERT: MLLW	
PARCEL: LOT F	DRAWING SCALE: AS NOTED	
PHASE: BID		

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - FOUNDATIONS

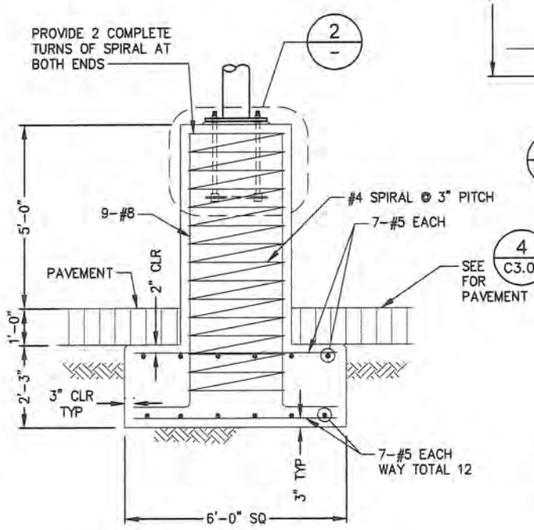
C3.04
29 OF 59



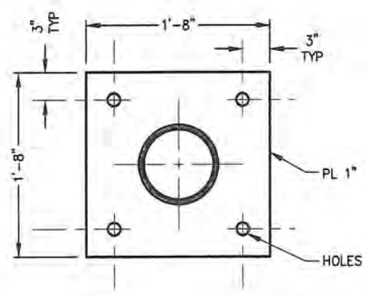
1 **T-POLE DETAIL**
SCALE: 1/4" = 1'-0"



2 **ANCHORAGE DETAIL**
SCALE: 1 1/2" = 1'-0"



3 **SPREAD FOOTING SECTION**
SCALE: 1/2" = 1'-0"



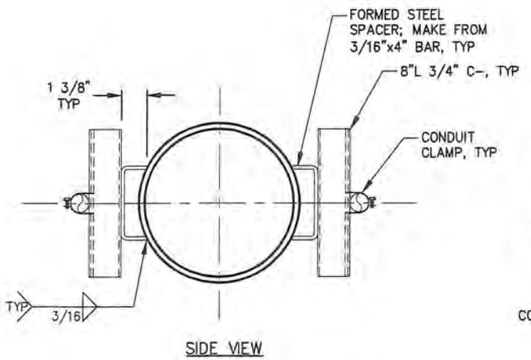
B **BASE PLATE DETAIL**
SCALE: 3" = 1'-0"

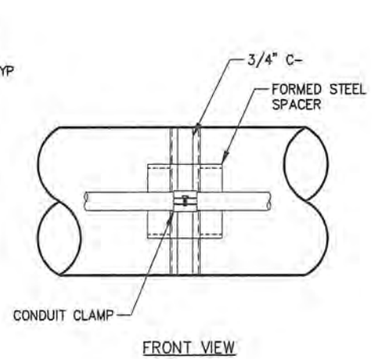
NOTE:

1. COORDINATE GROUNDING REQUIREMENTS WITH ELEC PRIOR TO CONCRETE POUR.

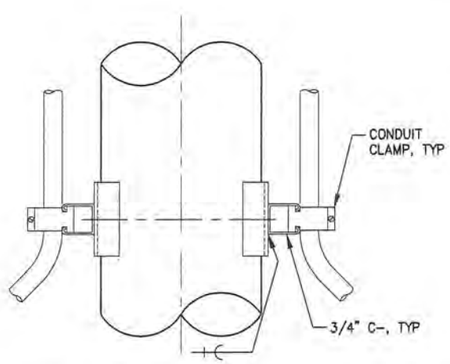
KEY NOTES:

1. T-POLE FLOOD LIGHT FIXTURE MOUNTED TO J-BOX, SEE ELECTRICAL PLANS
2. CCTV CAMERA CONDUIT SHALL BE PVC COATED RIGID STEEL WHERE EXPOSED (INSTALLED ON PROJECT NORTH SIDE).
3. LIGHTING CONDUIT SHALL BE PVC COATED RIGID STEEL WHERE EXPOSED (INSTALLED ON PROJECT SOUTH SIDE).
4. APPLETON RSM CAST BOX OR EQUIVALENT EACH SIDE.
5. DOME CAMERA (BY OTHERS). USE 1 1/2" HUB ON CAST BOX TO ACCEPT CAMERA.

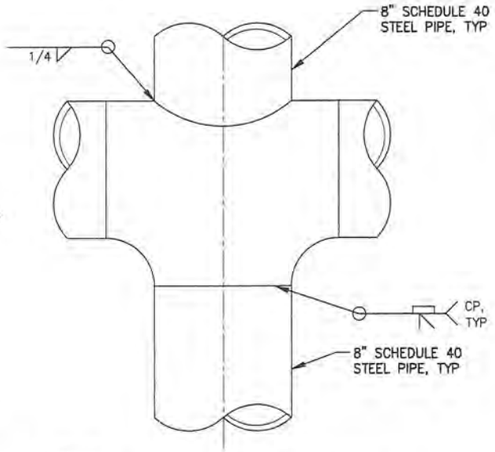




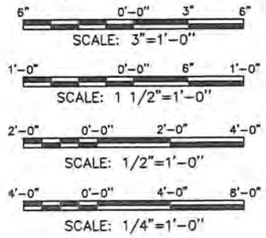
A **UNISTRUT MOUNT DETAIL**
SCALE: 3" = 1'-0"



C **UNISTRUT MOUNT ELEVATION**
SCALE: 3" = 1'-0"



4 **T-POLE CONNECTION DETAIL**
SCALE: 3" = 1'-0"



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DRAWING SCALE: AS NOTED	

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - CAMERA POLES

TOWNSHIP: 21N	RANGE: 3E
SECTION: 34	
DAT-HRZ: WA83/2011-SF	VERT: MLLW
PARCEL: LOT F	PHASE: BID

C3.05
30 OF 69

BINDING EDGE

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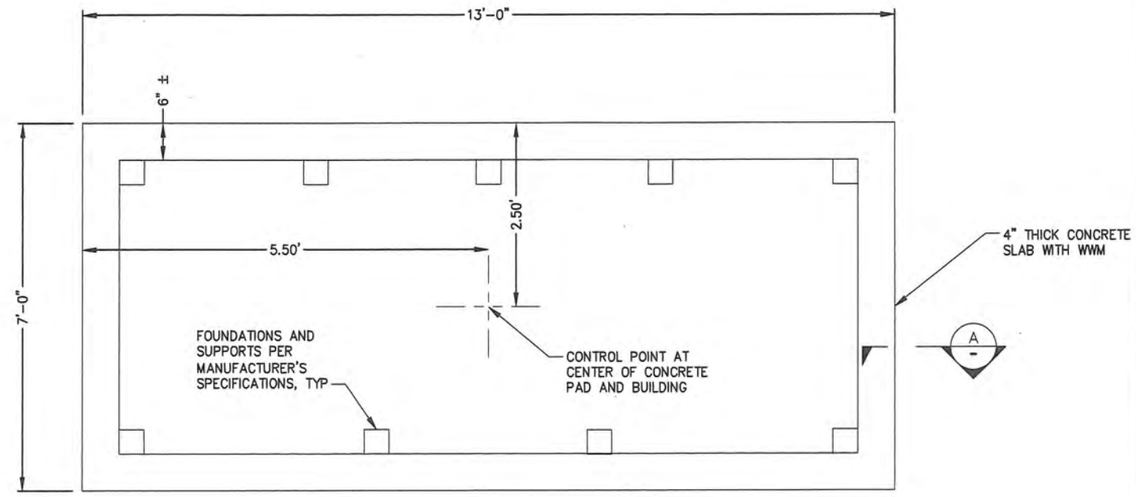
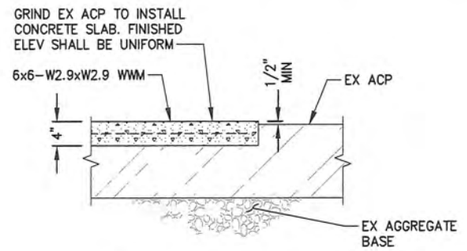
1 / – REPRESENTATIVE SHELTER
SCALE: NTS



2 / C2.05 DRIVER ASSISTANCE SHELTER SCHEMATIC LAYOUT
SCALE: NTS



A / – SLAB SECTION
SCALE: 1" = 1'-0"

NOTES:

1. CONTRACTOR SHALL CONSTRUCT NEW 4" THICK CONCRETE SLAB AND SHALL INSTALL OWNER PROVIDED SHELTER.
2. CONTRACTOR SHALL CONSTRUCT SLAB WITH (12) 1/2"x4" EXPANSION BOLTS AS SPECIFIED BY THE MANUFACTURER.

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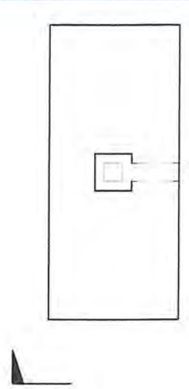
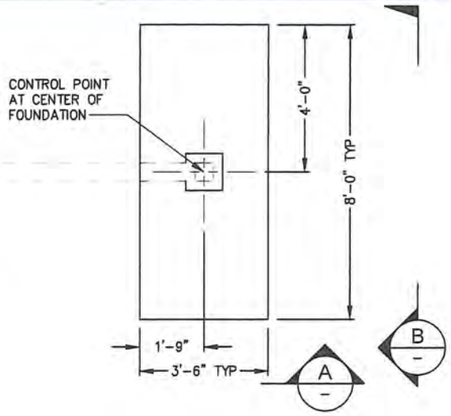
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - DRIVER ASSISTANCE SHELTER

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WA83/2011-SF	VERT: MLLW		
PARCEL: LOT F	DRAWING SCALE: AS NOTED		
PHASE: BID			

C3.06
31 OF 69

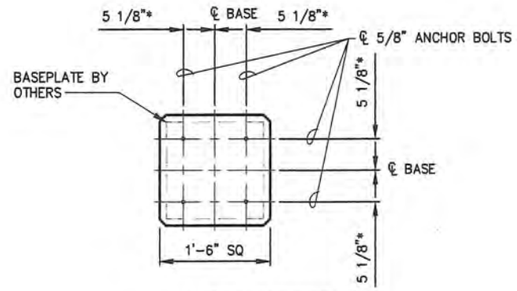
BINDING EDGE





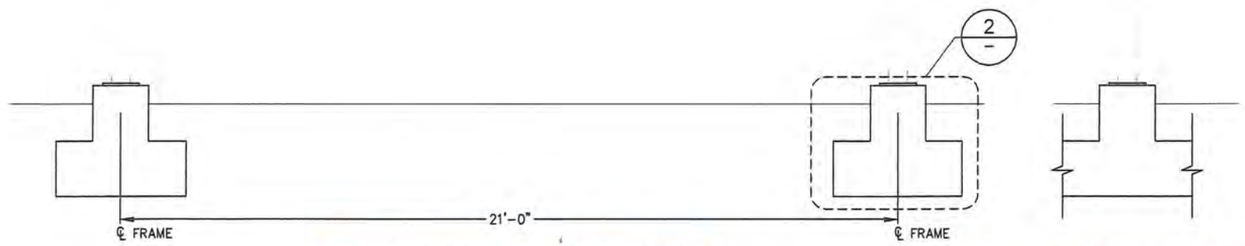
1 — **STRUCTURE PLAN VIEW**
SCALE: 1/2" = 1'-0"

OCR PORTAL FRAME BY OTHERS



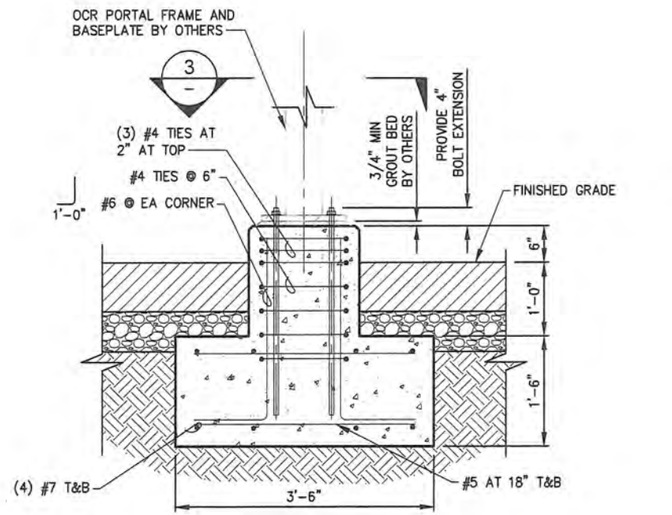
* CONFIRM DIMENSIONS w/ OCR VENDOR. COORDINATE ANCHOR BOLT SETTING TEMPLATE w/ VENDOR.

3 — **DETAIL**
SCALE: 1" = 1'-0"



A — **STRUCTURE FRONT ELEVATION**
SCALE: 1/2" = 1'-0"

B — **STRUCTURE SIDE ELEVATION**
SCALE: 1/2" = 1'-0"



2 — **DETAIL - OCR PORTAL FOUNDATION**
SCALE: 1" = 1'-0"

2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"

1' 0' 1' 2'
SCALE: 1"=1'

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LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - OCR FOUNDATIONS

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PHASE: BID | PARCEL: LOT F | DRAWING SCALE: AS NOTED

C3.07
32 OF 69

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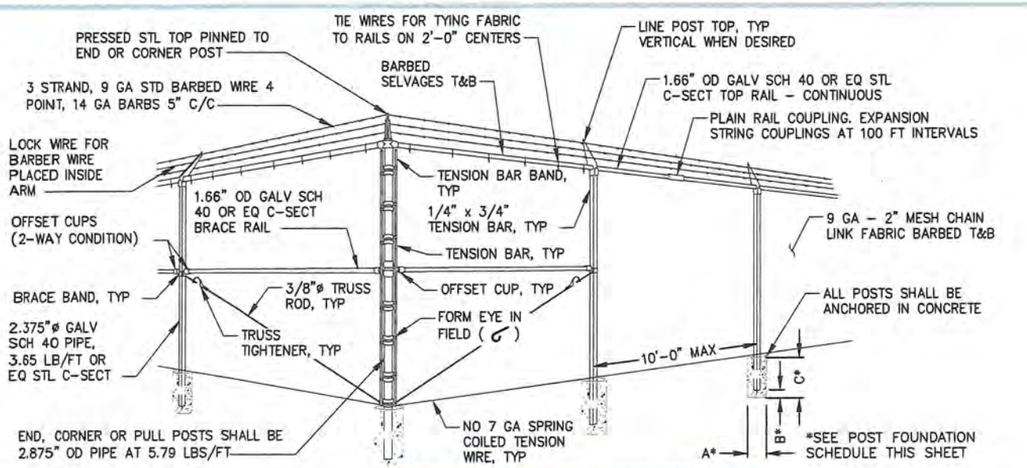
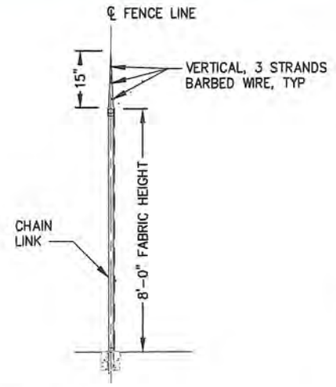


1 – **TYPICAL FENCE PERSPECTIVE**
SCALE: NTS

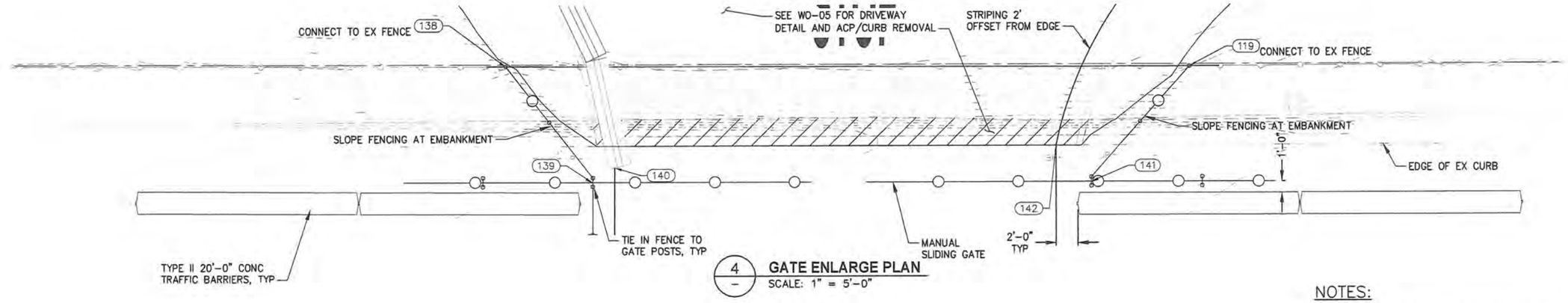


2 – **TYPICAL FENCE SECTION**
SCALE: NTS

POST FOUNDATION DIMENSIONS AND REINFORCEMENT SCHEDULE				
LOCATION	A	B	C	STEEL REINF AND NOTES
FENCE, MAN GATE, AND TURNSTILE POSTS				
LINE	0'-10"	0'-6"	3'-0"	NONE
CORNER/END	1'-0"	0'-6"	3'-6"	NONE
PEDESTRIAN ACCESS GATE HINGE POST	1'-4"	0'-6"	3'-6"	NONE
DOUBLE LEAF SWING GATE POST	2'-0"	0'-6"	6'-0"	SEE NOTE A
DOUBLE LEAF SLIDING GATE POLE	CONTRACTOR DESIGNED			

A. PROVIDE 8 EQUALLY SPACED VERTICAL #6 BARS AND HORIZONTAL #4 TIES AT 6" ON CENTER. ADJUST REINF LENGTH TO MATCH SPECIFIED FOUNDATION DIAMETER AND DEPTH.

3 – **POST FOUNDATION DIMENSION**
SCALE: NTS



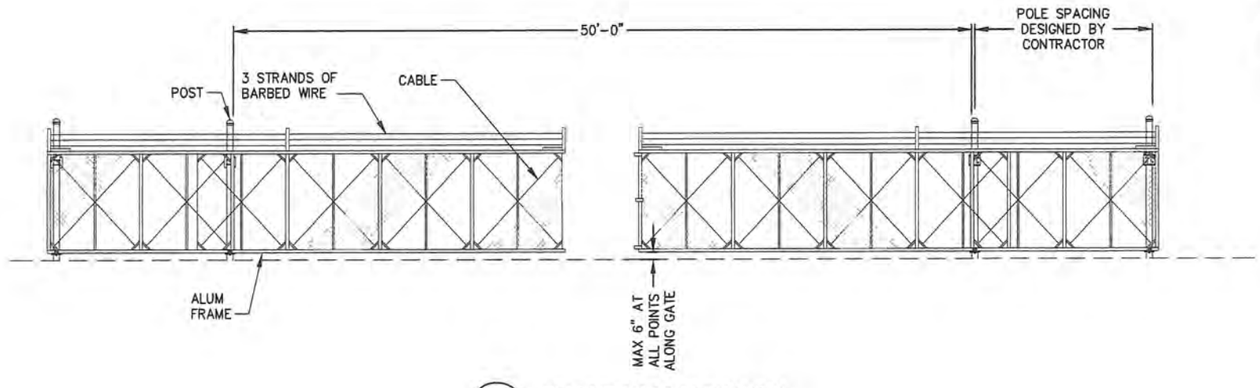
4 – **GATE ENLARGE PLAN**
SCALE: 1" = 5'-0"

NOTES:

1. ALL FENCE AND GATE FABRIC, FRAMEWORK, FITTINGS, TIES, POSTS AND BARBED WIRE SHALL BE GALVANIZED AND PVC COATED, COLOR BLACK.

LEGEND:

ACP OVERLAY



5 – **SLIDING GATE ELEVATION**
SCALE: 1" = 5'

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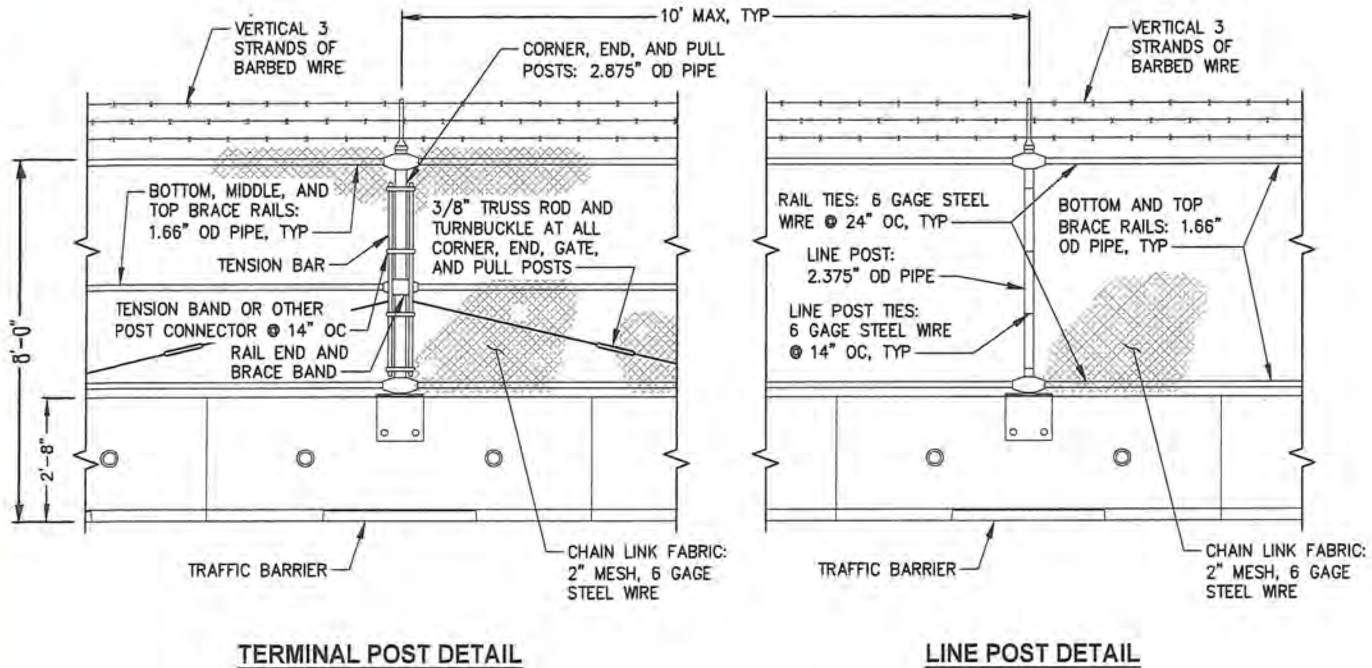
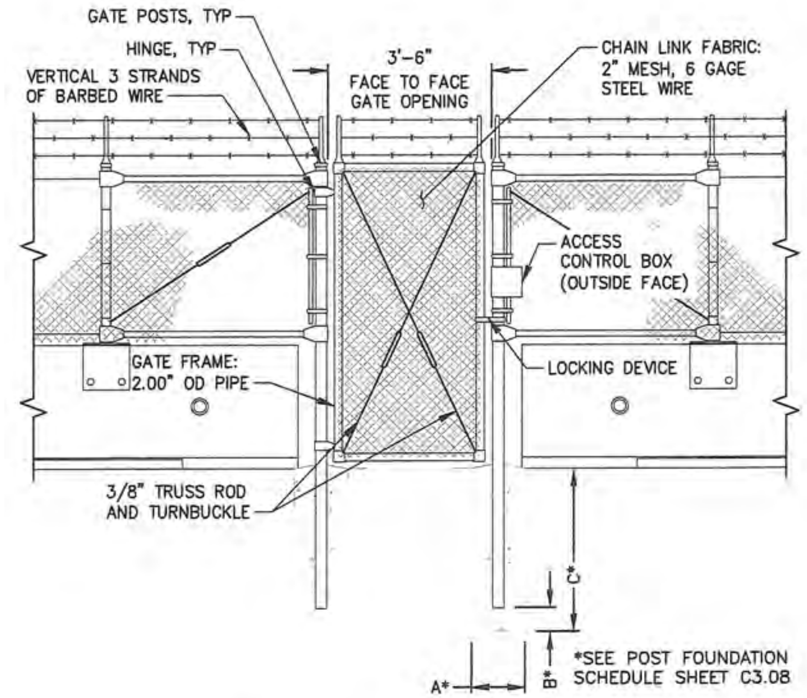
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - FENCING & SLIDING GATE

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WA83/2011-SF	VERT: MLLW		
PARCEL: LOT F	DRAWING SCALE: AS NOTED		
PHASE: BID			

C3.08
33 OF 59



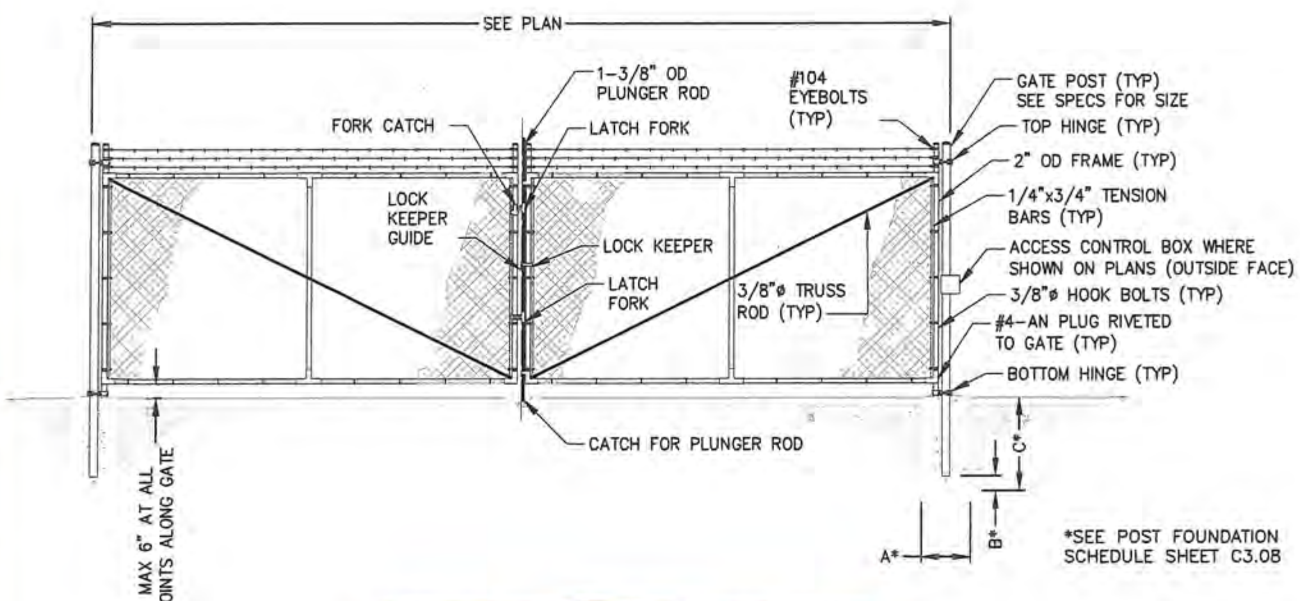
1 / – **BARRIER MOUNTED SECURITY FENCE**
SCALE: 1/2" = 1'-0"
C2.01, C2.02, C2.03, C2.04



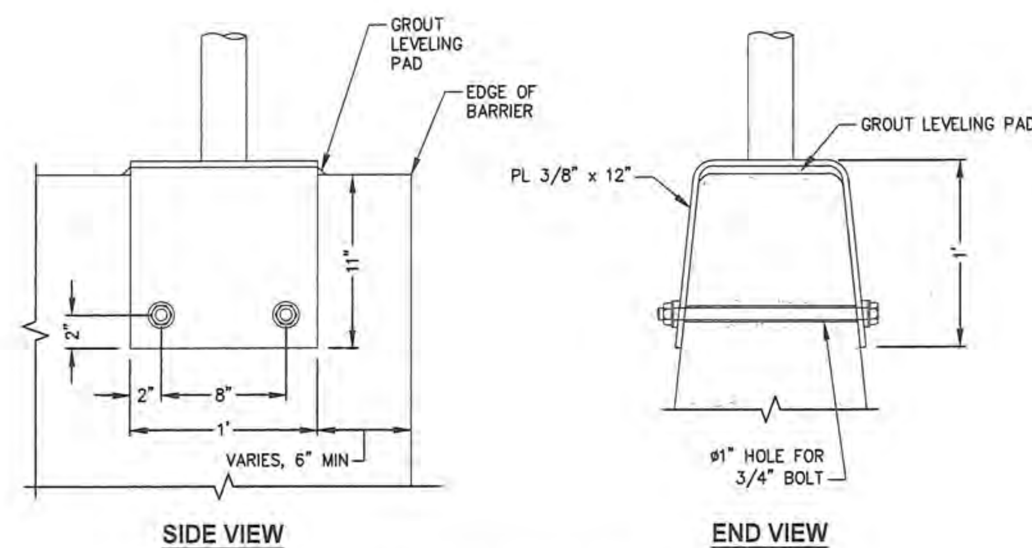
2 / C2.02 **PEDESTRIAN ACCESS GATE**
SCALE: 1/2" = 1'-0"
C2.03

NOTES

1. TOP OF THE FENCE SHALL PRESENT A SMOOTH LINE PARALLEL TO FINISHED GROUND LEVELS, WITH NO DISCERNIBLE DIPS, HUMPS, OR SUDDEN DIFFERENCES IN ALIGNMENT.
2. STRAINING (PULL) POSTS SHALL BE PROVIDED AT ALL ENDS AND CORNERS OF THE FENCE, AT CHANGES OF DIRECTION, AND AT INTERVALS NOT EXCEEDING 98'-5" ON STRAIGHT LENGTHS OF FENCE.
3. ALL FENCE AND GATE FABRIC, FRAMEWORK, FITTINGS, TIES, POSTS AND BARBED WIRE SHALL BE GALVANIZED AND PVC COATED, COLOR BLACK.



3 / C2.02 **DOUBLE LEAF SWING GATE DETAIL**
SCALE: NTS
C2.03



4 / – **FENCE POST SADDLE**
SCALE: 2" = 1'-0"

2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"

6" 0'-0" 6" 1'-0"
SCALE: 2"=1'-0"

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ITS | Husky

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BYRON J. HALEY, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER 12/02/19

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LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - BARRIER MOUNTED FENCE & SWING GATE

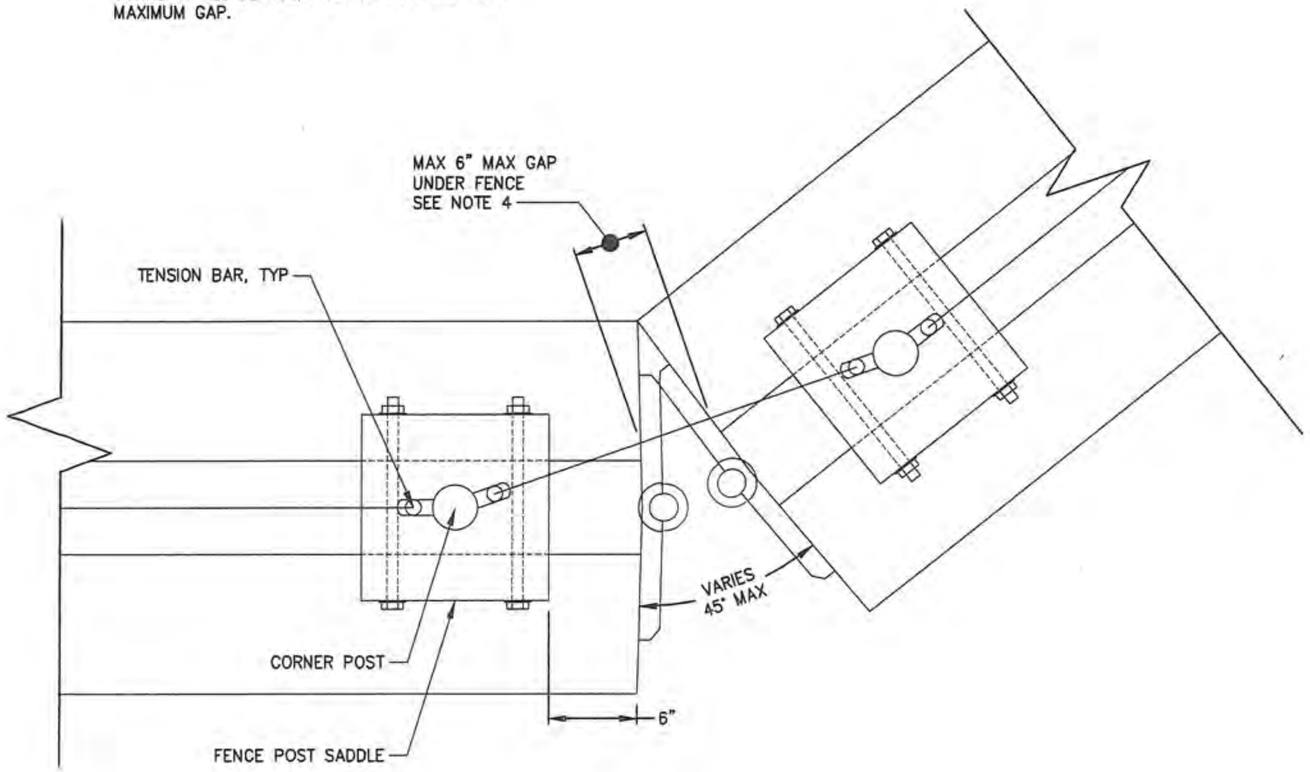
TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
DAT-HRZ: WA83/2011-SF	VERT: MLLW	
PARCEL: LOT F	DRAWING SCALE: AS NOTED	

C3.09
34 OF 59
PHASE: BID

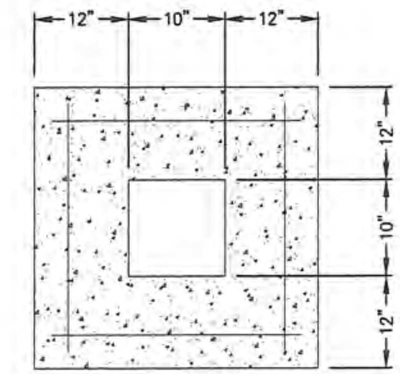
BINDING EDGE

NOTES

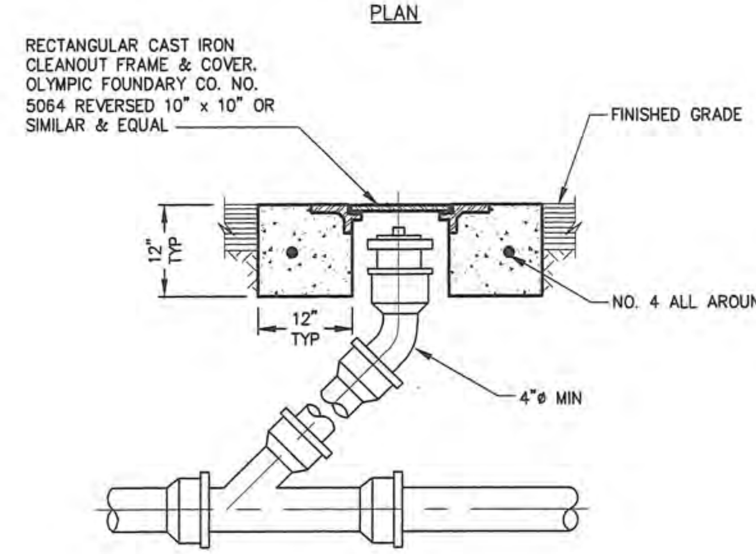
1. TOP OF THE FENCE SHALL PRESENT A SMOOTH LINE PARALLEL TO FINISHED GROUND LEVELS, WITH NO DISCERNIBLE DIPS, HUMPS, OR SUDDEN DIFFERENCES IN ALIGNMENT.
2. TENSION BARS SHALL BE PROVIDED BOTH SIDES AT EACH CORNER POST.
3. CHAMFER OF CONCRETE BARRIER NOT SHOWN FOR CLARITY.
4. MAXIMUM GAP OF 6" IS ALLOWABLE. FOR SHARPER ANGLES, INTERMEDIATE FENCE CORNERS WILL BE REQUIRED TO MAINTAIN THE MAXIMUM GAP.



1 / – **FENCE CORNER POST SADDLE**
SCALE: 2" = 1'-0"



PLAN



ELEVATION

NOTE:
1. CLEANOUT SHALL BE DESIGNED FOR TOP PICK LOADING.

2 / – **SCALE SUMP CLEANOUT**
SCALE: NTS
C2.01, C2.03

6" 0'-0" 6" 1'-0"
SCALE: 2"=1'-0"

CALL 2 DAYS
BEFORE YOU DIG
1-800-424-5555

PORT OF TACOMA FILE: Q:\LB\8897-07\CADD_Active_SheetSet\889707-C03.10

moffatt & nichol
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MARK:	REVISION:	BY:	APPR:	DATE:

S. GRAY 11/19/19
CHECKED BY DATE
B. HALEY 11/19/19
PROJ. ENGR DATE
PRINTED BY: mcoker Dec 02, 2019
SITE ADDRESS: 1754 THORNE RD TACOMA, WA 98421

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DETAILS - MISCELLANEOUS

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011-SF | VERT: MLLW
PARCEL: LOT F | DRAWING SCALE: AS NOTED
PHASE: BID

C3.10
35 OF 59

BINDING EDGE

GENERAL NOTES:

1. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO CIVIL AND STRUCTURAL DRAWINGS TO COORDINATE THE EXACT LOCATION OF ALL ELECTRICAL EQUIPMENT, STRUCTURES, VAULTS, CONDUITS, ETC. NOTIFY ENGINEER IN THE EVENT OF A CONFLICT.
2. SEE DRAWING E10 AND E11 FOR CONDUIT AND CONDUCTOR SCHEDULE. NOT ALL CONDUIT AND CONDUCTORS ARE INDICATED ON THE SCHEDULES. SEE SITE PLANS AND DETAILS FOR ADDITIONAL CONDUIT AND CONDUCTOR REQUIREMENTS. METALLIC CONDUITS, COUPLINGS AND JOINTS OF METALLIC CONDUITS EMBEDDED IN CONCRETE, CDF, EARTH OR ASPHALT SHALL BE 1/2 LAP TAPED OR OTHERWISE MADE WATERTIGHT TO PREVENT INTRUSION OF MORTAR, WATER OR OTHER MATERIALS. TEST CONDUIT FOR ABSENCE OF ANY BLOCKAGE PRIOR TO AND WITHIN 24 HOURS OF COMPLETING A CONCRETE OR CDF POUR OR ASPHALT PAVING. ALL METAL CONDUIT EXPOSED ABOVE GRADE SHALL BE PVC COATED OR PRIMED AND PAINTED TWO(2) COATS BLACK OVER GALVANIZE.
3. CONTRACTOR SHALL INCLUDE IN THE BID ALL COSTS TO HAVE A DEPARTMENT OF LABOR AND INDUSTRIES APPROVED FIRM TO FIELD EVALUATE THE INSTALLATION, SAFETY, AND COMPLIANCE REQUIRED PER TACOMA POWER ELECTRICAL INSPECTION AND/OR PER W.A.C. 296-46B-901 FOR ANY EQUIPMENT SPECIFIED OR FURNISHED NOT UL LABELED.
4. THERE IS ADDITIONAL ELECTRICAL WORK SHOWN ON THE CIVIL AND STRUCTURAL DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS. EXTENSIVE COORDINATION IS REQUIRED BY THE CONTRACTOR WITH GOVERNING AUTHORITIES, OTHER CONTRACTORS WORKING ON SITE, POT, AND POT TENANTS. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATION SECTIONS AND INCLUDE COSTS FOR ALL COORDINATION AND RELATED WORK IN THE BID.
5. EXCAVATIONS IN EXISTING ASPHALT AREAS FOR POWER AND COMMUNICATIONS WORK. THE CONTRACTOR SHALL SAWCUT, EXCAVATE, HAND DIG, BACKFILL, COMPACT AND PATCH ASPHALT PER THE SPECIFICATIONS. LIMITS OF PAVEMENT DEMOLITION AND RESTORATION SHALL BE AS REQUIRED BY CIVIL AND TO SAFELY PERFORM THE POWER AND COMMUNICATIONS INSTALLATIONS. PAVEMENT PATCHING SHALL BE PER CIVIL/ STRUCTURAL REQUIREMENTS.
6. SEE CIVIL DRAWINGS FOR LIMITS OF CAP, SITE EQUIPMENT DEMOLITION, EXISTING AND NEW BELOW GRADE UTILITIES. CONTRACTOR SHALL FIELD COORDINATE EXISTING UTILITIES, UNDERGROUND WORK BY OTHER CONTRACTORS WITH ROUTING OF NEW ELECTRICAL UNDERGROUND INFRASTRUCTURE. CALL FOR, IDENTIFY AND MAINTAIN EXISTING UTILITY LOCATES PRIOR TO ANY EXCAVATIONS.
7. THIS PROJECT WILL HAVE MULTIPLE CONTRACTORS WORKING ON THE SAME SITE TO ACCOMPLISH A COMPLETED PROJECT. CONTRACTOR WILL BE REQUIRED TO SCHEDULE AND COORDINATE WITH ITS/ HUSKY COMMUNICATION EQUIPMENT CONTRACTOR, PORT OF TACOMA MAINTENANCE PERSONNEL, POT OF TACOMA IT STAFF AND WUT TERMINAL TENANT.
8. CONTRACTOR SHALL PROVIDE PULL TAPE IN ALL CONDUIT RUNS WITH CONDUCTORS, COMMUNICATIONS CABLES OR EMPTY. PROVIDE COMPLETE LOOP OF ALL POWER AND COMMUNICATIONS CABLES AROUND ALL FOUR(4) WALLS OF VAULTS PRIOR TO CABLE EXITING VAULT. FOR POWER CONDUCTORS UPSIZED TO REDUCE VOLTAGE DROP AND LARGER THAN TERMINATION LUGS CONTRACTOR SHALL PROVIDE TERMINAL PINS (FINGER SPLICES) TO ACCOMMODATE TERMINATION.

SYMBOLS LEGEND:

- XXXX — BURIED POWER/ COMMUNICATIONS CONDUITS IN SHARED TRENCH. SEE CONDUIT AND WIRE SCHEDULE SHEET E10 AND E11.
- PV / CV — POWER VAULT(PV) AND COMMUNICATION VAULT(CV), 125KIP RATING. SEE VAULT SCHEDULE SHEET E12.
- ELECTRICAL POWER PANEL.
- DUPLEX 120V, 20A. WP = GFI RECEPTACLE IN NEMA 3R CAST BOX WITH "IN USE" NEMA 3R COVER.
- GROUND PER NEC
- EQUIPMENT CONNECTION. PROVIDE PER NEC AND MANUFACTURER'S REQUIREMENTS AND/OR RECOMMENDATIONS.
- J — CAST JUNCTION BOX
- PX — WOOD LIGHTING POLE WITH MULTIPLE LIGHT FIXTURES. SUBSCRIPT PX IDENTIFIES POLE #.
- XXX — AVAILABLE FAULT CURRENT.
- A / B — DETAIL/SECTION IDENTIFICATION: A = DETAIL/SECTION LETTER, B = SHEET NUMBER WHERE DETAIL/SECTION IS TAKEN FROM OR DRAWN.
- EXISTING(E)
- EXISTING TO BE REMOVED
- NEW(N)

ABBREVIATION LEGEND:

A	=	AMPS
AFG	=	ABOVE FINISHED GRADE
AIC	=	FAULT CURRENT RATING
BP	=	EXISTING BURIED POWER
BPO	=	EXISTING BURIED FIBER
C	=	COMMUNICATIONS
CDF	=	CONTROLLED DENSITY FILL
CKT	=	CIRCUIT
CO	=	CONDUIT ONLY
CV	=	COMMUNICATIONS VAULT
E	=	EXISTING
FT	=	FEET
GRD	=	GROUND
HMA	=	HOT MIX ASPHALT
ID	=	IDENTIFICATION
N	=	NEW
NEC	=	NATIONAL ELECTRICAL CODE
NEMA	=	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	=	NOT IN CONTRACT
PV	=	POWER VAULT
POT	=	PORT OF TACOMA ENGINEER
POTM	=	PORT OF TACOMA FACILITIES MAINENANCE
POTIT	=	POT OF TACOMA INFORMATION TECHNOLOGY DEPARTMENT
PVCRS	=	PVC COATED RIGID STEEL CONDUIT OR OTHER EQUIPMENT AS NOTED
TPU	=	TACOMA POWER UTILITIES
WAC	=	WASHINGTON ADMINISTRATIVE CODE
WP	=	WEATHERPROOF
WPC	=	WHERE-PORT COMMUNICATIONS

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MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 11/21/19

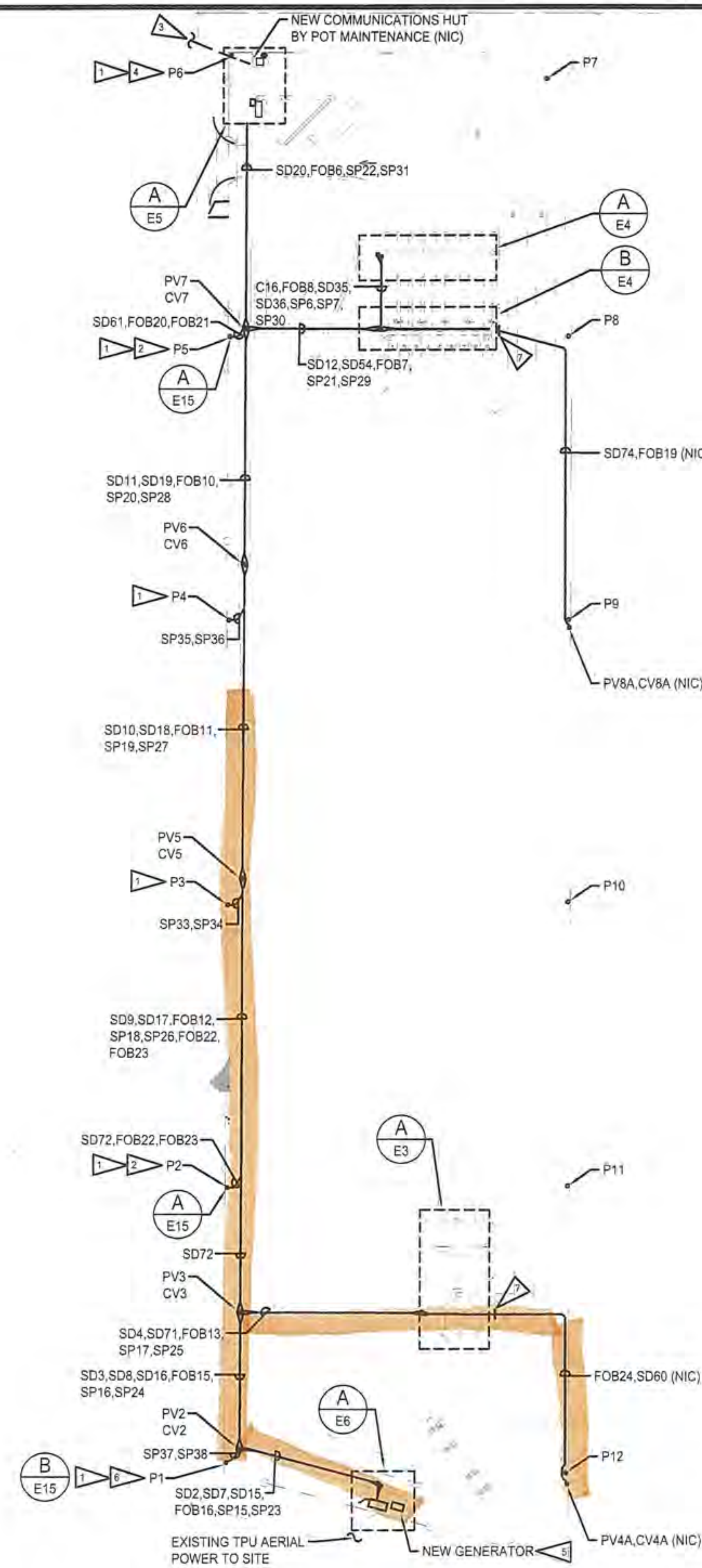
DESIGNED BY	SLH	12-02-19
CHECKED BY		DATE
PROJ. ENGR	GLW	12-02-19
PRINTED BY:	ScottK Dec 02, 2019	DATE
SITE ADDRESS:	1281 PIER G WAY LONG BEACH, CA 90802	

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
ELECTRICAL SYMBOLS/ ABBREVIATION LEGEND AND GENERAL NOTES

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT—HRZ: WA83/2011	VERT: MLLW 19.18' @ TIDE 22 1933		
PARCEL: N/A	DRAWING SCALE: AS NOTED		
PHASE: BID SET			

E1
36 OF 69

PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E1



OVERALL ELECTRICAL SITE PLAN

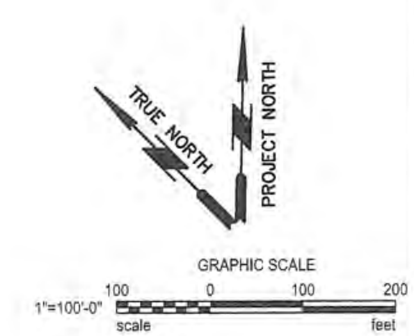
SCALE: 1"=100'-0"

GENERAL NOTES:

1. SEE SHEET E1 FOR GENERAL NOTES.

ELECTRICAL NOTES:

1. SEE SHEET E8.
2. SECURITY CAMERA, RFID ANTENNAS, POT COMMUNICATION BOX, ITS/HUSKY COMMUNICATION BOX AND UNIT SUB LOCATION. SEE DETAIL A/E15.
3. AERIAL FO CABLE TO HUT (NIC).
4. ITS/HUSKY SECURITY CAMERAS(2) AND ACCESS POINT(1) SUPPLIED BY ITS/HUSKY AND INSTALLED BY CONTRACTOR. POWER AND COMMUNICATIONS WIRING REQUIREMENTS IN CONDUIT FROM HUT BY CONTRACTOR.
5. ITS/HUSKY HAS PREORDERED GENERATOR. NEMA 3R, STAND-BY GENERATOR WITH DIESEL FUEL, 48 HOUR BELLY TANK, 300KW (375KVA), 480V, 3PH, 4W, AND SERVICE ENTRANCE RATED ATS, SERVING AS BACK UP TO SITE ELECTRICAL SERVICE. CONTRACTOR SHALL RECEIVE, INSTALL, TEST, PROVIDE ALL CONSUMABLES AND WARRANTEE.
6. ITS/HUSKY SECURITY CAMERA(S), TWO(2) SUPPLIED BY ITS/HUSKY AND INSTALLED BY CONTRACTOR. POWER AND COMMUNICATIONS WIRING REQUIREMENTS IN CONDUIT FROM UNIT SUB AT P2 AND ITS/HUSKY COMMUNICATIONS CABINET AT P2 BY CONTRACTOR.
7. EXTENSION OF CONDUIT FROM THIS LOCATION TO P9, PANEL 4A AND P12, PANEL 4B BY POT CONTRACTOR. WIRE FROM PANELS 4A AND 4B BY POT CONTRACTOR.



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Job Number: 18-032

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ITS Husky

STEVEN L. HUBBS — PROFESSIONAL ENGINEER — 12/2/19

MARK:	REVISION:	BY:	APPR:	DATE:

CHECKED BY	SLH	12-02-19
		DATE
PROJ. ENGR	GLW	12-02-19
		DATE

PRINTED BY: ScottK Dec 02, 2019
SITE ADDRESS: 1281 PIER G WAY LONG BEACH, CA 90802

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
OVERALL LOT F ELECTRICAL SITE PLAN

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
DAT–HRZ: WA83/2011	VERT: MLLW 19.18' @ TIDE 22 1933	
PARCEL: N/A	DRAWING SCALE: AS NOTED	

E2
37 OF 59

PHASE: BID SET

BINDING EDGE

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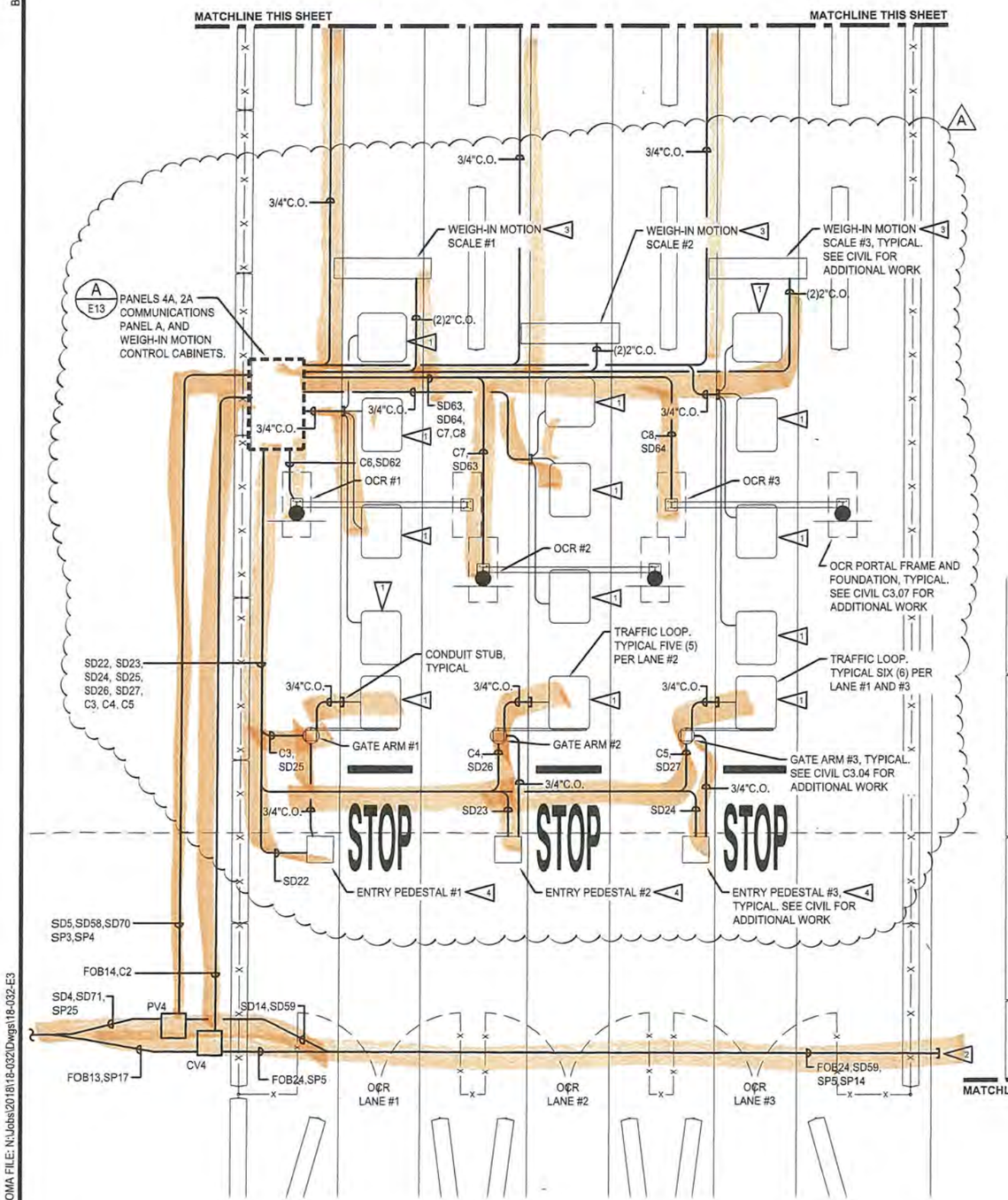
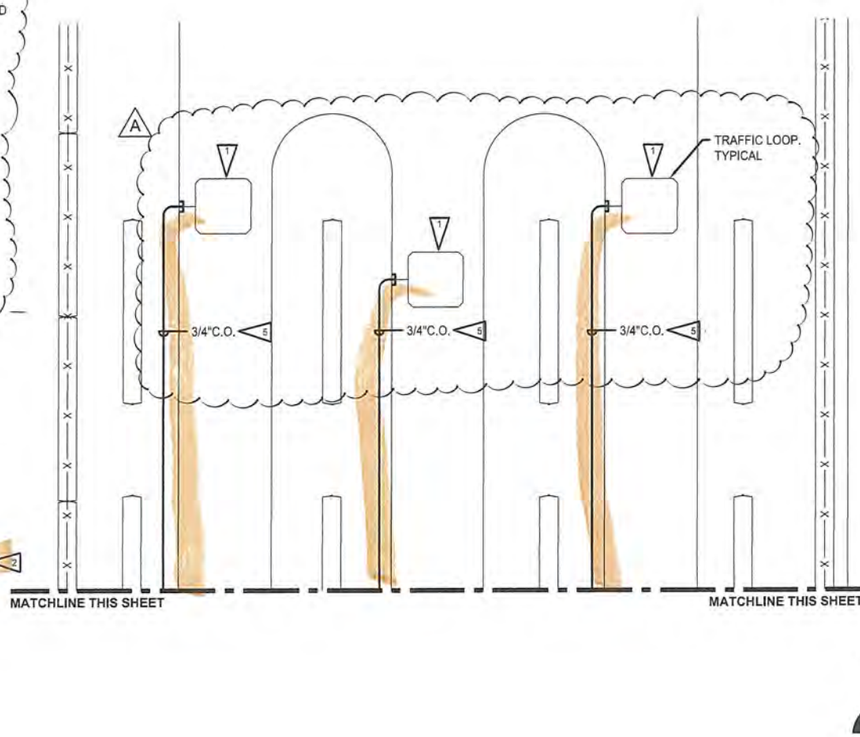
BINDING EDGE



A E3 **PARTIAL ELECTRICAL SITE PLAN**
SCALE: 1/8"=1'-0"



GENERAL NOTES:

1. SEE SHEET E1 FOR GENERAL NOTES.

ELECTRICAL NOTES:

1. SAW CUT ASPHALT AND PROVIDE TRAFFIC LOOP WIRING AS INDICATED PER GATE EQUIPMENT AND OCR EQUIPMENT MANUFACTURER'S SHOP DRAWINGS AND REQUIREMENTS. SEE CIVIL. PROVIDE 3/4" SCHEDULE 80 PVC FOR ALL WIRING OUTSIDE OF TRAFFIC LOOP BACK TO EQUIPMENT AND CONTROL LOCATIONS, FOR GATE ARM AND OCR EQUIPMENT. TACK SEAL SAWCUT AFTER WIRING INSTALLATION. FOAM SEAL CONDUIT STUB.
2. SEE SHEET E2. WIRE FROM PANEL 4A AND CONDUIT EXTENSION BY POT CONTRACTOR. NIC.
3. PROVIDE (2)2"C.O. WITH PULLSTRINGS FROM EACH WEIGH-IN MOTION SCALE TO WEIGH-IN MOTION CONTROL CABINETS. COORDINATE EXACT LOCATION FOR CONDUITS AND TERMINATIONS WITH WEIGH-IN MOTION EQUIPMENT SHOP DRAWINGS. FIELD WIRING BY SCALE PROVIDER.
4. PUSH BUTTON PROVIDED BY GATE ARM EQUIPMENT SUPPLIER. REVIEW SHOP DRAWINGS, PROVIDE FIELD WIRING AND INSTALL PER GATE ARM EQUIPMENT SUPPLIER REQUIREMENTS.
5. TO COMMUNICATIONS CABINET "A".

TRUE NORTH
PROJECT NORTH

GRAPHIC SCALE
1/8"=1'-0" 8 0 8 16 scale feet

GRAPHIC SCALE
1/4"=1'-0" 4 0 4 8 scale feet

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Job Number: 19-032

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600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:
A	ADDENDUM #A	SJK	GLW	12/11/19

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — 12/11/19

CHECKED BY	SLH	12-02-19
	GLW	12-02-19
PROJ. ENGR		DATE

PRINTED BY: ScottK Dec 12, 2019
SITE ADDRESS: 1281 PIER G WAY
LONG BEACH, CA 90802

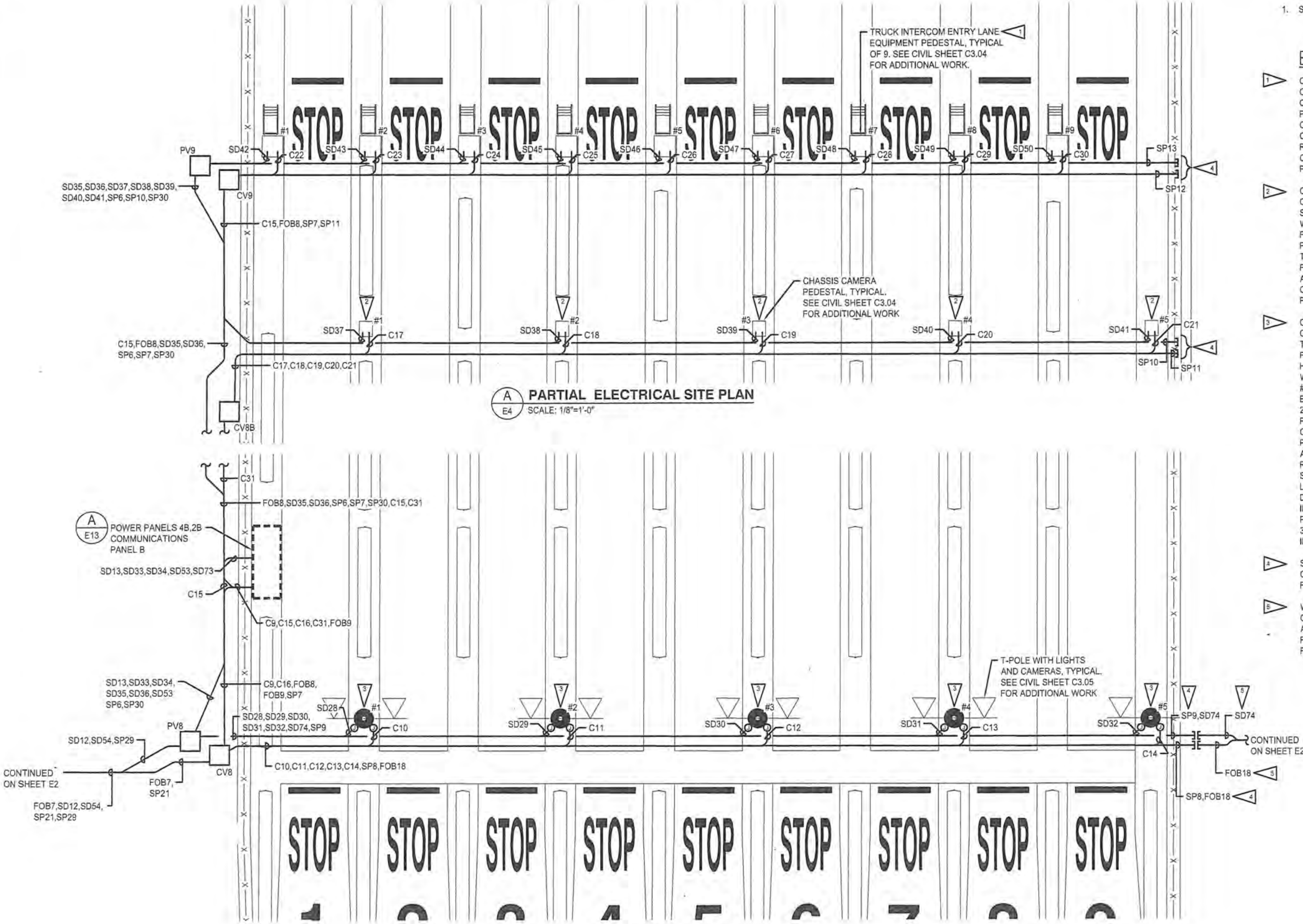
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
PARTIAL ELECTRICAL SITE PLAN

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT–HRZ: WA83/2011 | VERT: MLLW 19.18' @ TIDE 22 1933
PARCEL: N/A | DRAWING SCALE: AS NOTED
PHASE: BID SET

E3
38 OF 59

PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E3

BINDING EDGE



A PARTIAL ELECTRICAL SITE PLAN (E4)
SCALE: 1/8"=1'-0"

B PARTIAL ELECTRICAL SITE PLAN (E4)
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. SEE SHEET E1 FOR GENERAL NOTES.

ELECTRICAL NOTES:

1. COORDINATE POWER/WIRING AND COMMUNICATIONS CONDUIT LOCATIONS IN INTERCOM PEDESTAL. PVC CONDUITS SHALL BE STUBBED 2" ABOVE CONCRETE. PROVIDE 18" MINIMUM POWER WIRING LOOP FOR CONNECTION TO RECEPTACLE BY OTHERS. SEE SHEET C3.04. PROVIDE #4 BARE COPPER GROUND WIRE TO BOND REBAR, ANCHOR BOLTS AND METAL STAIR. LEAVE 24" COIL FOR CONNECTION TO EQUIPMENT GROUND WIRE PROVIDED IN CONDUIT FROM POWER PANEL.

2. COORDINATE POWER/WIRING AND COMMUNICATIONS CONDUIT LOCATIONS IN CHASSIS CAMERA PEDESTAL. SEE SHEET C3.04. PROVIDE #4 BARE COPPER GROUND WIRE TO REBAR AND ANCHOR BOLTS. LEAVE 24" COIL FOR CONNECTION TO EQUIPMENT GROUND WIRE PROVIDED IN CONDUIT FROM POWER PANEL. PROVIDE TWO(2) BEGA 22354K4BRZ19524120V OR EQUAL LIGHT FIXTURES MOUNTED IN PEDESTAL. PROVIDE ASTRONOMICAL, PROGRAMMABLE, 4-CHANNEL LIGHTING CONTROL, NEMA 3R, MOUNTED ADJACENT TO POWER PANEL. TORK, INTERMATIC OR EQUAL.

3. COORDINATE POWER/WIRING, COMMUNICATIONS CONDUIT AND SURFACE PULL BOX LOCATIONS AT T-POLES. SEE SHEET C3.05. PROVIDE TWO(2) LIGHT FIXTURES AND AND STAINLESS STEEL MOUNTING HARDWARE ON POLE AS INDICATED. ILP WPSPYMK30WLEDUNIV4000KCORDX OR EQUAL. PROVIDE #4 BARE COPPER GROUND WIRE TO CONCRETE EMBEDDED REBAR, T-POLE AND ANCHOR BOLTS. LEAVE 24" COIL FOR CONNECTION TO EQUIPMENT GROUND WIRE PROVIDED IN CONDUIT FROM POWER PANEL. ALL CONDUIT ON T-POLE SHALL BE PVC COATED FLEX OR PVCRS WERE EXPOSED. PULL BOXES, JUNCTION BOXES AND LIGHT FIXTURE/CAMERA MOUNTING BOXES SHALL BE RS TYPE, GASKETED PAINTED TWO(2) COATS BLACK. USE STAINLESS STEEL SCREWS AND DO NOT PAINT SCREWS. LIGHTS AND CAMERA CONNECTIONS SHALL BE FROM DOWN FACING HUBS. ITS/HUSKY WILL FURNISH AND INSTALL CAMERAS ON T-POLE. PROVIDE ASTRONOMICAL, PROGRAMMABLE, 4-CHANNEL LIGHTING CONTROL, NEMA 3R, MOUNTED ADJACENT TO POWER PANEL. TORK, INTERMATIC OR EQUAL.

4. STUB AND CAP CONDUITS BELOW GRADE AT LIMITS OF CONSTRUCTION BOUNDARY. DIMENSION LOCATIONS FROM CENTER OF PEDESTAL.

5. WORK FROM THIS POINT BY POT CONTRACTOR NIC. COORDINATE CONDUIT EXTENSION SAWCUTTING, ASPHALT REMOVAL, TRENCHING, BACKFILL, PATCHING FROM THIS LOCATION WITH POT CONTRACTOR. WIRE FROM PANEL 4B TO UNIT SUB BY POT CONTRACTOR.

TRUE NORTH — PROJECT NORTH

GRAPHIC SCALE
1/8"=1'-0" 8 0 8 16 scale feet

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ITS — Husky

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — 12/2/19

MARK:	REVISION:	BY:	APPR:	DATE:

CHECKED BY	SLH	12-02-19
PROJ. ENGR	GLW	12-02-19

PRINTED BY: ScottK Dec 02, 2019
SITE ADDRESS: 1281 PIER G WAY, LONG BEACH, CA 90802

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
PARTIAL ELECTRICAL SITE PLAN

TOWNSHIP: 21N RANGE: 3E SECTION: 34
DAT-HRZ: WA83/2011 VERT: MLLW 19.18' @ TIDE 22 1933
PARCEL: N/A DRAWING SCALE: AS NOTED
PHASE: BID SET

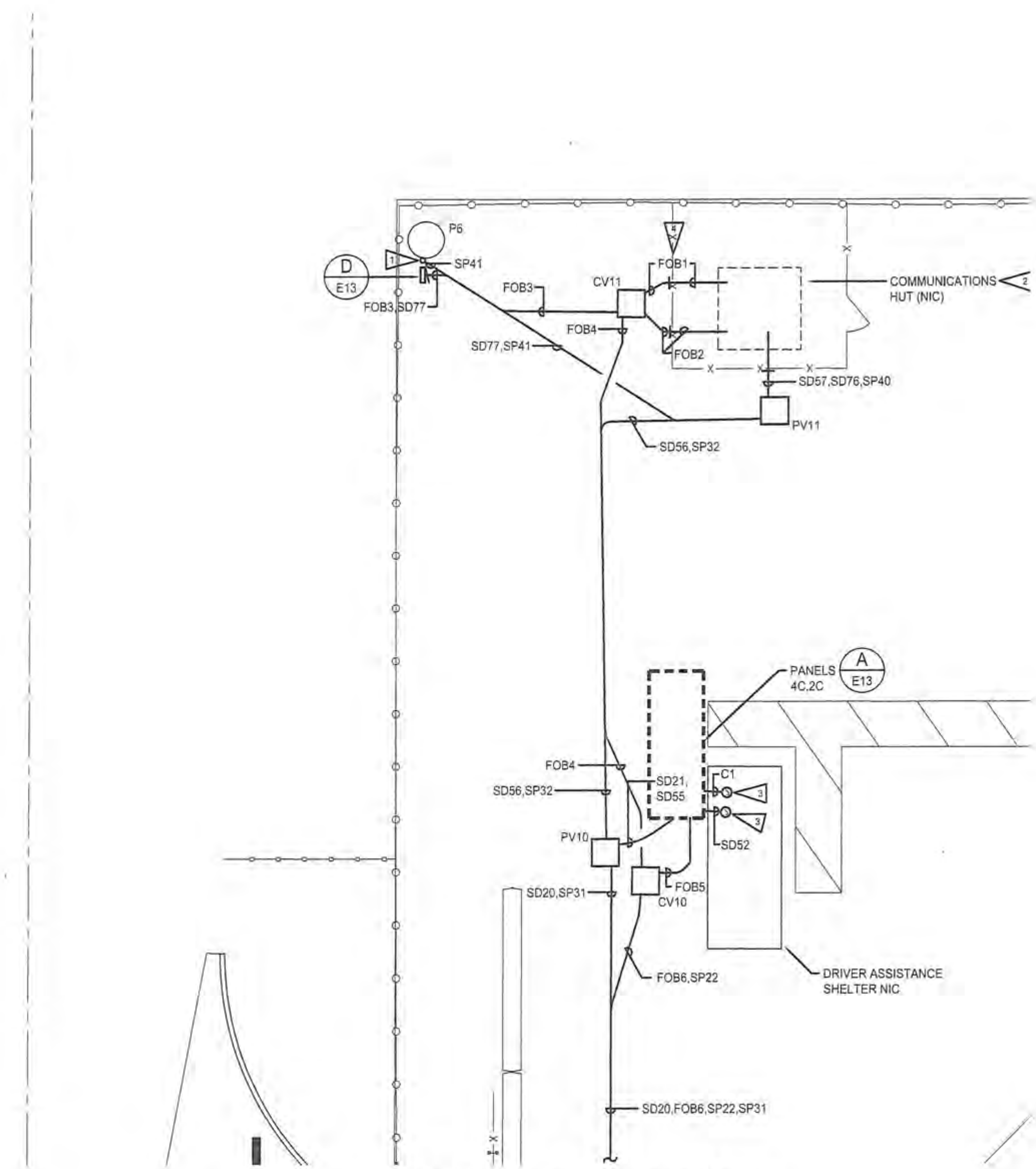
E4
39 OF 59

GENERAL NOTES:

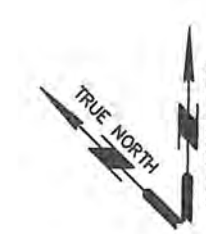
1. SEE SHEET E1 FOR GENERAL NOTES.

ELECTRICAL NOTES:

1. PROVIDE (2)1" PVRS CONDUIT ONLY UP EXISTING CONCRETE POLE BASE AND CAP.
2. COMMUNICATIONS HUT (NIC). CONTRACTOR SHALL COORDINATE CONDUIT STUBS OUT OF HUT AT FENCE LINE WITH POTM.
3. DRIVER ASSISTANCE SHELTER (NIC) PROVIDED BY ITS/HUSKY. CONTRACTOR SHALL COORDINATE POWER AND COMMUNICATIONS CONDUITS INTO DRIVER ASSISTANCE SHELTER WITH ITS/HUSKY COMMUNICATIONS SYSTEMS PROVIDER.
4. CONTRACTOR SHALL PROVIDE UNSPLICED, OSP, LOOSE TUBE, SINGLE JACKET FIBER CABLES IN INDIVIDUAL FABRIC INNER DUCT FROM ITS/HUSKY RACK IN COMMUNICATIONS HUT TO:
   a. COMMUNICATIONS CABINET C (6 STRANDS FIBER)
   b. COMMUNICATIONS CABINET B (12 STRANDS FIBER)
   c. COMMUNICATIONS CABINET A (12 STRANDS FIBER)
   d. ITS/HUSKY COMMUNICATIONS CABINET AT POLE #5 (6 STRANDS FIBER)
   e. ITS/HUSKY COMMUNICATIONS CABINET AT POLE #2 (6 STRANDS FIBER)
   f. ITS/HUSKY COMMUNICATIONS CABINET AT POLE #1 (6 STRANDS FIBER)



A PARTIAL ELECTRICAL SITE PLAN
E5 SCALE: 1/8"=1'-0"



GRAPHIC SCALE
1/8"=1'-0" 8 0 8 16
scale feet

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Phone: (253) 759-0118 Job Number: 18-032

ITS
Husky

moffatt & nichol
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MARK: | REVISION: | BY: | APPR: | DATE:

STEVEN L. HUBBS PROFESSIONAL ENGINEER 12/2/19

CHECKED BY SLH 12-02-19 DATE
PROJ. ENGR GLW 12-02-19 DATE
PRINTED BY: ScottK Dec 02, 2019
SITE ADDRESS: 1281 PIER G WAY LONG BEACH, CA 90802

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
PARTIAL ELECTRICAL SITE PLAN

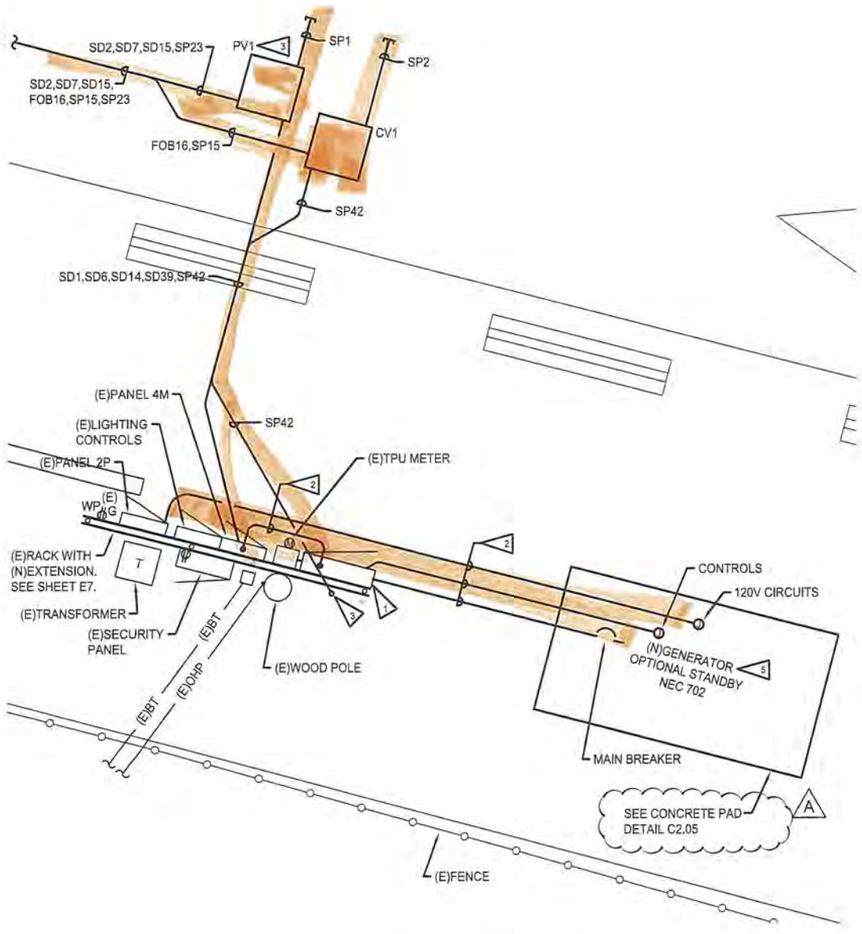
TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011 VERT: MLLW 19.18' @ TIDE 22 1933
PARCEL: N/A | DRAWING SCALE: AS NOTED

E5
40 OF 59

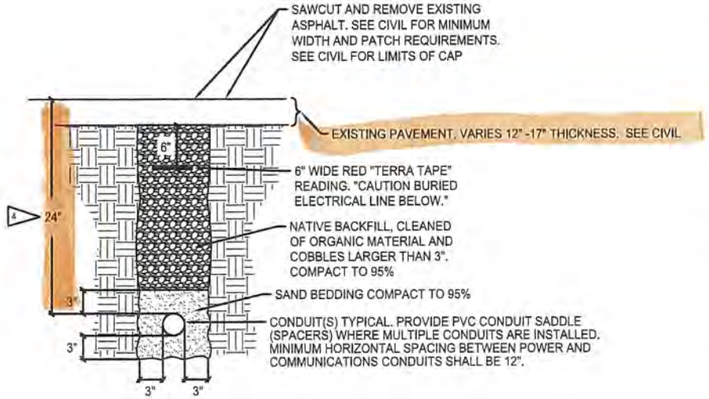
PHASE: BID SET

BINDING EDGE
PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E5

BINDING EDGE



A / E6 **PARTIAL ELECTRICAL SITE PLAN**
SCALE: 1/4"=1'-0"



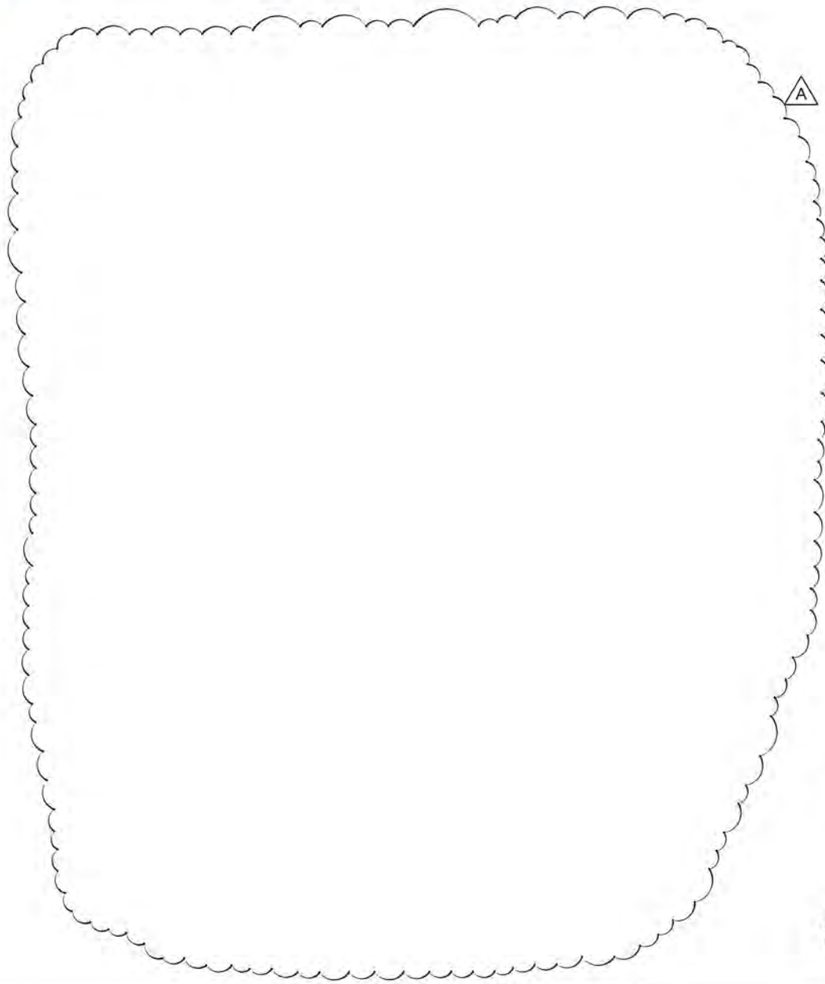
ELECTRICAL/COMMUNICATIONS TRENCH - TYPICAL ENTIRE SITE
NOT TO SCALE

GENERAL NOTES:

1. SEE SHEET E1 FOR GENERAL NOTES.

ELECTRICAL NOTES:

1. NEW SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH PRE-ORDERED BY ITS/HUSKY INSTALLED BY CONTRACTOR. SEE POWER RISER SHEET E7.
2. PROVIDE NEW UNDERGROUND CONDUITS. SEE POWER RISER SHEET E7.
3. STUB AND CAP CONDUIT 6" ABOVE ASPHALT. ELBOW AND STUB SHALL BE PVCRS.
4. IN CAP AREAS FROM TOP OF ASPHALT. SEE CIVIL FOR LIMITS OF CAP.
5. ITS/HUSKY HAS PRE-ORDERED SERVICE ENTRANCE RATED ATS AND OPTIONAL STANDBY NEC 702 DIESEL GENERATOR. CONTRACTOR SHALL TAKE DELIVERY ON SITE, OFF LOAD, INSTALL AND TEST. CONTRACTOR SHALL PROVIDE ALL CONSUMABLES (ANTIFREEZE, OIL, LUBRICANTS, FILTERS) FOR ON SITE TESTING. CHANGE ALL FILTERS TO NEW AFTER ACCEPTANCE TEST. CONTRACTOR SHALL PROVIDE REINFORCED CONCRETE PAD AND MOUNT GENERATOR.



GRAPHIC SCALE
1/8"=1'-0" 8 0 8 16
scale feet

GRAPHIC SCALE
1/4"=1'-0" 4 0 4 8
scale feet

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SUITE# 610
SEATTLE, WA 98101
(206) 622-5022

MARK:	REVISION:	BY:	APPR:	DATE:
A	ADDENDUM #A	SJK	GLW	12/11/19

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 12/11/19

CHECKED BY	SLH	12-02-19
		DATE
PROJ. ENGR	GLW	12-02-19
		DATE

PRINTED BY: ScottK Dec 11, 2019
SITE ADDRESS: 1281 PIER G WAY
LONG BEACH, CA 90802

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
PARTIAL ELECTRICAL SITE PLAN

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WA83/2011	VERT: MLLW 19.18' @ TIDE 22 1933		
PARCEL: N/A	DRAWING SCALE: AS NOTED		
PHASE: BID SET			

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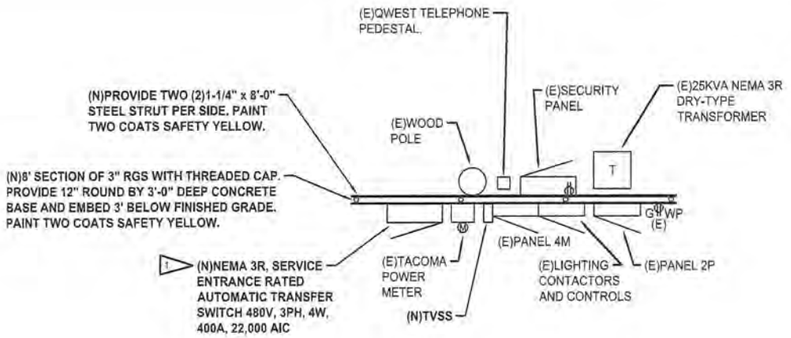
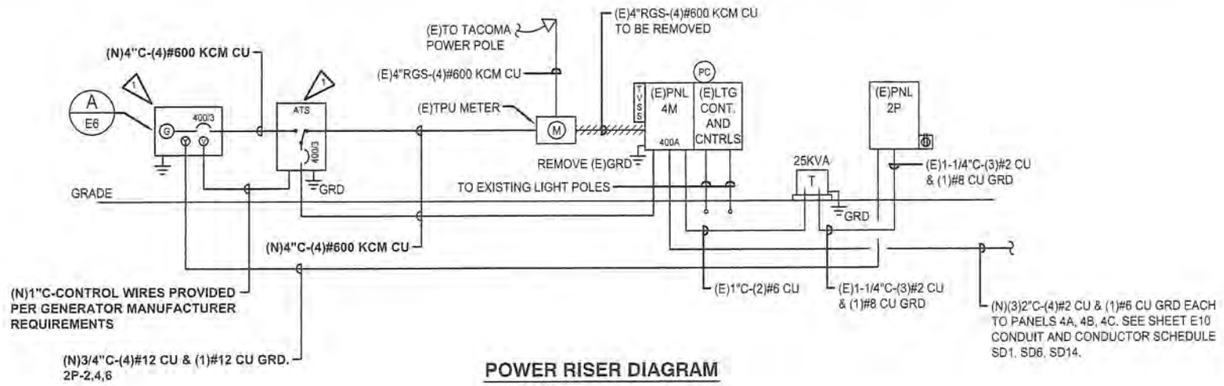
41 OF 59

PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E6



ELECTRICAL SERVICE LAYOUT

SCALE: 1/4"=1'-0"



POWER RISER DIAGRAM

NOT TO SCALE

(E)NEMA 3R - EXISTING

PANEL SCHEDULE

SURFACE MOUNTING
14,000 AIC

NO. 4M | LOCATION: LOT F | SERVING: LIGHTING, PANELS | 480/277 VOLTS 3PHASE 4WIRE 400 AMPS WITH 400 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.	
1	**CIRCUIT #1 LIGHTS**	**30.00**	100		100	**14.60**	**PANEL 4A**	2	4
3			3		3			4	
5								6	
7	**CIRCUIT #2 LIGHTS**	**30.00**	100		100	**15.00**	**PANEL 4B**	8	4
9								10	
11			3		3			12	
13	SPACE				**100**	**6.40**	**PANEL 4C**	14	4
15								16	
17					3			18	
19					20		SPARE	20	
21	SPACE				20		SPARE	22	
23	PANEL 2P VIA 25KVA XFMR	3.20	60		20		SPARE	24	
25			2		**30**		**- TVSS**	26	4
27	SPARE		20					28	
29	LIGHTING CONTROLS	.10	20		3			30	

REMARKS: .

CONNECTED LOAD: **99.2 KVA 120 AMPS**
DEMAND LOAD: **114.2 KVA 138 AMPS**

PROVIDE HANDLE TIES FOR ALL MULTI-CIRCUIT HOMERUNS SHARING A NEUTRAL PER THE NATIONAL ELECTRIC CODE ARTICLE 210.4 MULTIWIRE BRANCH CIRCUITS. PART (B) DISCONNECTING MEANS. DRAWINGS ARE DIAGRAMMATIC. WHERE THE CONTRACTOR MODIFIES THE CIRCUITING, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL NEUTRAL PER CIRCUIT, MULTI-POLE CIRCUIT BREAKERS, OR CIRCUIT BREAKER HANDLE TIE TO MEET THE NEC ARTICLE. ALL COSTS ASSOCIATED WITH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

PANEL 4M LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	60.00	X	1.25	220.19(A)(1)	=	75.00
RECEPTS TO 10KW	-	X	1.00	220.44	=	-
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	-	X	1.25	430.24	=	-
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	-	X	1.00	220.51	=	-
MISCELLANEOUS	39.20	X	1.00		=	39.20
TOTAL CONNECTED	99.2 KVA (120 AMPS)			TOTAL DEMAND		114.2 KVA (138 AMPS)

(E)NEMA 3R - EXISTING

PANEL SCHEDULE

SURFACE MOUNTING
10,000 AIC

NO. 2P | LOCATION: LOT F | SERVING: RECEPTACLES | 120/240 VOLTS 1PH 3WIRE 100 AMPS WITH 100 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.	
1	RECEPTACLE	.18	20		**20**	**1.20**	**BLOCK HEATER**	2	4
3	HEATERS	1.00				**.10**	**BATTERY CHARGER**	4	
5	SECURITY	.50				**.20**	**LIGHTS, RECEPTACLE**	6	
7	SPARE				**20**	**.36**	**COMM. PANEL D**	8	
9					20		SPARE	10	
11								12	
13								14	
15								16	
17								18	
19	SPARE		20		20		SPARE	20	

REMARKS: .

CONNECTED LOAD: **3.2 KVA 13 AMPS**
DEMAND LOAD: **3.2 KVA 13 AMPS**

PROVIDE HANDLE TIES FOR ALL MULTI-CIRCUIT HOMERUNS SHARING A NEUTRAL PER THE NATIONAL ELECTRIC CODE ARTICLE 210.4 MULTIWIRE BRANCH CIRCUITS. PART (B) DISCONNECTING MEANS. DRAWINGS ARE DIAGRAMMATIC. WHERE THE CONTRACTOR MODIFIES THE CIRCUITING, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL NEUTRAL PER CIRCUIT, MULTI-POLE CIRCUIT BREAKERS, OR CIRCUIT BREAKER HANDLE TIE TO MEET THE NEC ARTICLE. ALL COSTS ASSOCIATED WITH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

PANEL 2P LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	-	X	1.25	220.19(A)(1)	=	-
RECEPTS TO 10KW	-	X	1.00	220.44	=	-
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	-	X	1.25	430.24	=	-
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	-	X	1.00	220.51	=	-
MISCELLANEOUS	3.20	X	1.00		=	3.20
TOTAL CONNECTED	3.2 KVA (13 AMPS)			TOTAL DEMAND		3.2 KVA (13 AMPS)

ELECTRICAL NOTES:

1. ITS/HUSKY HAS PRE-ORDERED NEMA 3R, OPTIMAL STANDBY 702 DIESEL GENERATOR, 300KW, 375KVA, 480V, 3PH, 4W, WITH INTEGRAL 48 HOUR, DOUBLE WALL, BELLY TANK, TO BE MOUNTED ON A REBAR REINFORCED, 12"D CONCRETE PAD EXTENDING 12" BEYOND GENERATOR FOOTPRINT AND NEMA 3R, STAINLESS STEEL, SERVICE ENTRANCE RATED, 400A, 480V, 3PH, 4W AUTOMATIC TRANSFER SWITCH.
2. UTILIZE EXISTING SPARE CIRCUIT BREAKER.
3. PROVIDE CIRCUIT BREAKER NEW.

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ITS / Husky

moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222

STEVEN L. HUBBS REGISTERED PROFESSIONAL ENGINEER 12/1/19

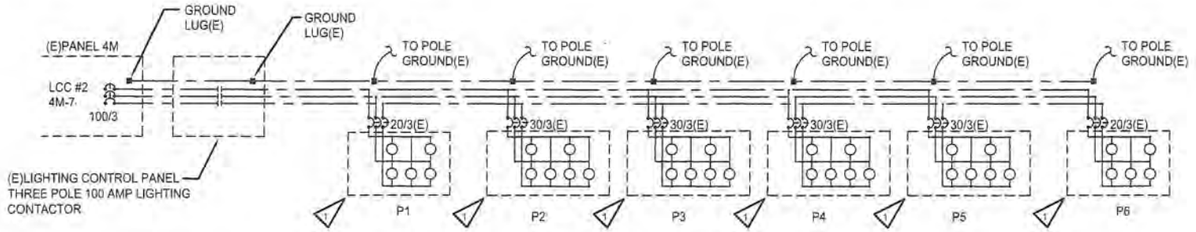
CHECKED BY	SLH	12-02-19 DATE
	GLW	12-02-19 DATE

PROJ. ENGR
PRINTED BY: Scott K Dec 02, 2019
SITE ADDRESS: 1281 PIER G WAY
LONG BEACH, CA 90802

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
POWER RISER DIAGRAM/ ELECTRICAL DETAILS AND SCHEDULES

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011 | VERT: MLLW 19.18' @ TIDE 22' 1933
PARCEL: N/A | DRAWING SCALE: AS NOTED
PHASE: BID SET

E7
42 OF 59

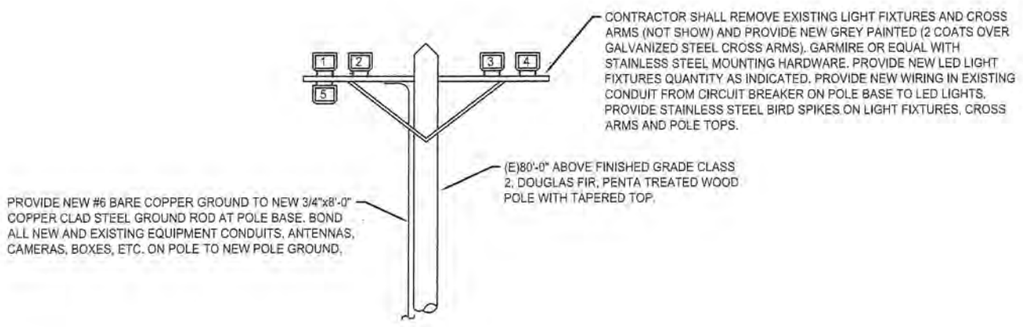


EXISTING LIGHTING CONTROL CIRCUIT #1

NOT TO SCALE

ELECTRICAL NOTES:

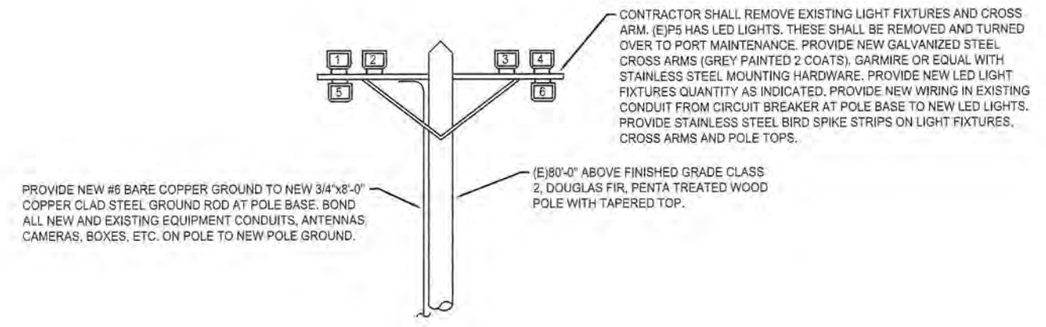
1. PROVIDE NEW #10 CU IN EXISTING CONDUIT FROM EXISTING CIRCUIT BREAKER ON EACH EXISTING POLE UP TO A NEW 8"x8"x6", NEMA 4, NON-METALLIC BOX WITH COVER LOCATED BETWEEN CROSS ARMS. REMOVE EXISTING LIGHTING BRACKET CROSS ARMS. PROVIDE NEW MOUNTING BRACKET CROSS ARMS PAINTED TWO(2) COATS GREY. ALL METAL PARTS OR EXPOSED GALVANIZED MATERIAL IS NOT ALLOWED. MOUNTING HARDWARE SHALL BE STAINLESS STEEL FOR NEW LIGHT FIXTURES. GARMIRE OR EQUAL. LIGHT FIXTURE MANUFACTURER SHALL PROVIDE AIMING ANGLES, BEAM SPREAD AND MOUNTING POSITIONS FOR FIELD AIMING INSTALLATION BY CONTRACTOR. AREA LIGHTING CALCULATIONS SHALL BE BASED ON ENTIRE LENGTH OF SITE AND THE SITE WIDTH. MINIMUM 3FC WITH MAX/MIN OF LESS THAN 6 FOR THE WEST (MAXWELL RD) HALF OF THE SITE. NO LIGHT SPILL PAST PROPERTY LINE. AS A SHOP DRAWING SUBMITTAL PROVIDE COMPUTER GENERATED PHOTOMETRICS ON SCALED SITE PLAN WITH LIGHT METER READINGS AT 30'x30' SPACINGS. INCLUDE MOUNTING HEIGHT, FIXTURE TYPE, LUMENS PER LIGHT FIXTURE, WATTAGE PER LIGHT FIXTURE AND AIMING COORDINATES FOR EACH. PROVIDE NEW LIGHT FIXTURES 800W, 480V, LED LIGHTS SPECGRADE AFL800WBEAM480V8300LMWTTLGSCNSP10, OR EQUAL BY HOLOPHANE OR HUBBEL.



LIGHTING POLE ELEVATION TYPICAL

NO SCALE

P1, P6



LIGHTING POLE ELEVATION TYPICAL

NO SCALE

P2, P3, P4, P5

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MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — 12/12/19

CHECKED BY	SLH	12-02-19
	BY	DATE
PROJ. ENGR	GLW	12-02-19
		DATE

PRINTED BY: ScottK Dec 02, 2019
SITE ADDRESS: 1281 PIER G WAY
LONG BEACH, CA 90802

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
ELECTRICAL DETAILS

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WA83/2011	DAT-VRT: MLLW 19.18' @ TIDE 22 1933		
PARCEL: N/A	DRAWING SCALE: AS NOTED		
PHASE: BID SET			

E8
43 OF 59

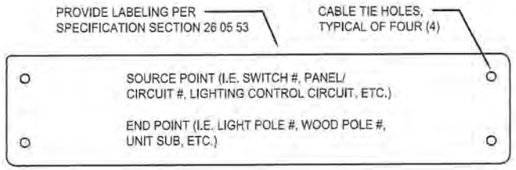
BINDING EDGE

CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT ID	CONDUIT NO.	CONDUIT SIZE	CONDUIT TYPE	CONDUCTORS PER CONDUIT NO.	CONDUCTORS PER CONDUIT SIZE	CONDUCTORS PER CONDUIT TYPE	FROM	TO	REMARKS
SD1	1	2	②④	4/1	2/6	600V	(E)PANEL 4M	PV1	
SD2	1	2	②	4/1	2/6	600V	PV1	PV2	
SD3	1	2	②	4/1	2/6	600V	PV2	PV3	
SD4	1	2	②	4/1	2/6	600V	PV3	PV4	
SD5	1	2	②④	4/1	2/6	600V	PV4	PANEL 4A	
SD6	1	2	②④	4/1	2/6	600V	(E)PANEL 4M	PV1	
SD7	1	2	②	4/1	2/6	600V	PV1	PV2	
SD8	1	2	②	4/1	2/6	600V	PV2	PV3	
SD9	1	2	②	4/1	2/6	600V	PV3	PV5	
SD10	1	2	②	4/1	2/6	600V	PV5	PV6	
SD11	1	2	②	4/1	2/6	600V	PV6	PV7	
SD12	1	2	②	4/1	2/6	600V	PV7	PV8	
SD13	1	2	②④	4/1	2/6	600V	PV8	PANEL 4B	
SD14	1	2	②④	4/1	2/6	600V	(E)PANEL 4M	PV1	
SD15	1	2	②	4/1	2/6	600V	PV1	PV2	
SD16	1	2	②	4/1	2/6	600V	PV2	PV3	
SD17	1	2	②	4/1	2/6	600V	PV3	PV5	
SD18	1	2	②	4/1	2/6	600V	PV5	PV6	
SD19	1	2	②	4/1	2/6	600V	PV6	PV7	
SD20	1	2	②	4/1	2/6	600V	PV7	PV10	
SD21	1	2	②④	4/1	2/6	600V	PV10	PANEL 4D	
SD22	1	.75	②	2/1	12/12	600V	PANEL 2A	ENTRY PEDESTAL #1	⑯
SD23	1	.75	②	2/1	12/12	600V	PANEL 2A	ENTRY PEDESTAL #2	⑯
SD24	1	.75	②	2/1	12/12	600V	PANEL 2A	ENTRY PEDESTAL #3	⑯
SD25	1	.75	②	2/1	12/12	600V	PANEL 2A	GATE ARM #1	⑫
SD26	1	.75	②	2/1	12/12	600V	PANEL 2A	GATE ARM #2	⑫
SD27	1	1	②	2/1	12/12	600V	PANEL 2A	GATE ARM #3	⑫
SD28	1	1	②	2/1	10/12	600V	PV8	T-POLE #1	
SD29	1	1	②	2/1	10/12	600V	PV8	T-POLE #2	
SD30	1	1	②	2/1	10/12	600V	PV8	T-POLE #3	
SD31	1	1	②	2/1	10/12	600V	PV8	T-POLE #4	
SD32	1	1	②	2/1	10/10	600V	PV8	T-POLE #5	
SD33	1	2	②④	6/1	10/10	600V	PANEL 2B	PV8	
SD34	1	2	②④	4/1	10/10	600V	PANEL 2B	PV8	
SD35	1	2	②	6/1	10/10	600V	PV8	PV9	⑬
SD36	1	2	②	4/1	10/10	600V	PV8	PV9	⑬
SD37	1	.75	②	2/1	10/10	600V	PV9	CHASSIS CAMERA PEDESTAL #1	
SD38	1	.75	②	2/1	10/10	600V	PV9	CHASSIS CAMERA PEDESTAL #2	
SD39	1	.75	②	2/1	10/10	600V	PV9	CHASSIS CAMERA PEDESTAL #3	
SD40	1	.75	②	2/1	10/10	600V	PV9	CHASSIS CAMERA PEDESTAL #4	
SD41	1	.75	②	2/1	10/10	600V	PV9	CHASSIS CAMERA PEDESTAL #5	
SD42	1	.75	②	2/1	10/10	600V	PV9	TRUCK INTERCOM PEDESTAL #1	
SD43	1	.75	②	2/1	10/10	600V	PV9	TRUCK INTERCOM PEDESTAL #2	
SD44	1	.75	②	2/1	10/10	600V	PV9	TRUCK INTERCOM PEDESTAL #3	
SD45	1	.75	②	2/1	10/10	600V	PV9	TRUCK INTERCOM PEDESTAL #4	
SD46	1	.75	②	2/1	10/10	600V	PV9	TRUCK INTERCOM PEDESTAL #5	
SD47	1	.75	②	2/1	10/10	600V	PV9	TRUCK INTERCOM PEDESTAL #6	
SD48	1	.75	②	2/1	10/10	600V	PV9	TRUCK INTERCOM PEDESTAL #7	
SD49	1	.75	②	2/1	10/10	600V	PV9	TRUCK INTERCOM PEDESTAL #8	
SD50	1	.75	②	2/1	10/10	600V	PV9	TRUCK INTERCOM PEDESTAL #9	
SD51									NOT USED
SD52	1	1	②④	4/1	12/12	600V	PANEL 2C	TROUBLE BOOTH CIRCUITS	
SD53	1	1	②④	2/1	8/10	600V	PANEL 4B	PV8	
SD54	1	1	②④	2/1	8/10	600V	PV8	PV7	
SD55	1	1	②④	4/1	6/10	600V	PANEL 2C	PV10	
SD56	1	1	②	4/1	6/10	600V	PV10	PV11	
SD57	1	1	②	4/1	6/10	600V	PV11	HUT	WIRE TO LUGS
SD58	1	1	②④	2/1	8/10	600V	PANEL 4A	PV4	
SD59	1	1	②	2/1	8/10	600V	PV4	PV4A	
SD60	1	1	②④	2/1	8/10	600V	PV4A	UNIT SUB POLE #12	NIC
SD61	1	1	②④	2/1	8/10	600V	PV7	UNIT SUB POLE #5	NIC
SD62	1	.75	②④	2/1	12/12	600V	PANEL 2A	OCR #1	⑪
SD63	1	.75	②④	2/1	12/12	600V	PANEL 2A	OCR #2	⑪
SD64	1	.75	②④	2/1	12/12	600V	PANEL 2A	OCR #3	⑪
SD70	1	1	②④	2/1	8/10	600V	PANEL 4A	PV4	
SD71	1	1	②	2/1	8/10	600V	PV4	PV3	
SD72	1	1	②	2/1	8/10	600V	PV3	UNIT SUB POLE #2	
SD73	1	1	②④	2/1	8/10	600V	PANEL 4B	PV8	
SD74	1	1	②	2/1	8/10	600V	PV8	PV8A	
SD75	1	1	②	2/1	8/10	600V	PV8A	UNIT SUB POLE #9	
SD76	1	.75	②	2/1	12/12	600V	HWT PANEL	PV11	
SD77	1	.75	②④	2/1	12/12	600V	PV11	ITS/HUSKY COMM CAB P6	

SCHEDULE ABBREVIATION LEGEND:

C	=	COMMUNICATIONS	SDV	=	SECONDARY POWER VAULT
CV	=	COMMUNICATIONS VAULT	SL	=	SITE LIGHTING
FOB	=	FIBER OPTIC	SP	=	SPARE CONDUIT
SD	=	SECONDARY 600V DISTRIBUTION	TPU	=	TACOMA PUBLIC UTILITIES
SC	=	SECURITY CAMERAS	WPC	=	WHERE-PORT COMMUNICATIONS



CONDUCTOR IDENTIFICATION LABEL — A / E10
NOT TO SCALE

SCHEDULE NOTES:

1. EXISTING CONDUIT
2. PVC SCHEDULE 80
3. STUB AND CAP AT TOP OF CONCRETE BASE.
4. PVC COATED GRS CONDUIT
5. STUB AND CAP 12" ABOVE FINISHED GRADE.
6. PROVIDE MAXCELL EDGE DETECTABLE 3 CELL INNER DUCT. MAXCELL MXC2003 OR EQUAL EACH CONDUIT.
7. COORDINATE AND INSTALL FIELD WIRING FOR SCALES SUPPLIED WITH SCALE EQUIPMENT.
8. PROVIDE (5)CAT 6 CABLES IN ONE CELL OF INNERDUCT.
9. NOT IN CONTRACT (NIC)
10. REVIEW AND COORDINATE WITH TRUCK INTERCOM MANUFACTURER'S SHOP DRAWINGS. STUB PVC CONDUIT 2" ABOVE TOP OF CONCRETE, WITH 18" WIRE LOOP FOR CONNECTION TO RECEPTACLE BY INTERCOM CABINET SUPPLIER. SEE CIVIL.
11. STUB CONDUIT MINIMUM 6" ABOVE OCR PARTIAL FOUNDATION. LEAVE MINIMUM 24" LOOP OF POWER WIRE FOR EXTENSION BY OCR EQUIPMENT PROVIDER. SEE CIVIL.
12. REVIEW AND COORDINATE POWER CONNECTION WITH GATE ARM MANUFACTURER. COMMUNICATION'S WIRING BY OTHERS. SEE CIVIL.
13. PROVIDE WATER TIGHT SPLICE(S) IN VAULT FOR GROUND WIRE. PROVIDE GROUND WIRE IN INDIVIDUAL CONDUITS TO EACH T-POLE, CHASSIS CAMERA PEDESTALS AND TRUCK INTERCOM PEDESTALS. SEE CIVIL.
14. PROVIDE OUTSIDE PLANT (OSP), 24 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLE. POT CONTRACTOR NIC.
15. PROVIDE OUTSIDE PLANT (OSP), (4)6 AND (2)12 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLES. CABLES SHALL BE INSTALLED IN INDIVIDUAL FIBER CELLS. ITS/HUSKY CONTRACTOR.
16. PROVIDE OUTSIDE PLANT (OSP), 6 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLE. ITS/HUSKY CONTRACTOR.
17. OUTSIDE PLANT (OSP), (3)6 AND (2)12 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLES. CABLES SHALL BE INSTALLED IN INDIVIDUAL FIBER CELLS. PROVIDED BY OTHERS.
18. PROVIDE OUTSIDE PLANT (OSP), 12 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLE. ITS/HUSKY CONTRACTOR.

CROSS ENGINEERS, INC
922 MLK Jr. Way
Tacoma, WA 98405
info@crossengineers.com
Phone: (253) 759-0118
Job Number: 18-032

ITS/HUSKY
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mcfarlt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 12/1/19

SLH	12-02-19	DATE
CHECKED BY		
GLW	12-02-19	DATE
PROJ. ENGR		

PRINTED BY: ScottK Dec 02, 2019 — SECTION: 34 — RANGE: 3E — TOWNSHIP: 21N
SITE ADDRESS: 1281 PIER G WAY — LONG BEACH, CA 90802 — MLLW 19.18' @ TIDE 22 1933 — VERT: — DAT-HRZ: WA83/2011
DRAWING SCALE: AS NOTED — PARCEL: N/A — PHASE: BID SET

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
CONDUIT AND CONDUCTOR SCHEDULE

E9
45 OF 59

PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E9

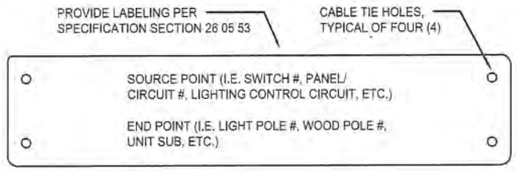
BINDING EDGE

CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT ID	CONDUIT NO.	CONDUIT SIZE	CONDUIT TYPE	CONDUCTORS PER CONDUIT NO.	CONDUCTORS PER CONDUIT SIZE	CONDUCTORS PER CONDUIT TYPE	FROM	TO	REMARKS
SP1	2	2	2	-	-	-	PV1	STUB AND CAP 15'	
SP2	2	2	2	-	-	-	CV1	STUB AND CAP 15'	
SP3	1	2	2 4	-	-	-	PV4	PANEL 4A	
SP4	2	2	2 4	-	-	-	PV4	PANEL 2A	
SP5	2	1	5	-	-	-	CV4	STUB AND CAP AT LIMIT OF CONSTRUCTION BOUNDRY	
SP6	6	2	5	-	-	-	PV8	PV9	
SP7	6	2	5	-	-	-	CV8	CV9	
SP8	3	2	5	-	-	-	CV8	STUB AND CAP AT LIMIT OF CONSTRUCTION BOUNDRY	
SP9	3	2	5	-	-	-	PV8	STUB AND CAP AT LIMIT OF CONSTRUCTION BOUNDRY	
SP10	3	2	5	-	-	-	PV9	STUB AND CAP AT LIMIT OF CONSTRUCTION BOUNDRY	
SP11	3	2	5	-	-	-	CV9	STUB AND CAP AT LIMIT OF CONSTRUCTION BOUNDRY	
SP12	6	1.5	5	-	-	-	CV9	STUB AND CAP AT LIMIT OF CONSTRUCTION BOUNDRY	
SP13	8	.75	5	-	-	-	PV9	STUB AND CAP AT LIMIT OF CONSTRUCTION BOUNDRY	
SP14	2	2	5	-	-	-	PV4	STUB AND CAP AT LIMIT OF CONSTRUCTION BOUNDRY	
SP15	2	2	5	-	-	-	CV1	CV2	
SP16	2	2	5	-	-	-	CV2	CV3	
SP17	2	2	5	-	-	-	CV3	CV4	
SP18	2	2	5	-	-	-	CV3	CV5	
SP19	2	2	5	-	-	-	CV5	CV6	
SP20	2	2	5	-	-	-	CV6	CV7	
SP21	2	2	5	-	-	-	CV7	CV8	
SP22	2	2	5	-	-	-	CV7	CV10	
SP23	2	4	5	-	-	-	PV1	PV2	
SP24	2	4	5	-	-	-	PV2	PV3	
SP25	2	4	5	-	-	-	PV3	PV4	
SP26	2	4	5	-	-	-	PV3	PV5	
SP27	2	4	5	-	-	-	PV5	PV6	
SP28	2	4	5	-	-	-	PV6	PV7	
SP29	2	4	5	-	-	-	PV7	PV8	
SP30	2	4	5	-	-	-	PV8	PV9	
SP31	2	4	5	-	-	-	PV7	PV10	
SP32	2	4	5	-	-	-	PV10	PV11	
SP33	2	2	2 4	-	-	-	CV5	P3	6
SP34	1	1	2 4	-	-	-	PV5	P3	6
SP35	2	2	2 4	-	-	-	CV6	P4	6
SP36	1	1	2 4	-	-	-	PV6	P4	6
SP37	2	2	2 4	-	-	-	CV2	P1	6
SP38	1	1	2 4	-	-	-	PV2	P1	6
SP39	2	2	5	-	-	-	(E)PANEL 4M	PV1	
SP40	2	1	5	-	-	-	HUT PANEL	PV11	
SP41	2	1	2 4	-	-	-	PV11	P6	5
SP42	2	2	2 4	-	-	-	CV1	SERVICE RACK	
FOB1	5	2	2	4	-	-	HUT ITS/HUSKY RACK	CV11	13 4
FOB2	5	2	2	4	-	-	HUT POT RACK	CV11	12
FOB3	2	2	2 4	4	-	-	CV11	POLE 6	4
FOB4	8	2	2	4	-	-	CV11	CV10	12 13
FOB5	2	2	2	4	-	-	CV10	COMMUNICATIONS CABINET C	18
FOB6	8	2	2	4	-	-	CV10	CV7	14 15 17
FOB7	6	2	2	4	-	-	CV7	CV8	14 15 16
FOB8	4	2	2	4	-	-	CV8	CV9	
FOB9	2	2	2	4	-	-	CV8	COMMUNICATIONS CABINET B	18
FOB10	8	2	2	4	-	-	CV7	CV6	14 16
FOB11	8	2	2	4	-	-	CV6	CV5	14 16
FOB12	8	2	2	4	-	-	CV5	CV3	14 16
FOB13	4	2	2	4	-	-	CV3	CV4	14 16
FOB14	2	2	2	4	-	-	CV4	COMMUNICATIONS CABINET A	18
FOB15	2	2	2	4	-	-	CV3	CV2	16
FOB16	2	2	2	4	-	-	CV2	CV1	
FOB17									NOT USED
FOB18	2	2	2	4	-	-	CV8	CV8A	13
FOB19	2	2	2	4	-	-	CV8A	POT COMM BOX POLE 9	14
FOB20	2	2	2	4	-	-	CV7	ITS/HUSKY COMM BOX POLE 5	16
FOB21	2	2	2	4	-	-	CV7	POT COMM BOX POLE 5	14
FOB22	2	2	2	4	-	-	CV5	ITS/HUSKY COMM BOX POLE 2	16
FOB23	2	2	2	4	-	-	CV5	POT COMM BOX POLE 2	14
FOB24	2	2	2	4	-	-	CV4	CV4A	14
FOB25	2	2	2	4	-	-	CV4A	POT COMM BOX POLE 12	14
FOB26	2	2	2 4	4			CV2	ITS/HUSKY COMM BOX POLE 1	16

SCHEDULE ABBREVIATION LEGEND:

C	=	COMMUNICATIONS	SDV	=	SECONDARY POWER VAULT
CV	=	COMMUNICATIONS VAULT	SL	=	SITE LIGHTING
FOB	=	FIBER OPTIC	SP	=	SPARE CONDUIT
SD	=	SECONDARY 600V DISTRIBUTION	TPU	=	TACOMA PUBLIC UTILITIES
SC	=	SECURITY CAMERAS	WPC	=	WHERE-PORT COMMUNICATIONS



CONDUCTOR IDENTIFICATION LABEL (A / E10)
NOT TO SCALE

SCHEDULE NOTES:

1. EXISTING CONDUIT
2. PVC SCHEDULE 80
3. STUB AND CAP AT TOP OF CONCRETE BASE.
4. PVC COATED GRS CONDUIT
5. STUB AND CAP 12" ABOVE FINISHED GRADE.
6. PROVIDE MAXCELL EDGE DETECTABLE 3 CELL INNER DUCT. MAXCELL MXC2003 OR EQUAL EACH CONDUIT.
7. COORDINATE AND INSTALL FIELD WIRING FOR SCALES SUPPLIED WITH SCALE EQUIPMENT.
8. PROVIDE (5)CAT 6 CABLES IN ONE CELL OF INNERDUCT.
9. NOT IN CONTRACT (NIC)
10. REVIEW AND COORDINATE WITH TRUCK INTERCOM MANUFACTURER'S SHOP DRAWINGS. STUB PVC CONDUIT 2" ABOVE TOP OF CONCRETE, WITH 18" WIRE LOOP FOR CONNECTION TO RECEPTACLE BY INTERCOM CABINET SUPPLIER. SEE CIVIL.
11. STUB CONDUIT MINIMUM 6" ABOVE OCR PARTIAL FOUNDATION. LEAVE MINIMUM 24" LOOP OF POWER WIRE FOR EXTENSION BY OCR EQUIPMENT PROVIDER. SEE CIVIL.
12. REVIEW AND COORDINATE POWER CONNECTION WITH GATE ARM MANUFACTURER. COMMUNICATION'S WIRING BY OTHERS. SEE CIVIL.
13. PROVIDE WATER TIGHT SPLICE(S) IN VAULT FOR GROUND WIRE. PROVIDE GROUND WIRE IN INDIVIDUAL CONDUITS TO EACH T-POLE, CHASSIS CAMERA PEDESTALS AND TRUCK INTERCOM PEDESTALS. SEE CIVIL.
14. PROVIDE OUTSIDE PLANT (OSP), 24 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLE. POT CONTRACTOR NIC.
15. PROVIDE OUTSIDE PLANT (OSP), (4)6 AND (2)12 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLES. CABLES SHALL BE INSTALLED IN INDIVIDUAL FIBER CELLS. ITS/HUSKY CONTRACTOR.
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STATE OF WASHINGTON STEVEN L. HUBBS REGISTERED PROFESSIONAL ENGINEER 01/2/19

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LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
CONDUIT AND CONDUCTOR SCHEDULE

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DAT-HRZ: WA83/2011	VERT: MLLW 19.18' @ TIDE	22 1933	
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PHASE: BID SET			

E10
45 OF 59

PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E10

CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT ID	CONDUIT NO.	CONDUIT SIZE	CONDUIT TYPE	CONDUCTORS PER CONDUIT NO.	CONDUCTORS PER CONDUIT SIZE	CONDUCTORS PER CONDUIT TYPE	FROM	TO	REMARKS
C1	2	1	(2)(4)	(17)	-	-	COMMUNICATIONS CABINET C	DRIVER ASSISTANCE SHELTER	
C2	2	1	(2)(4)	(17)	-	-	CV4	COMMUNICATIONS CABINET A	
C3	1	1	(2)	(7)	-	-	COMMUNICATIONS CABINET A	GATE ARM #1	
C4	1	1	(2)	(7)	-	-	COMMUNICATIONS CABINET A	GATE ARM #2	
C5	1	1	(2)	(7)	-	-	COMMUNICATIONS CABINET A	GATE ARM #3	
C6	1	2	(2)	(17)	-	-	COMMUNICATIONS CABINET A	OCR #1	
C7	1	2	(2)	(17)	-	-	COMMUNICATIONS CABINET A	OCR #2	
C8	1	2	(2)	(17)	-	-	COMMUNICATIONS CABINET A	OCR #3	
C9	2	2	(2)	(17)	-	-	COMMUNICATIONS CABINET B	CV8	
C10	1	1.5	(2)	(17)	-	-	CV8	T-POLE #1	
C11	1	1.5	(2)	(17)	-	-	CV8	T-POLE #2	
C12	1	1.5	(2)	(17)	-	-	CV8	T-POLE #3	
C13	1	1.5	(2)	(17)	-	-	CV8	T-POLE #4	
C14	1	1.5	(2)	(17)	-	-	CV8	T-POLE #5	
C15	3	2	(2)(4)	(17)	-	-	COMMUNICATIONS CABINET B	CV8A	
C16	3	2	(2)(4)	(17)	-	-	COMMUNICATIONS CABINET B	CV8	
C17	1	1.5	(2)	(17)	-	-	CV8A	CHASSIS CAMERA PEDESTAL #1	
C18	1	1.5	(2)	(17)	-	-	CV8A	CHASSIS CAMERA PEDESTAL #2	
C19	1	1.5	(2)	(17)	-	-	CV8A	CHASSIS CAMERA PEDESTAL #3	
C20	1	1.5	(2)	(17)	-	-	CV8A	CHASSIS CAMERA PEDESTAL #4	
C21	1	1.5	(2)	(17)	-	-	CV8A	CHASSIS CAMERA PEDESTAL #5	
C22	1	1.5	(2)	(17)	-	-	CV9	TRUCK INTERCOM PEDESTAL #1	
C23	1	1.5	(2)	(17)	-	-	CV9	TRUCK INTERCOM PEDESTAL #2	
C24	1	1.5	(2)	(17)	-	-	CV9	TRUCK INTERCOM PEDESTAL #3	
C25	1	1.5	(2)	(17)	-	-	CV9	TRUCK INTERCOM PEDESTAL #4	
C26	1	1.5	(2)	(17)	-	-	CV9	TRUCK INTERCOM PEDESTAL #5	
C27	1	1.5	(2)	(17)	-	-	CV9	TRUCK INTERCOM PEDESTAL #6	
C28	1	1.5	(2)	(17)	-	-	CV9	TRUCK INTERCOM PEDESTAL #7	
C29	1	1.5	(2)	(17)	-	-	CV9	TRUCK INTERCOM PEDESTAL #8	
C30	1	1.5	(2)	(17)	-	-	CV9	TRUCK INTERCOM PEDESTAL #9	
C31	3	2	(2)(4)		-	-	COMMUNICATIONS CABINET B	CV8A	

SCHEDULE ABBREVIATION LEGEND:

- C = COMMUNICATIONS
- CV = COMMUNICATIONS VAULT
- FOB = FIBER OPTIC
- SD = SECONDARY 600V DISTRIBUTION
- SC = SECURITY CAMERAS
- SDV = SECONDARY POWER VAULT
- SL = SITE LIGHTING
- SP = SPARE CONDUIT
- TPU = TACOMA PUBLIC UTILITIES
- WPC = WHERE-PORT COMMUNICATIONS

PROVIDE LABELING PER SPECIFICATION SECTION 26 05 53

CABLE TIE HOLES, TYPICAL OF FOUR (4)

SOURCE POINT (I.E. SWITCH #, PANEL/ CIRCUIT #, LIGHTING CONTROL CIRCUIT, ETC.)

END POINT (I.E. LIGHT POLE #, WOOD POLE #, UNIT SUB, ETC.)

CONDUCTOR IDENTIFICATION LABEL (A / E10)

NOT TO SCALE

SCHEDULE NOTES:

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2. PVC SCHEDULE 80
3. STUB AND CAP AT TOP OF CONCRETE BASE.
4. PVC COATED GRS CONDUIT
5. STUB AND CAP 12" ABOVE FINISHED GRADE.
6. PROVIDE MAXCELL EDGE DETECTABLE 3 CELL INNER DUCT, MAXCELL MXC2003 OR EQUAL EACH CONDUIT.
7. COORDINATE AND INSTALL FIELD WIRING FOR SCALES SUPPLIED WITH SCALE EQUIPMENT.
8. PROVIDE (5)CAT 6 CABLES IN ONE CELL OF INNERDUCT.
9. NOT IN CONTRACT (NIC)
10. REVIEW AND COORDINATE WITH TRUCK INTERCOM MANUFACTURER'S SHOP DRAWINGS. STUB PVC CONDUIT 2" ABOVE TOP OF CONCRETE, WITH 18" WIRE LOOP FOR CONNECTION TO RECEPTACLE BY INTERCOM CABINET SUPPLIER. SEE CIVIL.
11. STUB CONDUIT MINIMUM 6" ABOVE OCR PARTIAL FOUNDATION. LEAVE MINIMUM 24" LOOP OF POWER WIRE FOR EXTENSION BY OCR EQUIPMENT PROVIDER. SEE CIVIL.
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STEVEN L. HUBBS, PROFESSIONAL ENGINEER 12/2/19

MARK: | REVISION: | BY: | APPR: | DATE:

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
CONDUIT AND CONDUCTOR SCHEDULE

SLH	12-02-19	DATE
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E11
46 OF 59

PHASE: BID SET

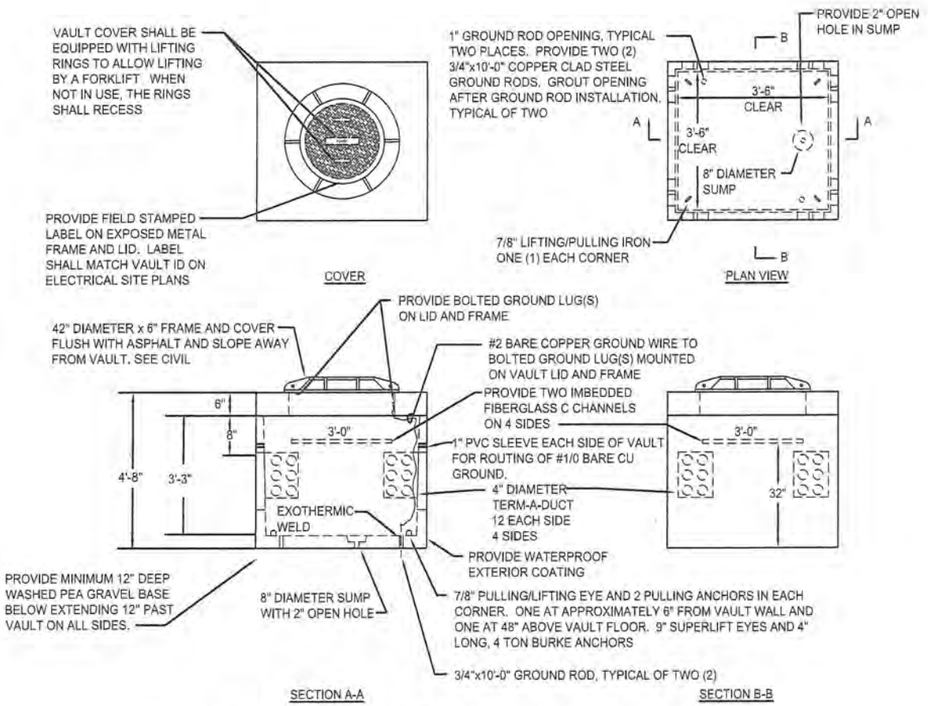
PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E11

BINDING EDGE

VAULT SCHEDULE			
ID	DESCRIPTION	LOADING	NOTES
PV1-PV11	CUSTOM 600V POWER VAULTS, SEE DETAIL A, THIS SHEET BY ITS/HUSKY CONTRACTOR	MINIMUM 125 KIP.	1 2 3 4 5 6
CV1-CV11,CV8B	CUSTOM COMMUNICATION VAULT SEE DETAIL A, THIS SHEET BY ITS/HUSKY CONTRACTOR	MINIMUM 125 KIP.	1 2 3 4 5 6

VAULT SCHEDULE NOTES:

1. ALL CONDUITS (2" AND LARGER) ENTERING OR LEAVING VAULTS SHALL USE TERM-A-DUCTS. ALL 3/4", 1" AND 1-1/2" CONDUITS ENTERING OR LEAVING VAULTS MAY USE BLOCK-OUTS WITH BELL ENDS AND GROUTED. PROVIDE REMOVABLE FOAM FILL IN ALL EMPTY CONDUIT OPENINGS. PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS. PROVIDE MAXCELL EDGE DETECTABLE MXC2003 (3 CELL) OR EQUAL IN ALL FOB LABELED COMMUNICATIONS CONDUITS. ITS/HUSKY CONTRACTOR SHALL PROVIDE CONDUIT LABELS FOR ALL CONDUITS ENTERING AND LEAVING VAULTS. PROVIDE PHENOLIC LABEL ATTACHED TO VAULT WALL WITH TWO (2) PLASTIC INSERTS AND STAINLESS STEEL SCREWS ADJACENT TO EACH CONDUIT. PHENOLIC LABEL SHALL HAVE CONDUIT ID ENGRAVED AS INDICATED ON CONDUIT AND WIRE SCHEDULE DRAWINGS.
2. SEE SPECIFICATION SECTION 26 71 19 FOR ADDITIONAL VAULT INSTALLATION REQUIREMENTS.
3. ALL WIRE (POWER AND COMMUNICATIONS) SHALL COMPLETELY LOOP AROUND VAULT WALLS PRIOR TO EXITING VAULT.
4. CONTRACTOR SHALL PROVIDE CAST LABEL ON LID TO READ "ELECTRIC" OR "COMMUNICATIONS". PROVIDE FIELD STAMPED LABEL ON LID WITH VAULT ID TO MATCH ELECTRICAL SITE PLANS.
5. PROVIDE BOLTED GROUND LUG(S) ON LID AND FRAME. PROVIDE #2 BARE CU GROUND IN EACH VAULT TO TWO (2) 3/4" X 10'-0" GROUND RODS.
6. PROVIDE STENCIL PAINTED, VAULT KIP RATING ON INSIDE OF VAULT DIRECTLY BELOW LID. MINIMUM 4" HIGH LETTERS.



TYPICAL SITE POWER/ COMMUNICATIONS VAULTS (A / E12)

NOT TO SCALE

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LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
ELECTRICAL VAULT DETAILS

E12
47 OF 59

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT–HRZ: WA83/2011 | DAT–VRT: MLLW 19.18' @ TIDE 22 1933
PHASE: BID SET | PARCEL: N/A | DRAWING SCALE: AS NOTED

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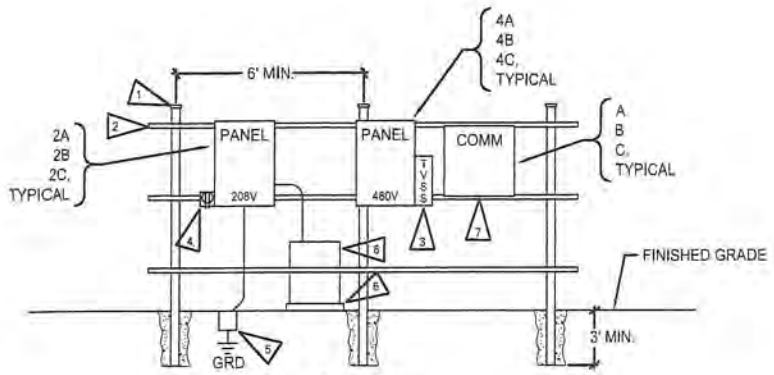
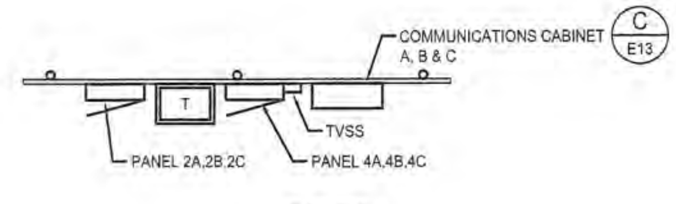


ELEVATION

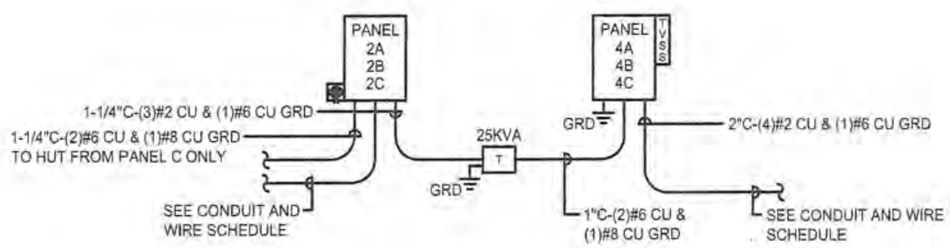


PLAN VIEW

EQUIPMENT MOUNTING TYPICAL (3) LOCATIONS (A / E13)

NOT TO SCALE

NOTE: AT PANEL LOCATION 4A THE ITS/HUSKY WEIGH-IN MOTION VENDOR WILL PROVIDE TWO(2) ADDITIONAL CABINETS NOT SHOWN AT THIS LOCATION. PROVIDE (1) ADDITIONAL POST WITH STRUTS. CABINETS SHALL BE MOUNTED ON EAST SIDE OF STRUT ONLY.

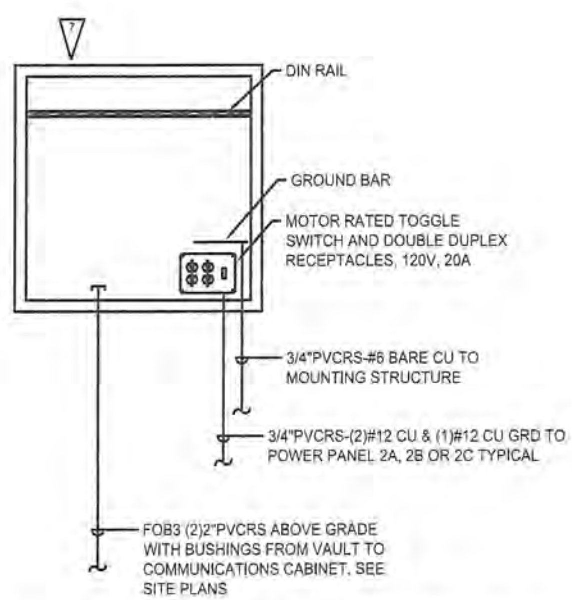


PARTIAL POWER RISER DIAGRAM - TYPICAL (B / E13)

NOT TO SCALE

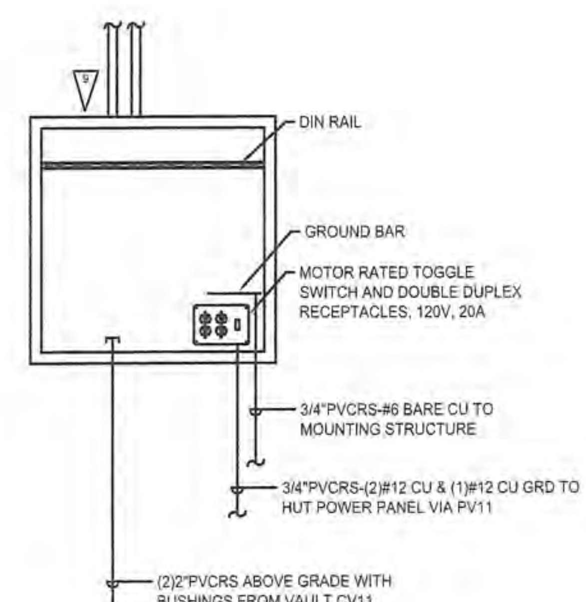
ELECTRICAL NOTES:

1. PROVIDE 8'-0" SECTION OF 3" RIGID GALVANIZED STEEL CONDUIT WITH THREADED END CAP. PROVIDE 8" ROUND x 3'-0" DEEP, 3000 PSI CONCRETE BASE AND EMBED CONDUIT 3'-0" BELOW FINISHED GRADE. PAINTED OVER GALVANIZE, 2 COATS SAFETY YELLOW. TYPICAL OF TWO(2) EACH LOCATION.
2. PROVIDE (3)1-5/8" HOT DIP, PAINTED (2 COATS SAFETY YELLOW) OVER GALVANIZED STRUT EACH SIDE BETWEEN RIGID STEEL CONDUIT POSTS FOR MOUNTING EQUIPMENT. DRILL CONDUIT AND PROVIDE STAINLESS STEEL MOUNTING HARDWARE FOR STRUT AND EQUIPMENT MOUNTING AT EACH LOCATION.
3. PROVIDE NEMA 3R, TRANSIENT SURGE PROTECTIVE DEVICE (TVSS), SIEMENS TPS3E1115D2 OR EQUAL. PROVIDE 3/4" CONDUIT NIPPLE AND 5#10 CU, WITH 30/3P CIRCUIT BREAKER IN PANEL.
4. PROVIDE 120V, 20A, GFCI DUPLEX RECEPTACLE WITH A NEMA 3R "IN-USE" COVER. PROVIDE 3/4"CONDUIT NIPPLE AND 2-#12 CU CONDUCTORS, PLUS GROUND AND CONNECT TO PANEL.
5. PROVIDE (2)10'-0" x 3/4" COPPER CLAD STEEL GROUND RODS SPACED NO LESS THAN 10 FEET APART. PROVIDE (1) GROUND WELL (ERITECH #T416F WITH COVER OR EQUAL). PROVIDE 3/4"PVCRS-#6 BARE CU TO GROUND WELL AND BETWEEN EACH GROUND ROD. CONNECT TO POWER PANEL AND COMMUNICATIONS BOX.
6. PROVIDE 4" CONCRETE PAD, 3000 PSI, EXTENDING 6" PAST TRANSFORMER FOOTPRINT ON ALL SIDES. BOLT TRANSFORMER TO CONCRETE PAD.
7. PROVIDE NEMA 4X, 36"W x 36"H x 12"D, 316 STAINLESS STEEL ENCLOSURE WITH HINGED AND PADLOCKABLE DOOR, DIN RAIL AND GROUND BAR. PROVIDE MOTOR RATED TOGGLE SWITCH, (2)DUPLEX 20A, 125V RECEPTACLES IN SINGLE BOX WITH COVER IN LOWER RIGHT HAND CORNER. ITS/HUSKY COMMUNICATIONS SYSTEMS VENDOR WILL PROVIDE COMMUNICATIONS EQUIPMENT, PULL WIRE AND TERMINATE IN CABINET AND AT EQUIPMENT.
8. NEMA 3R, 304 STAINLESS STEEL, PAINTED, DRY-TYPE TRANSFORMER, 25KVA, 480V TO 240V, 1PH ON 4" HIGH CONCRETE PAD.
9. PROVIDE NEMA 4X, 24"W x 24"H x 8"D, 316 STAINLESS STEEL ENCLOSURE WITH HINGED AND PADLOCKABLE DOOR, DIN RAIL AND GROUND BAR. PROVIDE MOTOR RATED TOGGLE SWITCH, (2)DUPLEX 20A, 125V RECEPTACLES IN SINGLE BOX WITH COVER IN LOWER RIGHT HAND CORNER. ITS/HUSKY WILL PROVIDE EQUIPMENT, CAMERAS AND MOUNTS. CONTRACTOR TO MOUNT EQUIPMENT, PULL (5)CAT 6 CABLES FROM HUT TO EQUIPMENT, TERMINATE AND TEST BOTH ENDS OF CABLE. PROVIDE (2)2"PVCRS, 70'-0" UP POLE TO (2)8" x 8" x 4" NEMA 4X, 316 STAINLESS STEEL BOXES. SEE NOTE 1 THIS SHEET FOR CABINET MOUNTING.



HUSKY COMMUNICATIONS CABINET A, B & C (C / E13)

NOT TO SCALE



HUSKY COMMUNICATIONS CABINET AT P6 (D / E13)

NOT TO SCALE

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Job Number: 18-032

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MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — PROFESSIONAL ENGINEER — 12/2/19

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
ELECTRICAL EQUIPMENT/ COMMUNICATIONS
CABINET DETAILS

CHECKED BY	SLH	12-02-19 DATE
PROJ. ENGR	GLW	12-02-19 DATE
TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
PRINTED BY: ScottK Dec 02, 2019		
DAT-HRZ: WA83/2011	VERT: MLLW 19.18' @ TIDE 22 1933	
SITE ADDRESS: 1281 PIER G WAY LONG BEACH, CA 90802		
PARCEL: N/A	DRAWING SCALE: AS NOTED	
PHASE: BID SET		

E13
48 OF 59

BINDING EDGE

PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E13

BINDING EDGE

NEMA 3R, 316 STAINLESS STEEL

SURFACE MOUNTING 10,000 AIC — **PANEL SCHEDULE**

NO. 4A — LOCATION: LOT F — SERVING: EQUIPMENT — 480/277 VOLTS 3PHASE 4WIRE 100 AMPS WITH 100 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	PANEL 2A VIA	4.60	60		20		SPARE	2
3	25KVA XFMR		2		20		SPARE	4
5	SPARE		20		20		SPARE	6
7	UNIT SUB POLE #2	5.00	30				SPACE	8
9			2					10
11	UNIT SUB POLE #12	5.00	30					12
13			2					14
15	TVSS	-	30					16
17								18
19			3				SPACE	20

REMARKS: .

CONNECTED LOAD: 14.6 KVA 18 AMPS
DEMAND LOAD: 14.6 KVA 18 AMPS

PROVIDE HANDLE TIES FOR ALL MULTI-CIRCUIT HOMERUNS SHARING A NEUTRAL PER THE NATIONAL ELECTRIC CODE ARTICLE 210.4 MULTIWIRE BRANCH CIRCUITS, PART (B) DISCONNECTING MEANS. DRAWINGS ARE DIAGRAMMATIC. WHERE THE CONTRACTOR MODIFIES THE CIRCUITING, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL NEUTRAL PER CIRCUIT, MULTI-POLE CIRCUIT BREAKERS, OR CIRCUIT BREAKER HANDLE TIE TO MEET THE NEC ARTICLE. ALL COSTS ASSOCIATED WITH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

PANEL 4A LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	-	X	1.25	220.19(A)(1)	=	-
RECEPTS TO 10KW	-	X	1.00	220.44	=	-
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	-	X	1.25	430.24	=	-
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.		X	1.00	220.56	=	-
WELDERS		X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	-	X	1.00	220.51	=	-
MISCELLANEOUS	14.60	X	1.00		=	14.60
TOTAL CONNECTED	14.6 KVA (18 AMPS)			TOTAL DEMAND		14.6 KVA (18 AMPS)

NEMA 3R, 316 STAINLESS STEEL

SURFACE MOUNTING 10,000 AIC — **PANEL SCHEDULE**

NO. 4B — LOCATION: LOT F — SERVING: EQUIPMENT — 480/277 VOLTS 3PHASE 4WIRE 100 AMPS WITH 100 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	PANEL 2B VIA	5.00	60		20		SPARE	2
3	25KVA XFMR		2		20		SPARE	4
5	SPARE		20		20		SPARE	6
7	UNIT SUB POLE #5	5.00	30				SPACE	8
9			2					10
11	UNIT SUB POLE #9	5.00	30					12
13			2					14
15	TVSS	-	30					16
17								18
19			3				SPACE	20

REMARKS: .

CONNECTED LOAD: 15.0 KVA 18 AMPS
DEMAND LOAD: 15.0 KVA 18 AMPS

PROVIDE HANDLE TIES FOR ALL MULTI-CIRCUIT HOMERUNS SHARING A NEUTRAL PER THE NATIONAL ELECTRIC CODE ARTICLE 210.4 MULTIWIRE BRANCH CIRCUITS, PART (B) DISCONNECTING MEANS. DRAWINGS ARE DIAGRAMMATIC. WHERE THE CONTRACTOR MODIFIES THE CIRCUITING, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL NEUTRAL PER CIRCUIT, MULTI-POLE CIRCUIT BREAKERS, OR CIRCUIT BREAKER HANDLE TIE TO MEET THE NEC ARTICLE. ALL COSTS ASSOCIATED WITH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

PANEL 4B LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	-	X	1.25	220.19(A)(1)	=	-
RECEPTS TO 10KW	-	X	1.00	220.44	=	-
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	-	X	1.25	430.24	=	-
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	-	X	1.00	220.51	=	-
MISCELLANEOUS	10.00	X	1.00		=	10.00
TOTAL CONNECTED	15.0 KVA (18 AMPS)			TOTAL DEMAND		15.0 KVA (18 AMPS)

NEMA 3R, 316 STAINLESS STEEL

SURFACE MOUNTING 10,000 AIC — **PANEL SCHEDULE**

NO. 4C — LOCATION: LOT F — SERVING: EQUIPMENT — 480/277 VOLTS 3PHASE 4WIRE 100 AMPS WITH 100 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	PANEL 2C VIA	6.40	60		20		SPARE	2
3	25KVA XFMR		2		20		SPARE	4
5	SPACE				20		SPARE	6
7							SPACE	8
9								10
11								12
13	SPACE							14
15	TVSS	-	30					16
17								18
19			3				SPACE	20

REMARKS: .

CONNECTED LOAD: 6.4 KVA 8 AMPS
DEMAND LOAD: 6.4 KVA 8 AMPS

PROVIDE HANDLE TIES FOR ALL MULTI-CIRCUIT HOMERUNS SHARING A NEUTRAL PER THE NATIONAL ELECTRIC CODE ARTICLE 210.4 MULTIWIRE BRANCH CIRCUITS, PART (B) DISCONNECTING MEANS. DRAWINGS ARE DIAGRAMMATIC. WHERE THE CONTRACTOR MODIFIES THE CIRCUITING, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL NEUTRAL PER CIRCUIT, MULTI-POLE CIRCUIT BREAKERS, OR CIRCUIT BREAKER HANDLE TIE TO MEET THE NEC ARTICLE. ALL COSTS ASSOCIATED WITH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

PANEL 4C LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	-	X	1.25	220.19(A)(1)	=	-
RECEPTS TO 10KW	-	X	1.00	220.44	=	-
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	-	X	1.25	430.24	=	-
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS		X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	-	X	1.00	220.51	=	-
MISCELLANEOUS	6.40	X	1.00		=	6.40
TOTAL CONNECTED	5.4 KVA (6 AMPS)			TOTAL DEMAND		6.4 KVA (8 AMPS)

NEMA 3R, 316 STAINLESS STEEL

SURFACE MOUNTING 10,000 AIC — **PANEL SCHEDULE**

NO. 2A — LOCATION: LOT F — SERVING: EQUIPMENT — 120/240 VOLTS 1PH 3WIRE 100 AMPS WITH 100 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	COMMUNICATIONS PANEL A	.72	20		20	.18	ENTRY PEDESTAL #1	2
3	SPARE					.18	ENTRY PEDESTAL #2	4
5						.18	ENTRY PEDESTAL #3	6
7						.70	GATE ARM #1	8
9						.70	GATE ARM #2	10
11						.70	GATE ARM #3	12
13						.90	OCR #1	14
15						.90	OCR #2	16
17						.90	OCR #3	18
19	SPARE		20		20	.18	RECEPTACLE	20

REMARKS: .

CONNECTED LOAD: 4.6 KVA 19 AMPS
DEMAND LOAD: 4.6 KVA 19 AMPS

PROVIDE HANDLE TIES FOR ALL MULTI-CIRCUIT HOMERUNS SHARING A NEUTRAL PER THE NATIONAL ELECTRIC CODE ARTICLE 210.4 MULTIWIRE BRANCH CIRCUITS, PART (B) DISCONNECTING MEANS. DRAWINGS ARE DIAGRAMMATIC. WHERE THE CONTRACTOR MODIFIES THE CIRCUITING, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL NEUTRAL PER CIRCUIT, MULTI-POLE CIRCUIT BREAKERS, OR CIRCUIT BREAKER HANDLE TIE TO MEET THE NEC ARTICLE. ALL COSTS ASSOCIATED WITH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

PANEL 2A LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	-	X	1.25	220.19(A)(1)	=	-
RECEPTS TO 10KW	-	X	1.00	220.44	=	-
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	-	X	1.25	430.24	=	-
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	-	X	1.00	220.51	=	-
MISCELLANEOUS	4.84	X	1.00		=	4.84
TOTAL CONNECTED	4.6 KVA (19 AMPS)			TOTAL DEMAND		4.6 KVA (19 AMPS)

NEMA 3R, 316 STAINLESS STEEL

SURFACE MOUNTING 10,000 AIC — **PANEL SCHEDULE**

NO. 2B — LOCATION: LOT F — SERVING: EQUIPMENT — 120/240 VOLTS 1PH 3WIRE 100 AMPS WITH 100 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	COMMUNICATIONS PANEL B	.72	20		20		SPARE	2
3	T-POLE #1	.20					SPARE	4
5	T-POLE #2	.20					SPARE	6
7	T-POLE #3	.20				.30	CHASSIS CAMERA #1	8
9	T-POLE #4	.20				.30	CHASSIS CAMERA #2	10
11	T-POLE #5	.20				.30	CHASSIS CAMERA #3	12
13	TRUCK INTERCOM #1,2	.36				.30	CHASSIS CAMERA #4	14
15	TRUCK INTERCOM #3,4	.33				.30	CHASSIS CAMERA #5	16
17	TRUCK INTERCOM #5,6	.36				.18	RECEPTACLE	18
19	TRUCK INTERCOM #7,8	.36	20		20	.18	TRUCK INTERCOM #9	20

REMARKS: .

CONNECTED LOAD: 5.0 KVA 21 AMPS
DEMAND LOAD: 5.0 KVA 21 AMPS

PROVIDE HANDLE TIES FOR ALL MULTI-CIRCUIT HOMERUNS SHARING A NEUTRAL PER THE NATIONAL ELECTRIC CODE ARTICLE 210.4 MULTIWIRE BRANCH CIRCUITS, PART (B) DISCONNECTING MEANS. DRAWINGS ARE DIAGRAMMATIC. WHERE THE CONTRACTOR MODIFIES THE CIRCUITING, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL NEUTRAL PER CIRCUIT, MULTI-POLE CIRCUIT BREAKERS, OR CIRCUIT BREAKER HANDLE TIE TO MEET THE NEC ARTICLE. ALL COSTS ASSOCIATED WITH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

PANEL 2B LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	-	X	1.25	220.19(A)(1)	=	-
RECEPTS TO 10KW	-	X	1.00	220.44	=	-
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	-	X	1.25	430.24	=	-
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	-	X	1.00	220.51	=	-
MISCELLANEOUS	5.02	X	1.00		=	5.02
TOTAL CONNECTED	5.0 KVA (21 AMPS)			TOTAL DEMAND		5.0 KVA (21 AMPS)

NEMA 3R, 316 STAINLESS STEEL

SURFACE MOUNTING 10,000 AIC — **PANEL SCHEDULE**

NO. 2C — LOCATION: LOT F HUT/ TROUBLE BOOTH — 120/240 VOLTS 1PH 3WIRE 100 AMPS WITH 100 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	SPACE				20	1.00	TROUBLE BOOTH	2
3						1.00	TROUBLE BOOTH	4
5						.18	RECEPTACLE	6
7							SPARE	8
9					20		SPARE	10
11							SPACE	12
13							SPACE	14
15							SPACE	16
17					60	4.20	COMMUNICATIONS HUT	18
19	SPACE				2			20

REMARKS: .

CONNECTED LOAD: 6.4 KVA 27 AMPS
DEMAND LOAD: 6.4 KVA 27 AMPS

PROVIDE HANDLE TIES FOR ALL MULTI-CIRCUIT HOMERUNS SHARING A NEUTRAL PER THE NATIONAL ELECTRIC CODE ARTICLE 210.4 MULTIWIRE BRANCH CIRCUITS, PART (B) DISCONNECTING MEANS. DRAWINGS ARE DIAGRAMMATIC. WHERE THE CONTRACTOR MODIFIES THE CIRCUITING, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL NEUTRAL PER CIRCUIT, MULTI-POLE CIRCUIT BREAKERS, OR CIRCUIT BREAKER HANDLE TIE TO MEET THE NEC ARTICLE. ALL COSTS ASSOCIATED WITH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

PANEL 2C LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	-	X	1.25	220.19(A)(1)	=	-
RECEPTS TO 10KW	.18	X	1.00	220.44	=	.18
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	-	X	1.25	430.24	=	-
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	-	X	1.00	220.51	=	-
MISCELLANEOUS	6.20	X	1.00		=	6.20
TOTAL CONNECTED	6.4 KVA (27 AMPS)			TOTAL DEMAND		6.4 KVA (27 AMPS)

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MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. RUSSELL — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 12/2/19

SLH	12-02-19	DATE
CHECKED BY		
GLW	12-02-19	DATE

PROJ. ENGR — PRINTED BY: Scott K Dec 02, 2019
SITE ADDRESS: 1281 PIER G WAY
LONG BEACH, CA 90802
DRAWING SCALE: AS NOTED

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
ELECTRICAL PANEL SCHEDULES

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011 | VERT: MLLW 19.18' @ TIDE 22 1933
PARCEL: N/A

PHASE: BID SET

E14
49 OF 59

PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E14

BINDING EDGE

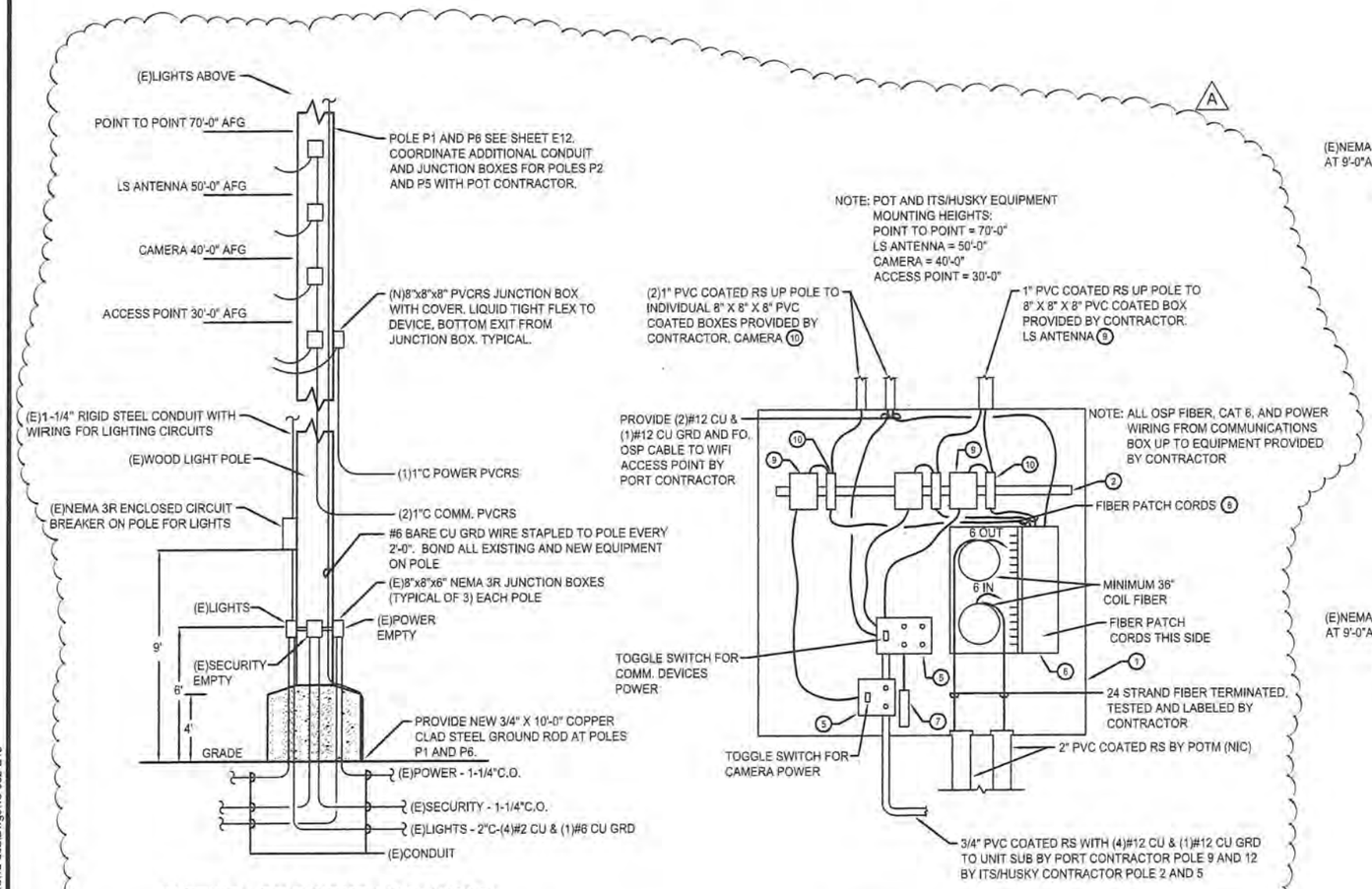
ELECTRICAL NOTES:

1. TWO (2) 2"C STUBBED 5' PAST EXISTING CURB, SAW CUT CURB, ASPHALT AND REMOVAL, BY POTM. FO CABLE FROM HUT AND TERMINATION BY PORT CONTRACTOR FOR POT COMMUNICATION BOX AND BY ITS/HUSKY CONTRACTOR FOR ITS/HUSKY COMMUNICATIONS BOX.
2. ONE (1)1"C STUBBED 5' PAST EXISTING CURB, SAWCUT CURB, ASPHALT, AND REMOVAL BY POTM, POWER CABLES IN CONDUIT BY ITS/HUSKY CONTRACTOR. SEE SHEETS E9, E10, E11.
3. 5KVA, NEMA 3R, 316 STAINLESS STEEL UNIT SUB, 480V, 1PH TO 120/240V, 1PH WITH TWELVE(12) CIRCUIT BREAKER SPACES AND SIX(6), 20/1P CIRCUIT BREAKERS. 3/4"PVCRS-(2)#12 CU & (1)#12 CU GRD, CAST 4 SQUARE BOX WITH 125V, 20A, GFI RECEPTACLE AND NEMA 3R "IN USE" COVER. FURNISHED AND INSTALLED BY POT CONTRACTOR.
4. 5KVA, NEMA 3R, 316 STAINLESS STEEL UNIT SUB, 480V, 1PH TO 120/240V, 1PH WITH TWELVE(12) CIRCUIT BREAKER SPACES AND SIX(6), 20/1P CIRCUIT BREAKERS. 3/4"PVCRS-(2)#12 CU & (1)#12 CU GRD, CAST 4 SQUARE BOX WITH 125V, 20A, GFI RECEPTACLE AND NEMA 3R "IN USE" COVER. FURNISHED AND INSTALLED BY ITS/HUSKY CONTRACTOR.

EQUIPMENT SCHEDULE

1. NEMA 4X, 316 STAINLESS STEEL, 36"x36"x12"D, HINGED, LATCHING AND PAD LOCKABLE COMMUNICATIONS CABINET. ITS/HUSKY CONTRACTOR PROVIDED.
2. DIN BAR(S) FOR MOUNTING EQUIPMENT INTERIOR TO COMMUNICATIONS CABINET. ITS/HUSKY CONTRACTOR PROVIDED.
3. MEDIA CONVERTER BLACKBOX. ITS/HUSKY FURNISHED, CONTRACTOR INSTALLED.
4. POWER SUPPLY. IT/HUSKY FURNISHED, CONTRACTOR INSTALLED.
5. CAST 2 OR 3-GANG BOX WITH COVER, MOTOR RATED TOGGLE SWITCH AND (1) OR (2)20A, 125V RECEPTACLES AS INDICATED. IT/HUSKY CONTRACTOR PROVIDED. (A)
6. BULKHEAD. ITS/HUSKY FURNISHED, CONTRACTOR INSTALLED.
7. GROUND BAR. CONTRACTOR PROVIDED.
8. FIBER PATCH CORDS. IT/HUSKY FURNISHED, CONTRACTOR INSTALLED.
9. LS ANTENNA ITS/HUSKY FURNISHED CONTRACTOR INSTALLED AT P2 AND P5:
   (1)LS ANTENNA
   (1)POE POWER SUPPLY
   (1)MEDIA CONVERTER
   (1)SFP LC-1GB-LX
10. CAMERAS ITS/HUSKY FURNISHED CONTRACTOR INSTALLED AT P1, P6:
    (1)CAMERA MOUNT ADAPTER
    (1)CAMERA DOME
    (1)CAMERA MOUNT
    (1)CAMERA
    (1)POWER SUPPLY
    (1)MEDIA CONVERTER
    (1)SFP LC-1GB-LX

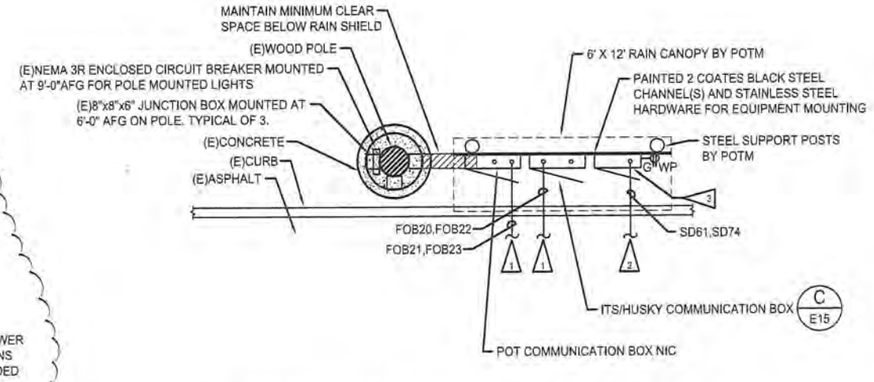
(A)



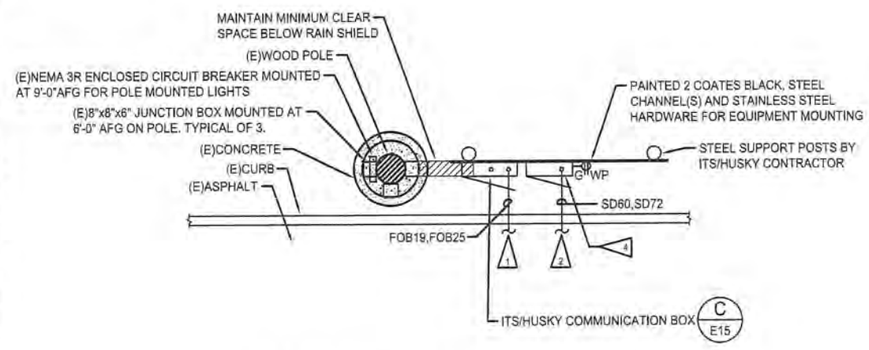
EXISTING LOT F WOOD LIGHT POLE/ BASE ELEVATION TYPICAL P1 THROUGH P12
NO SCALE

NOTE: POT AND ITS/HUSKY EQUIPMENT MOUNTING HEIGHTS:
POINT TO POINT = 70'-0"
LS ANTENNA = 50'-0"
CAMERA = 40'-0"
ACCESS POINT = 30'-0"

(C) E15 **ITS/HUSKY COMMUNICATIONS BOX**
NO SCALE



(A) E15 **POWER/COMMUNICATIONS AT POLES 2 AND 5**
NO SCALE



(B) E15 **POWER/COMMUNICATIONS AT POLE 1**
NO SCALE

CROSS ENGINEERS, INC
923 MLK Jr. Way
Tacoma, WA 98405
Info@crossengineers.com
Phone: (253) 759-0118
Job Number: 18-032

MARK:	REVISION:	BY:	APPR:	DATE:
A	ADDENDUM #A	SJK	GLW	12/11/19

moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222

STEVEN L. HUBBS CERTIFIED PROFESSIONAL ENGINEER 12/11/19

SLH 12-02-19 DATE
CHECKED BY
GLW 12-02-19 DATE
PROJ. ENGR
PRINTED BY: ScottK Dec 11, 2019
SITE ADDRESS: 1281 PIER G WAY LONG BEACH, CA 90802

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
ELECTRICAL SYMBOLS/ ABBREVIATION LEGEND AND GENERAL NOTES

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83/2011 | VERT: MLLW 19.18' @ TIDE 22 1933
PARCEL: N/A | DRAWING SCALE: AS NOTED
PHASE: BID SET

E15
50 OF 59

PORT OF TACOMA FILE: N:\Jobs\2018\18-032\Dwgs\18-032-E15

LOT F REDEVELOPMENT

HUSKY PROCESSING LANES
TACOMA, WASHINGTON

ELEVATION DATUM:
MEAN LOWER LOW WATER (MLLW);
CONVERSION: MLLW DATUM MINUS 6.17' = NGVD 29 CITY OF TACOMA DATUM

HORIZONTAL DATUM:
NAD 83 (2007)

CONVERSION: PORT OF TACOMA DATUM MINUS N 0.22, E 0.00 = NAD 83/91 CITY OF TACOMA DATUM

SPECIAL TRAFFIC CONTROL REQUIREMENTS:

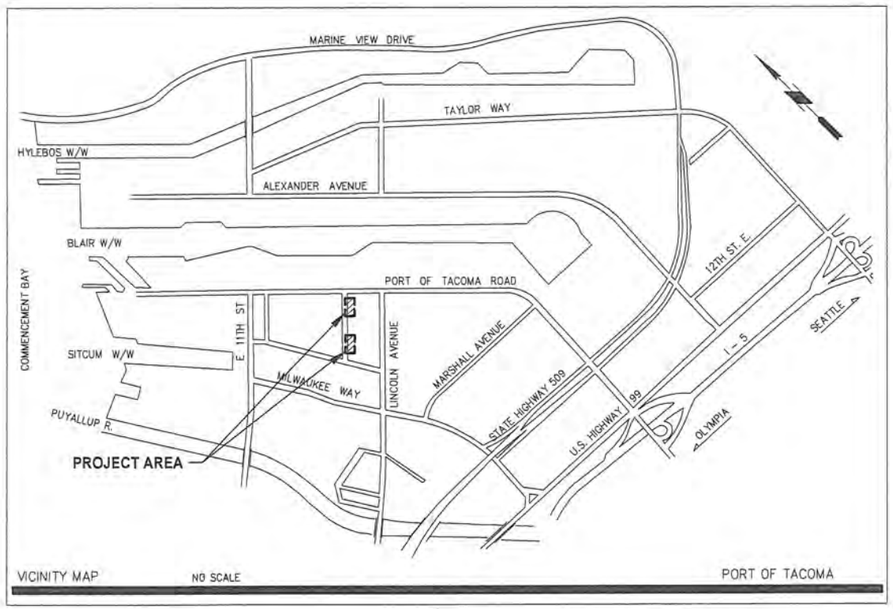
1. A MINIMUM OF ONE 20-FOOT WIDE ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES AT ALL TIMES.
2. THREE (3) WORKING DAYS PRIOR TO ANY STREET OR LANE CLOSURE, THE CONTRACTOR SHALL NOTIFY:

TACOMA PUBLIC WORKS ENGINEERING DIVISION	(253) 591-5500
TACOMA PUBLIC WORKS STREETS AND GROUNDS	(253) 591-5495
TACOMA PUBLIC WORKS SOLID WASTE	(253) 591-5544
TACOMA FIRE DEPARTMENT	(253) 591-5733
TACOMA POLICE DEPARTMENT	(253) 591-5951
LESA COMMUNICATION CENTER	(253) 798-4721 OPT. #3

3. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO, AND APPROVED BY THE TACOMA PUBLIC WORKS, ENGINEERING DIVISION, PRIOR TO BEGINNING ANY WORK ON CITY RIGHT OF WAY.

GENERAL CONSTRUCTION SEQUENCE:

1. HOLD AND ATTEND PRE-CONSTRUCTION MEETING WITH THE CITY OF TACOMA CONSTRUCTION DIVISION AND BUILDING AND LAND USE SERVICE, TACOMA POWER, TACOMA WATER, PORT OF TACOMA, ENGINEER AND OTHERS AS APPLICABLE PRIOR TO COMMENCEMENT OF WORK.
2. STAKE PROJECT LIMITS PRIOR TO BEGINNING CONSTRUCTION.
3. WHEN COMPLETED CONTACT CITY INSPECTOR FOR FINAL APPROVAL.



VICINITY MAP NO SCALE PORT OF TACOMA

PROJECT CONTACT INFORMATION

OWNER - PORT OF TACOMA

CONSULTING ENGINEER - MOFFATT & NICHOL

BYRON HALEY, P.E.
PROJECT MANAGER
PHONE: (206) 622-0222
EMAIL: BHALEY@MOFFATTNICHOL.COM

SHEET LIST INDEX	
SHEET NUMBER	SHEET TITLE
WO-01	COVER SHEET AND SHEET INDEX
WO-02	GENERAL NOTES
WO-03	SITE PREP, EROSION CONTROL PLANS – SHEET 1
WO-04	SITE PREP, EROSION CONTROL PLANS – SHEET 2
WO-05	SITE PLAN – SHEET 1
WO-06	SITE PLAN – SHEET 2
WO-07	DRIVEWAY DETAILS
WO-08	BIOSWALE PLAN
WO-09	BIOSWALE DETAILS

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY DATE FIELD BOOKS

DATE 12/2/19 SCALE AS NOTED
DESIGNED ALP CHECKED BJH
SENIOR PM SLG PROJECT NAME
DRAWING NAME

BYRON HALEY REGISTERED PROFESSIONAL ENGINEER

ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
COVER SHEET AND SHEET INDEX

WO-01

SHEET NO
SHEET 1 OF 9

GENERAL

- The following special provisions are to be used in conjunction with the "2010" Standard Specifications for Road, Bridge and Municipal Construction" and "Standard Plans for Road, Bridge and Municipal Construction" as prepared by the Washington State Department of Transportation (WSDOT). State Standard Specifications are available through WSDOT, by mail at Pre-Contract Section, P.O. Box 47408, Olympia, WA 98504-7408, or by telephoning (360) 705-7430.
- Any inconsistency between these work order drawings and the 2010 Standard Specifications or the WSDOT Standard Plans shall be resolved by the following order of precedence (e.g., 1 presiding over 2, 3, and so forth):
  1. Approved Work Order Drawings
  2. 2010 Standard Specifications
  3. WSDOT Standard Plans
- Any revisions to these plans must be reviewed and approved by the City of Tacoma Department of Public Works prior to any implementation in the field.
- Contractors shall familiarize themselves with the site and shall bring any discrepancies to the attention of the Engineer prior to undertaking the affected work.
- Any discrepancy in these drawings, specifications, these notes, and the site conditions shall be reported to the Engineer, who shall correct such discrepancy in writing after reviewing any changes. Any work done by the Contractor after the discovery of such discrepancy shall be done at the Contractor's risk. The Contractor shall verify and coordinate the dimensions among all drawings prior to proceeding with any work.
- A pre-construction meeting shall be held at the City of Tacoma with the applicant, contractor, and City Inspectors prior to issuance of a permit.

ADDITIONAL PERMITS

- Separate permits are required for all retaining walls, grading, and erosion control. Adherence to all conditions of these permits is required as a part of this plan.
- Separate permits are required for sidewalk installation as well as curb and gutter removal and driveway construction when constructed at building permit stage.
- Separate storm and sanitary sewer connection permits are required for connections to the sanitary or storm sewer system.

UTILITIES

- The existing underground utilities shown hereon are based upon existing record drawings and are not guaranteed to be accurate, nor all-inclusive.
- All utilities must be verified prior to construction. If the project requires any excavation, the developer/contractor is required to call the Utility Underground Location Center at (800) 424-5555 at least two days before starting such excavation in accordance with RCW 19.122.
- It shall be the Contractor's responsibility to protect, in place, all utilities and/or structures whether shown or not shown on this plan. Damage due to the Contractor's operations shall be repaired at the Contractor's expense.

EXCAVATION

- If workers enter any trench or other excavation four feet or more in depth that does not meet the open pit requirements of Section 2-09.3(3)B, it shall be shored and cribbed. All trench safety systems shall meet the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Contractor alone shall be responsible for all worker safety, and neither the City of Tacoma nor the Engineer of record assumes any responsibility.

PAVEMENT PREPARATION / RESTORATION

- Additional removal and replacement of pavement may be required to provide proper transition/crown as directed by the City of Tacoma Construction Inspector in the field.
- The street sections shown on this plan are designed to be placed upon a firm and unyielding base.
- Subgrade compaction shall be tested by a professional geotechnical consultant prior to placing base material.
- Pavement restoration shall be constructed in accordance with the City of Tacoma Restoration policy.

HOT MIX ASPHALT

- The hot mix asphalt shall be HMA CL 1/2 inch PG 64-22. Mix design shall be based on Standard Plan PD-01-Pavement Design Standards.
- Section 5-04.3(8)A 'Acceptance Sampling and Testing' of the Standard Specifications is deleted.
- All hot mix asphalt shall be compacted to a minimum of 92 percent of the maximum density as determined by AASHTO T209. All hot mix asphalt utilized shall be considered compactable. The level of compaction attained will be determined as the average of not less than 5 nuclear density gauge tests taken on the day the mix is placed (after completion of the finish rolling) at randomly selected locations within each lot. The quantity represented by each lot will be no greater than a single day's production or approximately 400 tons, whichever is less.
- All testing results shall be provided to the City within 48 hours of the test.
- Control lots not meeting the minimum density standard shall be removed and replaced with satisfactory material.
- In addition to the randomly selected locations for test of the control lot, the Engineer reserves the right to test any area which appears defective and to require further compaction of areas that fall below acceptable density readings. These additional tests shall not impact the compaction evaluation of the entire control lot.
- Hot mix asphalt pavement shall not be placed on any traveled way between October 1 and April 1 without written approval from the Construction Division Manager.
- No traffic shall be allowed on any newly placed pavement without the approval of the Inspector.

CONCRETE

- Concrete pavement mix design shall be based on Standard Plan PD-01-Pavement Design Standards.
- Cold Weather Concrete Work. The following requirements for placing concrete shall be in effect from November 1 to April 1:
  1. The Engineer shall be notified at least 24 hours prior to any concrete placement.
  2. Weather permitting, all concrete placement shall be completed no later than 2:00 p.m. each day.
  3. Where forms have been placed and the subgrade has been subjected to severe frost, no concrete shall be placed until the ground is completely thawed. At that time, the forms shall be adjusted and subgrade repaired as determined by the Engineer.
- Curing of concrete shall be in accordance with Section 5-05.3(13) of the Standard Specifications.
- The slump for concrete used for sidewalks shall not exceed four inches +/- one inch.
- Sidewalks and curb ramps shall be constructed in accordance with ADA Standards for Accessible Design, 28 CFR, Part 35 and as supplemented by the Public Works Right of Way Accessibility Guidelines (PROWAG).

SANITARY AND STORM SEWERS

- 7-08.3(2)G Jointing of Dissimilar Pipe:

Dissimilar pipe shall be joined by use of rigid couplings manufactured by Romac Industries, Inc., or Engineer approved equal.

- 7-08.3(2)F Plugs and Connections:

Rigid Couplings, manufactured by Romanc Industries, Inc., or Engineer approved equal, shall be used at any pipe joint in which ball and spigot or fused joints are not used. Flexible couplings are not permitted.

- Section 7-04 of the Standard Specification is deleted. Storm sewers shall meet all the requirements of sanitary sewers.
- Sewers and appurtenances shall be cleaned and tested after backfilling by either exfiltration or low-pressure air method at the option of the Contractor, except where the ground water table is such that the Engineer may require the infiltration test.
- All sanitary and storm sewers shall be video inspected by City Forces prior to paving where paving occurs over sewers. All other sewers will be video inspected prior to final acceptance.
- All abandoned pipes encountered during construction and new storm and sanitary sewer stub outs shall be sealed with a watertight pipe plug.
- All frames and grates for standard catch basin inlets on this project shall be "vaned" type and shall conform to that shown on WSDOT Standard Plan No. B30.30-00
- Recycled concrete shall not be used for pipe zone backfill.

MISCELLANEOUS

- Any fence or structure replaced and/or relocated shall be maintained to remain functional.
- Independent quality assurance sampling and testing will be provided by a certified independent laboratory for all improvements within the right-of-way. All special inspection reports shall be forwarded to the Construction Division Office on a monthly basis, and / or as requested by the construction inspector.
- The Contractor shall only use those hydrants designated by the agency in charge of water distribution and in strict accordance with its requirements for hydrant use. Water applied by the Contractor shall not be from residential sources.

PRIVATE WORK ORDER GENERAL NOTES

GRADING, EXCAVATION, AND EROSION CONTROL NOTES

- All work is to be done in accordance with the approved grading plan, soils report, the most current WSDOT Standard Specification For Road, Bridge And Municipal Construction, and the current Tacoma Surface Water Management Manual.
- When construction operations are such that debris from the work is deposited on the streets, the Contractor shall, as a minimum, remove on a daily basis any deposits or debris which may accumulate on the roadway surface. Should daily removal be insufficient to keep the streets clean, the Contractor shall perform removal operations on a more frequent basis. If the City of Tacoma Construction Inspector determines that a more frequent cleaning is impractical or if the Contractor fails to keep the streets free from deposits and debris resulting from the work, the Contractor shall, upon order of the City of Tacoma Construction Inspector, provide facilities for, and remove all clay or other deposits from the tires or between wheels before trucks or other equipment will be allowed to travel over paved streets. Should the Contractor fail or refuse to clean the streets in question, or the trucks or equipment in question, the City of Tacoma Construction Inspector may order the work suspended at the Contractor's risk until compliance with the Contractor's obligations is assured, or the City of Tacoma Construction Inspector may order the streets in question cleaned by others and such costs incurred by the City in achieving compliance with these requirements, including cleaning of the streets, shall be deducted from the work order account.
- The Contractor shall protect existing drainage structures using acceptable methods and materials as shown on this plan. If the methods and materials as shown on this plan are not adequate, the City of Tacoma Construction Inspector may require additional/alternative methods for erosion control and/or protection of existing drainage structures. Additional or alternative methods shall be submitted by the design engineer and accepted by the City of Tacoma Construction Inspector. Any damage caused to the City of Tacoma storm sewer system as a result of the work outlined on this plan shall be the sole responsibility of the Contractor. Resolving said damage may include, but not be limited to, the cleaning of the drainage system in question by the Contractor.
- Watering provisions when applicable must be in place to prevent dust from becoming air borne. Violation of this condition will result in a stop work order until corrected.
- Fill that will support a street section or other structures shall be placed under the inspection of a licensed Geotechnical Engineer. Soil to be placed shall be tested and compacted to 95 percent of its maximum density. Engineer shall document existing site conditions, soil and its placement and allowable bearing capacity submitted. Standard requirements for cuts and fill are contained in the WSDOT Standard Specifications For Road, Bridges, and Municipal Construction.
- A stormwater pollution prevention plan is required for all work order projects. The plan must be in accordance with the current Tacoma Surfacewater Management Manual.

HYDROSEEDING

- All areas that are cleared and grubbed, graded, excavated or filled are subject to hydroseeding. Any of these areas that are left unpaved or unlandscaped shall be hydroseeded under the direction and approval of the Construction Inspector.
- Hydroseed only during the periods of April 1 though May 31 or September 1 though October 15. This hydroseeding requirement may be met during the months of June through August if irrigation is provided.
- Maintain hydroseeding throughout the winter wet season.

EROSION CONTROL MEASURES

A. Minimum Erosion Control measures shall include:
   1. Construction entrance.
   2. Perimeter erosion/sedimentation control.
   3. Protection of catch basins.
   4. Stabilization of exposed soils.
B. All erosion control shall be in place prior to clearing.
C. Erosion control measures shall be maintained at all times to the approval of the Construction Inspector.
D. Should temporary erosion and sedimentation control measures, as shown on plans become inadequate, the contractor shall install facilities as necessary to protect adjacent properties and the City of Tacoma drainage system, meeting approval of the Construction Inspector.
E. Grading, excavation, and filling prohibited. No permits to perform grading, excavation, or filling during the period from October 1st through March 31 shall be issued. EXCEPTION: The Building Official may approve a grading, excavation, or filling plan prepared by a licensed Civil or Geotechnical Engineer which specifically addresses the winter rain season and the associated erosion problems, and issue a permit based on such plan.
F. Call for inspection of the Construction Inspector upon completion of:
   1. Staking of clearing limits.
   2. Installation of erosion control and prior to site grading.
   3. Prior to removal of erosion control devices.
G. All material removed from site shall be placed only at a permitted site. Verify location of destination of material prior to exportation.
H. Traffic control provisions as approved by the traffic engineer shall be adhered to at all times.
I. Trees to be removed shall be clearly marked for removal. Trees to be saved shall be fenced with barricade fence at the drip line (outer edge of tree branches) to keep construction vehicles from compacting root zone and killing trees. This fencing shall be maintained until construction ends.

RECORD DRAWINGS CRITERIA FOR ACCEPTANCE OF ALL PRIVATE WORK ORDERS

- All revisions to the approved plans must be approved by the City of Tacoma Public Works Construction Division prior to implementation of the changes.
- A determination at the time of proposal shall be made whether the revision can be addressed with red line drawings submitted as a part of the record drawings or will require formal submission for approval.
- Record drawings shall show the station, offset, centerline and gutter flowline elevations, to nearest 0.01 foot, for all horizontal and vertical roadway alignment changes, at the intersection end of radius points and at the beginning and end of new paving.
- Record drawings shall show the station, offset, invert, and rim elevations to the nearest 0.01 foot for all storm and sanitary sewer structures. (i.e.: manholes, catch basins, etc.)
- After any new storm and/or sanitary sewer(s) have been cleaned and the manholes channeled, the main(s) shall be televised to provide a record of the constructed conditions and to verify side sewer connection locations by the City of Tacoma Public Works Sewer Maintenance Division.
- The property side ends of the side sewers shall be marked in the field by means of a 2-inch by 4-inch board and locate wire that extends from the flow line of the side sewer to at least 1 foot above the finished lot grade. Record drawings shall show all side sewers and shall locate them by measurements from permanent objects. (i.e.: curb, property corner, etc.) In addition, the depth of all side sewers shall be noted on the record drawings and locate board.
- Record drawings shall be received and accepted prior to issuing side sewer connection permits or release of performance bonds.
- Record drawings shall show vertical and horizontal datum for survey monuments (existing or new construction) within the limits of the project.
- Record drawings shall consist of a clean set of approved work order drawings with all changes noted above shown in red ink.
- Record drawings must be submitted within 30 days of substantial completion or City survey crews will collect the necessary data and bill against the work order.

MONUMENT REMOVAL PERMIT PROCESS

"No survey monument shall be removed or destroyed (the physical disturbance or covering of a monument such that the survey point is no longer visible or readily accessible) before a permit is obtained from the Department of Natural Resources (DNR)." WAC 332-120-030(2) states "It shall be the responsibility of those performing construction work or other activity (including road and street resurfacing projects) to adequately search the records and the physical area of the proposed construction work or other activity for the purpose of locating and referencing any known or existing survey monuments." Construction shall not commence until WAC outlined in Chapter 332-120 is complied with.

SEWERS AND STORM

- Clearing stakes if needed.
- Stakes every 50 feet plus grade breaks. Try to maintain 12 foot offsets in streets and 8 foot offsets in alleys.
- Double offsets at manholes and catch basins (ahead and back stakes at angle points).
- Catch basin station shall be to the centerline of the basin. Catch basin offsets shall be to the face of the curb.

RESIDENTIAL STREETS

- Clearing stakes as needed.
- Slope stakes every 50 feet and grade breaks if cuts or fills exceed 2 feet.
- Curb stakes every 50 feet and grade breaks, on 4 foot offset to the face of curb. Curb stakes are set to the top of curb grade (Blue Tops).
- Also stake the beginning and end of all approaches.
- No centerline of street grades unless the street grade is warped. If street grades are needed, set blue tops for each course.

ARTERIAL STREETS

- Clearing stakes as needed.
- Slope stakes every 50 feet and grade breaks if cuts or fills exceed 2 feet.
- Curb stakes every 50 feet and grade breaks, on 4 foot offset to the face of curb.
- Curb stakes are set to the top of curb grade (Blue Tops). Also stake the beginning and end of all approaches.
- Stake centerline and quarterline grade every 50 feet and grade breaks at grade for each course.

ALLEYS

- Stake both sides every 50 feet and grade breaks, on a 2 foot offset to the edge of paving, with a cut or fill to edge of paving on high side and flow line on low side.

SIDEWALKS

- Offsets for walks are set on 50' intervals and grade breaks normally at 2 foot to edge of walk and at edge of walk grade (Blue Tops).
- Sidewalk alignment is normally at 5 feet from the face of curb. No walk grades are needed if curbs are built.

HORIZONTAL AND VERTICAL CURVES

- Grade stakes must be set every 25 feet and grade breaks with a minimum of 3 stakes for each curve. Radius points on street Returns.

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 12/2/19 | SCALE AS NOTED
DESIGNED ALP | CHECKED BJH
SENIOR PM SLG | PROJECT NAME
DRAWING NAME

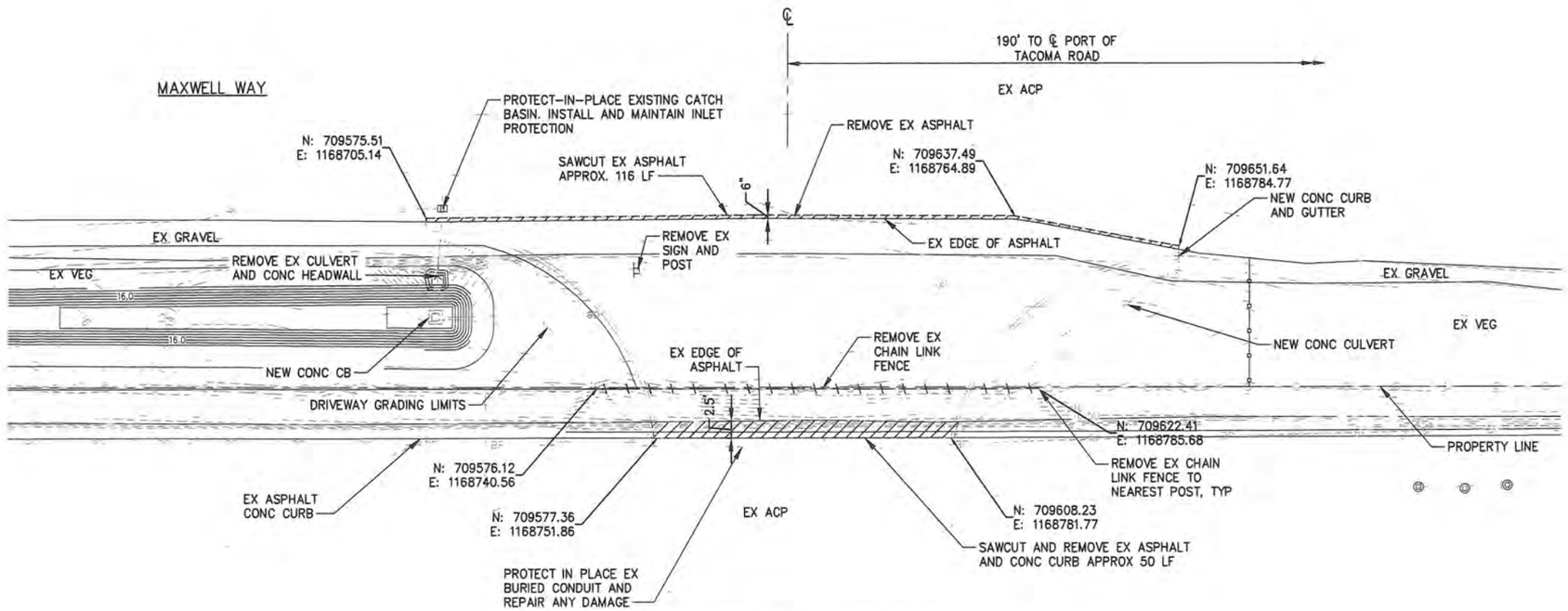
BYRON J. HALEY — STATE OF WASHINGTON — 47514 — REGISTERED PROFESSIONAL ENGINEER

ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
GENERAL NOTES

WO-02
SHEET NO.
SHEET 2 OF 9



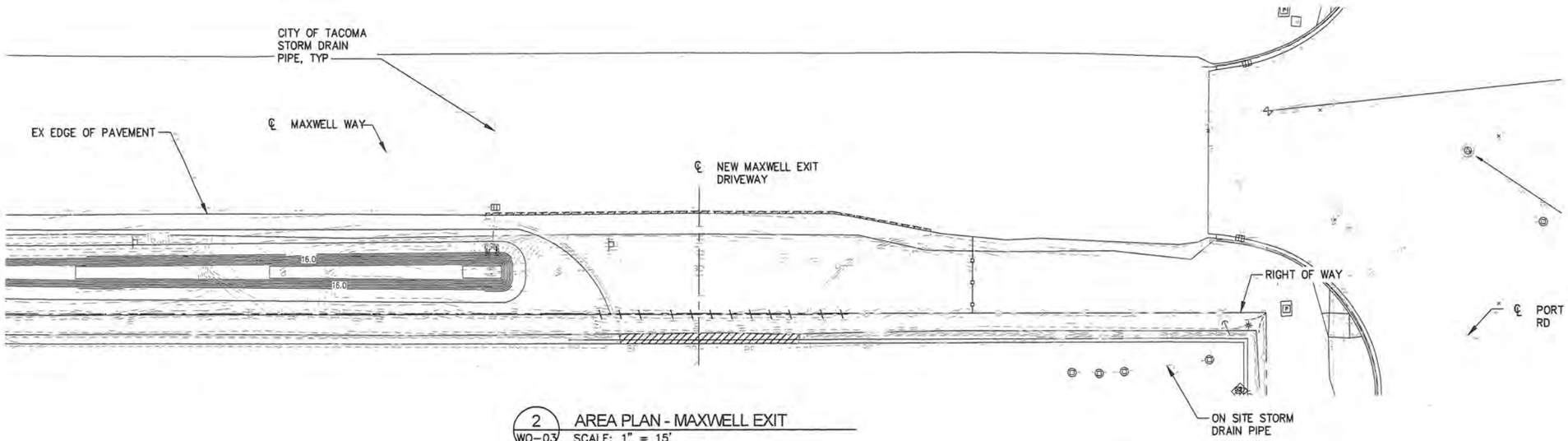
1 WO-03 ENLARGED PLAN - MAXWELL EXIT
SCALE: 1" = 10'

NOTES:

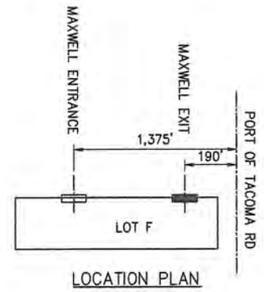
1. DELINEATE SAWCUT LINE AS FIRST ORDER OF WORK. CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER PRIOR TO SAWCUT.
2. SAWCUT COORDINATES ARE TO THE SAWCUT CORNER.

LEGEND:

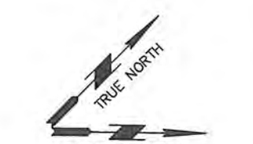
- SF — SILT FENCE.
- HIGH VISIBILITY CONSTRUCTION FENCE
- SAWCUT
- REMOVE EX PAVEMENT
- GRADING LIMITS
- DEMOLISH EX CHAIN LINK FENCE



2 WO-03 AREA PLAN - MAXWELL EXIT
SCALE: 1" = 15'



LOCATION PLAN



10' 0' 10' 20'
SCALE: 1"=10'

15' 0' 15' 30'
SCALE: 1"=15'

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 12/2/19 | SCALE AS NOTED
DESIGNED ALP | CHECKED BJH
SENIOR PM SLG | PROJECT NAME
DRAWING NAME

BYRON J. HALEY — STATE OF WASHINGTON — 21777 — REGISTERED PROFESSIONAL ENGINEER

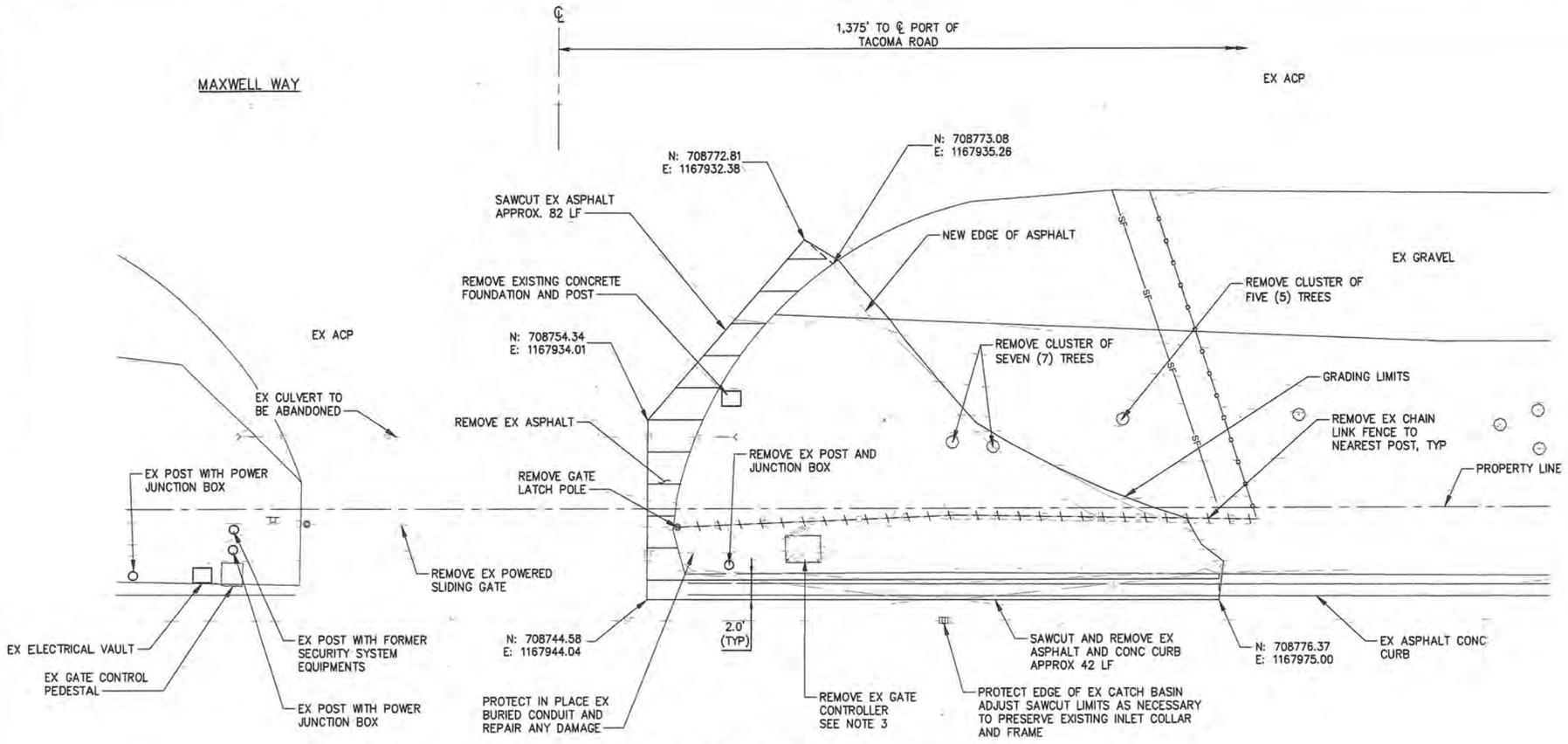
ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

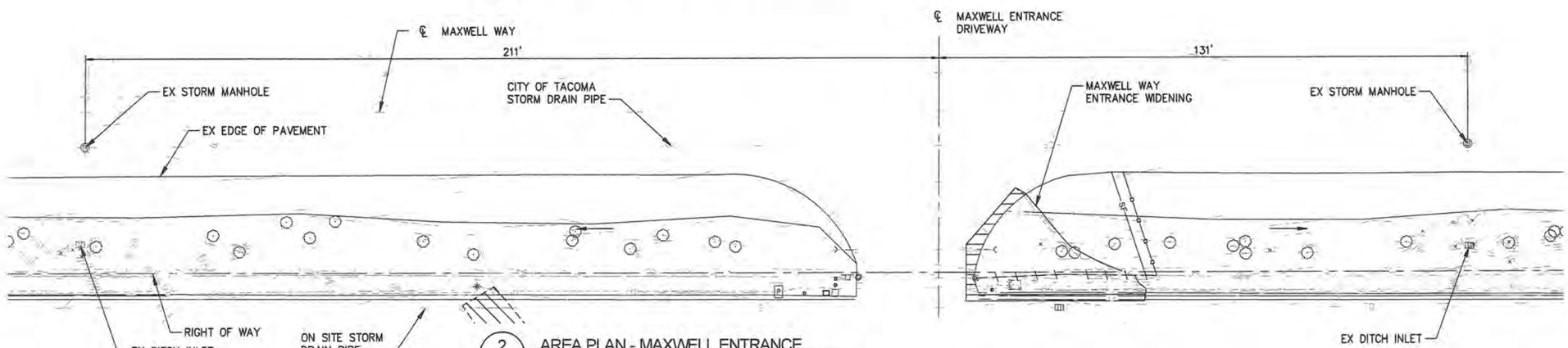
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
SITE PREP, EROSION CONTROL PLANS - SHEET 1

WO-03

SHEET NO. 3 OF 9



1 WO-04 ENLARGED PLAN - MAXWELL ENTRANCE
SCALE: 1" = 5'



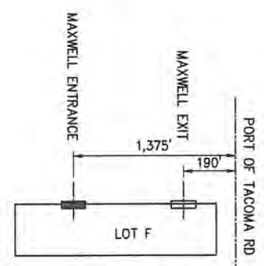
2 WO-04 AREA PLAN - MAXWELL ENTRANCE
SCALE: 1" = 15'

NOTES:

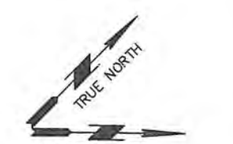
1. DELINEATE SAWCUT LINE AS FIRST ORDER OF WORK. CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER PRIOR TO SAWCUT.
2. SAWCUT COORDINATES ARE TO THE SAWCUT CORNER.
3. REMOVE, CLEAN AND SAVE EXISTING GATE CONTROLLER FOR DELIVERY TO PORT OF TACOMA.
4. TREE REMOVAL SHALL BE UNDER ADVISEMENT OF PORT OF TACOMA ENVIRONMENTAL DEPARTMENT.

LEGEND:

- SF — SILT FENCE
- HIGH VISIBILITY CONSTRUCTION FENCE
- SAWCUT
- REMOVE EX PAVEMENT
- GRADING LIMITS
- DEMOLISH EX CHAIN LINK FENCE/CURB



LOCATION PLAN



PROJECT NORTH

SCALE: 1"=10'

SCALE: 1"=15'

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 12/2/19
DESIGNED JAT
SENIOR PM SLG
DRAWING NAME

SCALE AS NOTED
CHECKED BJH
PROJECT NAME

BYRON HALEY 21511 REGISTERED PROFESSIONAL ENGINEER

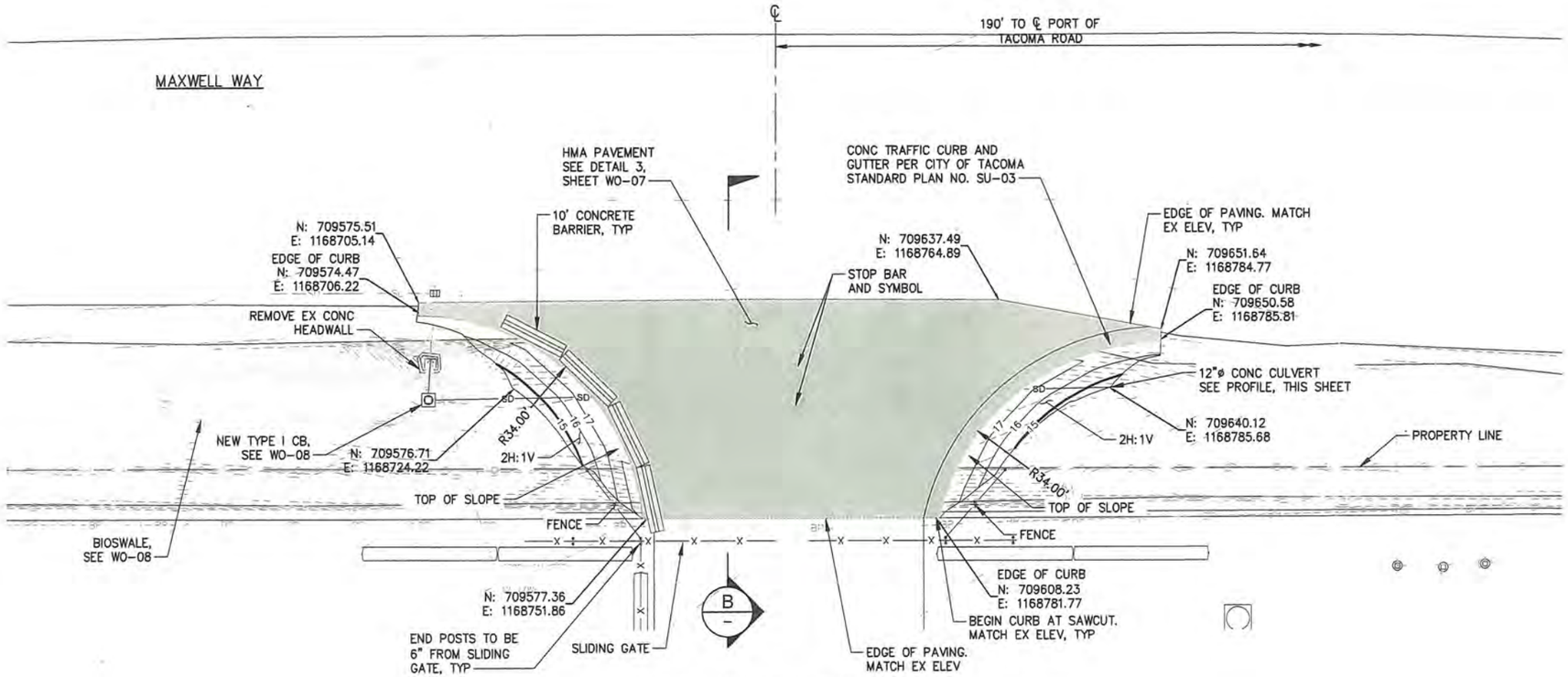
ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
SITE PREP, EROSION CONTROL PLANS - SHEET 2

WO-04

SHEET NO.
SHEET 4 OF 9



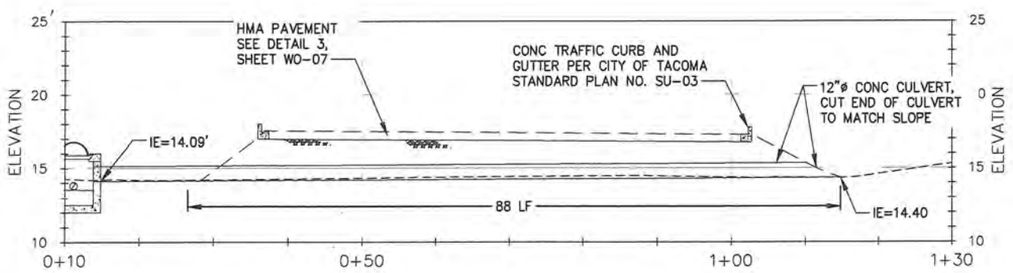
1 / WO-05 ENLARGED PLAN - MAXWELL EXIT
SCALE: 1" = 10'

NOTES:

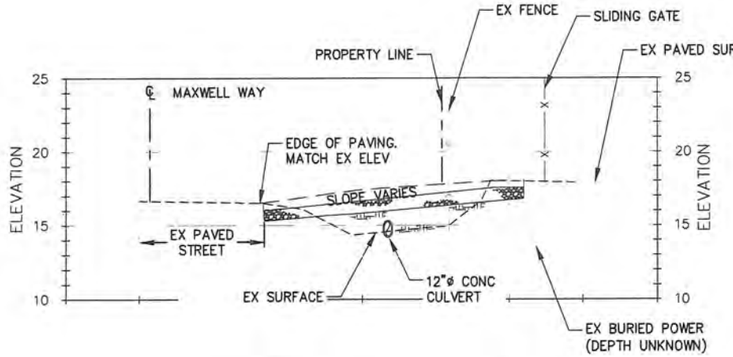
1. STRIPING SHALL BE 4" WHITE UNLESS OTHERWISE NOTED.
2. STABILIZE GRADED SURFACES WITH EROSION CONTROL BLANKETS PRIOR TO ESTABLISHING FINAL COVER TYPE. HYDROSEED ALL FINISHED PERVIOUS SURFACES.

LEGEND:

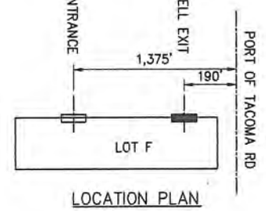
- SD — CULVERT
- GRADING LIMITS
- X — X — CHAIN LINK FENCE/ GATE
- FULL DEPTH HMA. SEE 1/WO-05



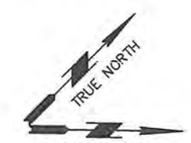
A / – CULVERT PROFILE
SCALE: 1" = 10' (H) 1"=5' (V)



B / – SECTION - MAXWELL EXIT
SCALE: 1" = 10' (H) 1"=5' (V)



LOCATION PLAN



PROJECT NORTH

5' 0' 5' 10'
SCALE: 1"=5'

10' 0' 10' 20'
SCALE: 1"=10'

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE 12/2/19	SCALE AS NOTED
BY	DESIGNED ALP	CHECKED BJH
DATE	SENIOR PM SLG	PROJECT NAME
FIELD BOOKS	DRAWING NAME	

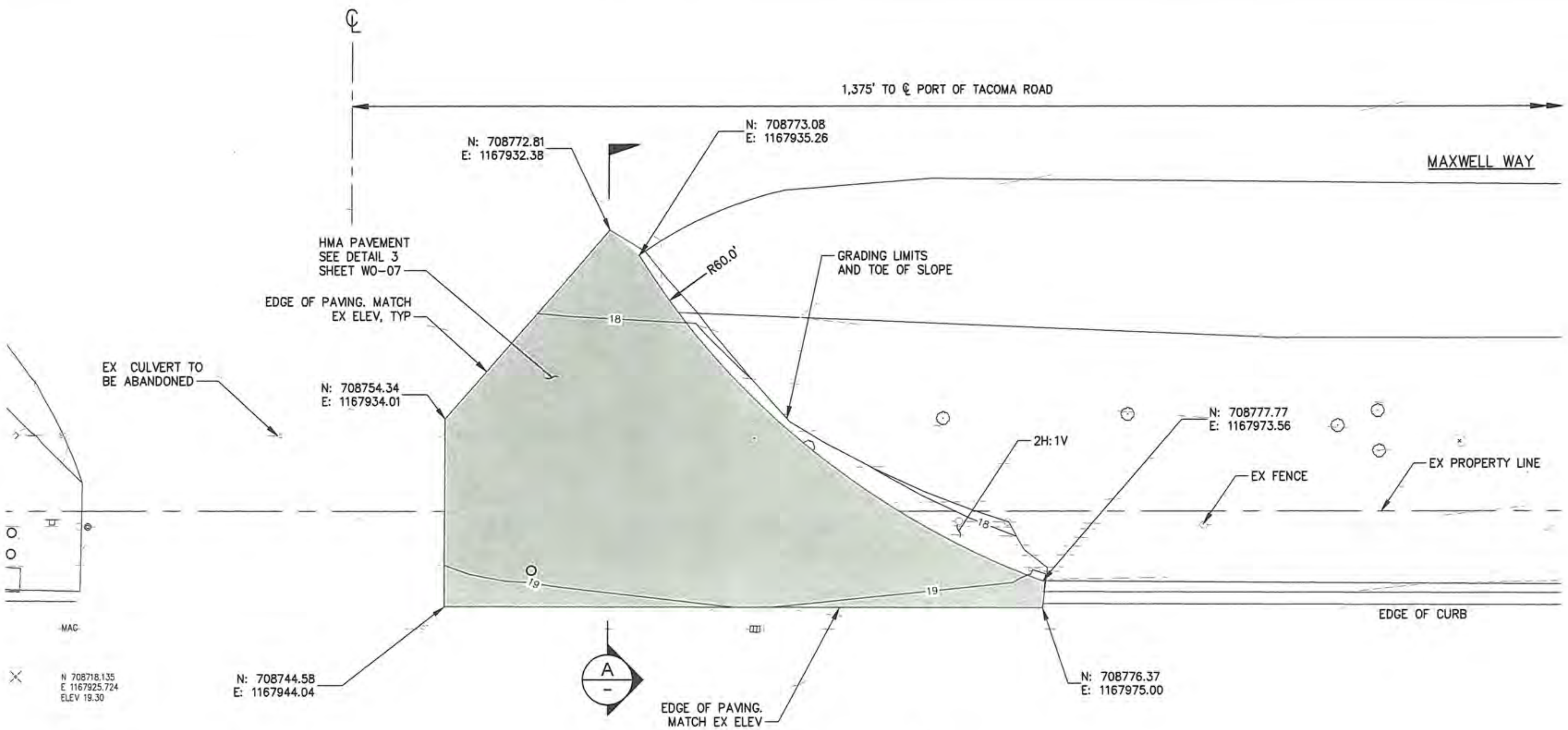
CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
SITE PLAN - SHEET 1

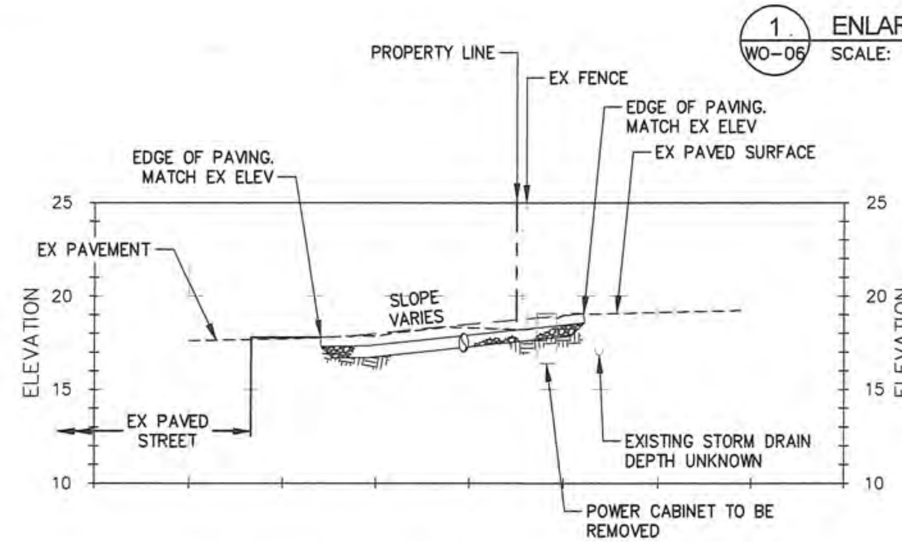
ASST. CONSTRUCTION DIVISION MANAGER

WO-05

SHEET NO.
SHEET 5 OF 9



1 / WO-06 ENLARGED PLAN - MAXWELL ENTRANCE
SCALE: 1" = 5'



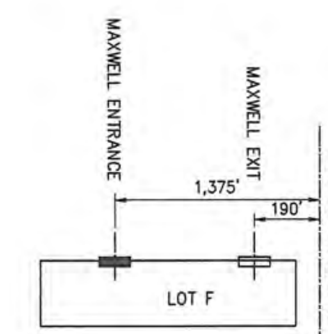
A / – SECTION - MAXWELL ENTRANCE
SCALE: 1" = 10' (H) 1"=5' (V)

NOTES:

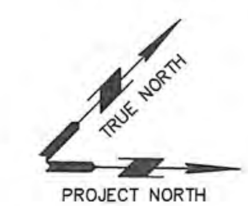
1. STABILIZE GRADED SURFACES WITH EROSION CONTROL BLANKETS PRIOR TO ESTABLISHING FINAL COVER TYPE. HYDROSEED ALL FINISHED PERVIOUS SURFACES.
2. PROPOSED CULVERT EXTENSION SHALL BE ENCASED THROUGH LIMITS OF NEW PAVEMENT CONSTRUCTION. SEE DETAILS ON SHEET 5. ENCASEMENT NOT SHOWN FOR CLARITY.

LEGEND:

- —SD— CULVERT
- - - - GRADING LIMITS
- —x—x— CHAIN LINK FENCE/ GATE
- FULL DEPTH HMA



LOCATION PLAN



5' 0' 5' 10'
SCALE: 1"=5'

10' 0' 10' 20'
SCALE: 1"=10'

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE 12/2/19	SCALE AS NOTED
BY	DESIGNED JAT	CHECKED BJH
DATE	SENIOR PM SLG	PROJECT NAME
FIELD BOOKS	DRAWING NAME	

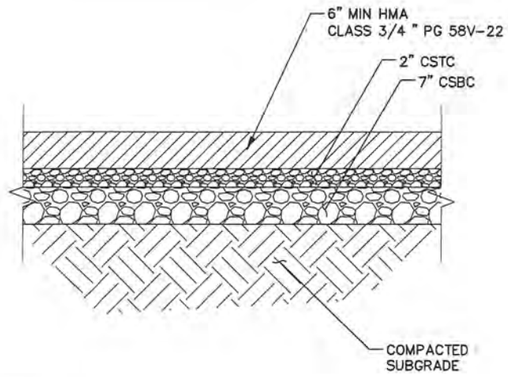
ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
SITE PLAN - SHEET 2

WO-06

SHEET 6 OF 9



1 – DETAIL - HMA PAVEMENT
SCALE: NTS

NOTES:

1. COMPACT BEDDING AND BACKFILL MATERIAL TO 95% MAXIMUM DENSITY.
2. GRAVEL BACKFILL SHALL BE 1 1/2" MINUS AS SPECIFIED IN SECTION 9-03.12(4) OF THE WSDOT STANDARD SPECIFICATIONS.
3. CRUSHED SURFACING TOP COURSE (CSTC) AND CRUSHED SURFACING BASE COURSE (CSBC) SHALL BE AS SPECIFIED IN SECTION 9-03.9(3) OF THE WSDOT STANDARD SPECIFICATIONS.

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY:
DATE:
FIELD BOOKS:

DATE: 12/2/19
DESIGNED: ALP
DRAWN PM: SLG
DRAWING NAME:
SCALE: AS NOTED
CHECKED: BJH
PROJECT NAME:

BYRON J. HALEY — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

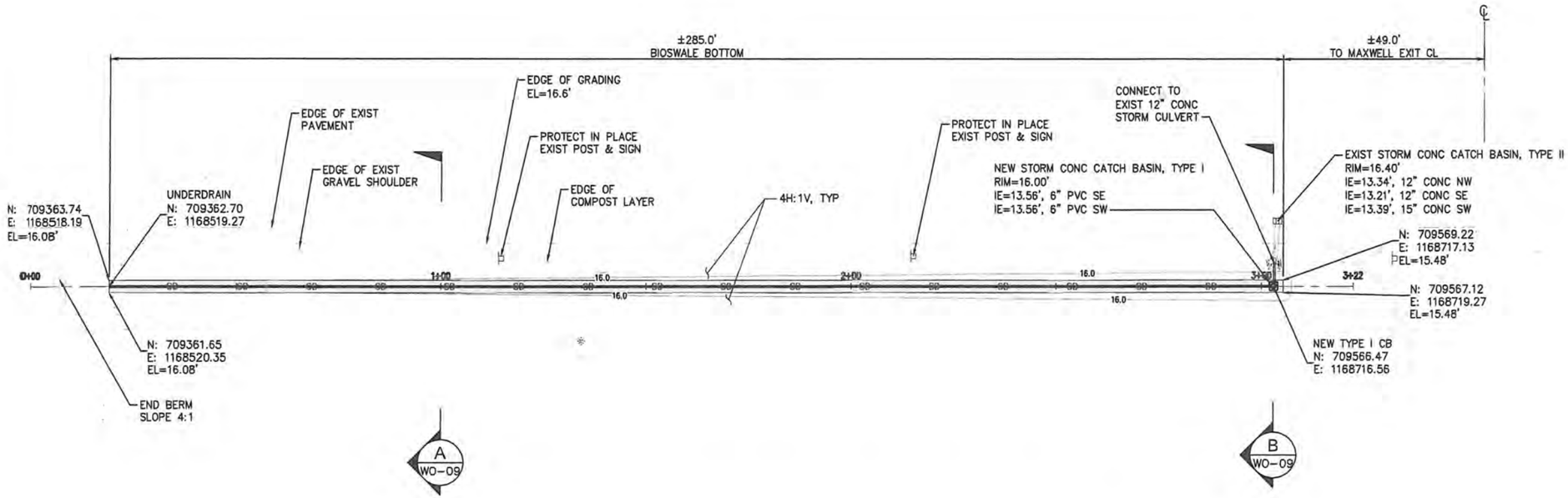
ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DRIVEWAY DETAILS

WO-07

SHEET NO:
SHEET 7 OF 9



NOTES:

1. ELEVATIONS (EL) SHOWN ON PLAN 1 CORRESPOND TO BIOSWALE'S BOTTOM FINISHED GRADE UNLESS NOTED OTHERWISE.
2. EXISTING 12" CONC STORM CULVERT AND HEADWALL SHALL BE FIELD VERIFIED AND PROTECTED IN PLACE DURING EXCAVATION.

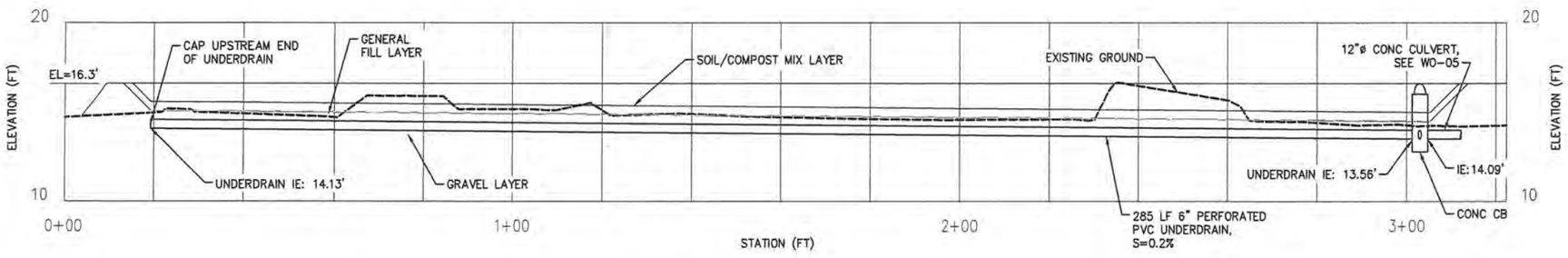
LEGEND:

SD — UNDERDRAIN

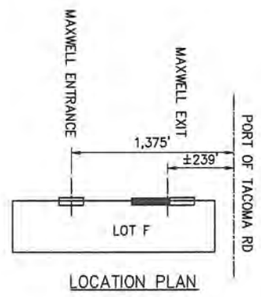
GRADING LIMITS

BIOSWALE BOTTOM

1 WO-08 PLAN - BIOSWALE
SCALE: 1" = 15'



A – PROFILE - BIOSWALE
SCALE: 1" = 15' HORIZONTAL
SCALE: 1" = 60' VERTICAL



LOCATION PLAN

PROJECT NORTH

15' 0' 15' 30'
SCALE: 1"=15'

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE: 12/2/19 | SCALE: AS NOTED
DESIGNED: ADM | CHECKED: BJH
SENIOR PM: SLG | PROJECT NAME
DRAWING NAME: WO-08

BRIAN J. HALEY — STATE OF WASHINGTON — 23632 — REGISTERED PROFESSIONAL ENGINEER

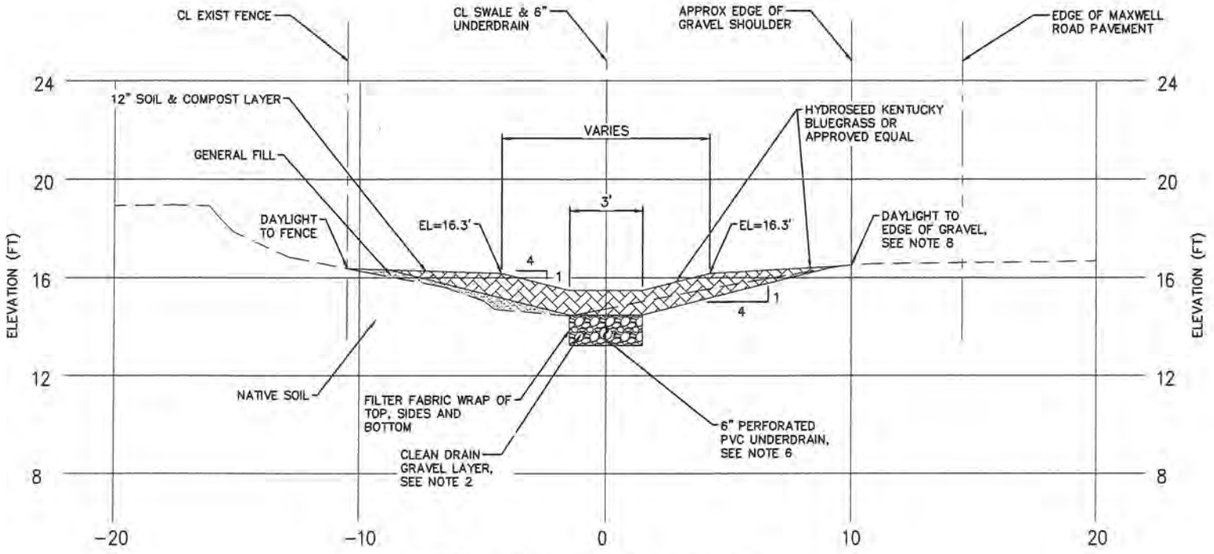
ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

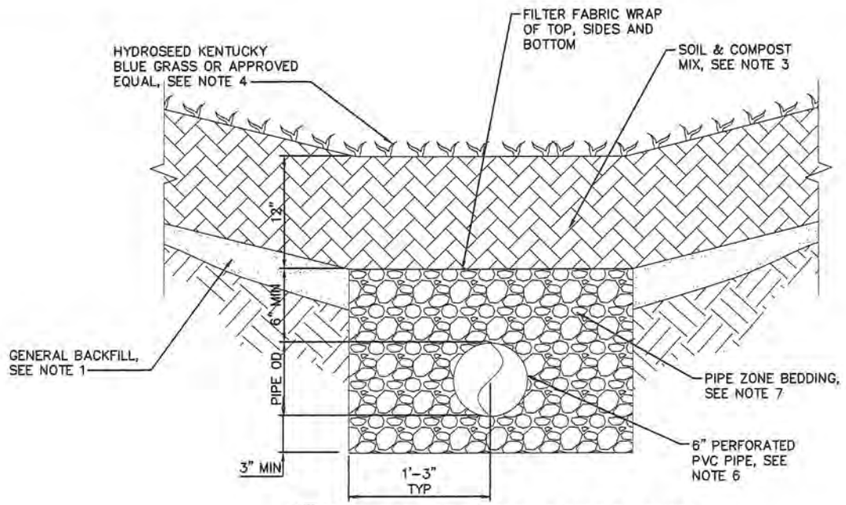
LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
BIOSWALE PLAN

WO-08

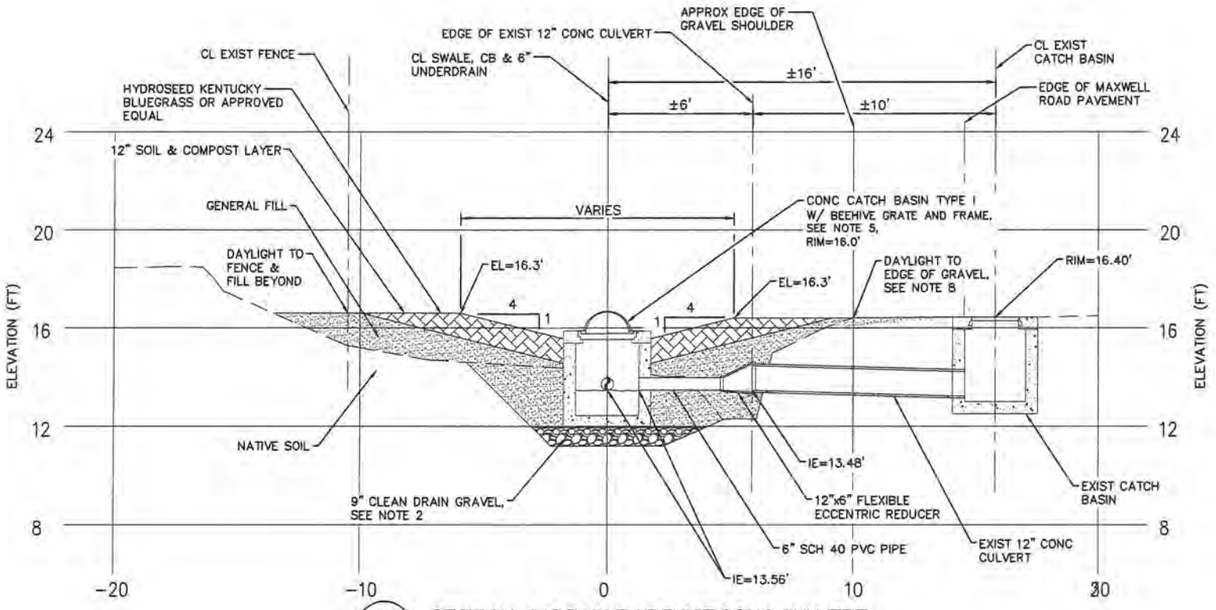
SHEET NO.
SHEET 8 OF 9



A WO-08 TYPICAL SECTION - BIOSWALE
SCALE: 1"=3'



1 – DETAIL - UNDERDRAIN PIPE BEDDING
SCALE: NTS



B WO-08 SECTION - BIOSWALE AT EXIST CONC CULVERT
SCALE: 1"=3'

NOTES:

1. GENERAL BACKFILL AS SPECIFIED IN SECTION 9-03.14(2) OF THE WSDOT STANDARD SPECIFICATIONS. COMPACT GENERAL BACKFILL MATERIAL TO 95% MAXIMUM DENSITY.
2. CLEAN DRAIN GRAVEL SHALL BE 5/8" MINUS AS SPECIFIED IN SECTION 9-03.12(4) OF THE WSDOT STANDARD SPECIFICATIONS.
3. AMEND THE SOIL AS NEEDED TO ALLOW EFFECTIVE PERCOLATION OF WATER TO THE UNDERDRAIN AND FOLLOW SOIL CRITERIA STATED ON SECTION 10.4.1.5 OF THE 2016 CITY OF TACOMA SWMM.
4. HYDROSEED KENTUCKY BLUEGRASS OR APPROVED EQUAL FOLLOWING SECTION 10.4.1.6 OF THE 2016 CITY OF TACOMA SWMM.
5. CONC CATCH BASIN TYPE I WITH NEENAH R-4353 BEEHIVE GRATE AND FRAME OR APPROVED EQUAL.
6. UNDERDRAIN SHALL BE SCH40 PVC PERFORATED PIPE OR EQUIVALENT.
7. PIPE ZONE BEDDING SHALL BE AS SPECIFIED IN SECTION 9-03.12(3) OF THE WSDOT STANDARD SPECIFICATIONS. DRAIN GRAVEL SHALL BE ENCLOSED BY GEOTEXTILE FABRIC
8. WHEN DAYLIGHTING TO EDGE OF GRAVEL, SLOPE SHALL ALWAYS BE TOWARD BIOSWALE.

3' 0' 3' 6'
SCALE: 1"=3'

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 12/2/19 | SCALE AS NOTED
DESIGNED ADM | CHECKED BJH
SENIOR PM SLG | PROJECT MANAGER
DRAWING NAME WO-09

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DRIVEWAY DETAILS

ASST CONSTRUCTION DIVISION MANAGER'S

WO-09

SHEET NO
SHEET 7 OF 9

Plotted By: Haley, Byron 12/2/2019 3:44 PM

Q:\LB\88897-07\CADD_ACTIVE_SHEETSET\889707-WO-09.DWG

BINDING EDGE

PORT OF TACOMA

FIBER TO LOT F
PROJECT NO. 101286.01
CONTRACT NO. 071169

PORT COMMISSIONERS:

DONALD JOHNSON
RICHARD MARZANO
JOHN McCARTHY
DON MEYER
CLARE PETRICH

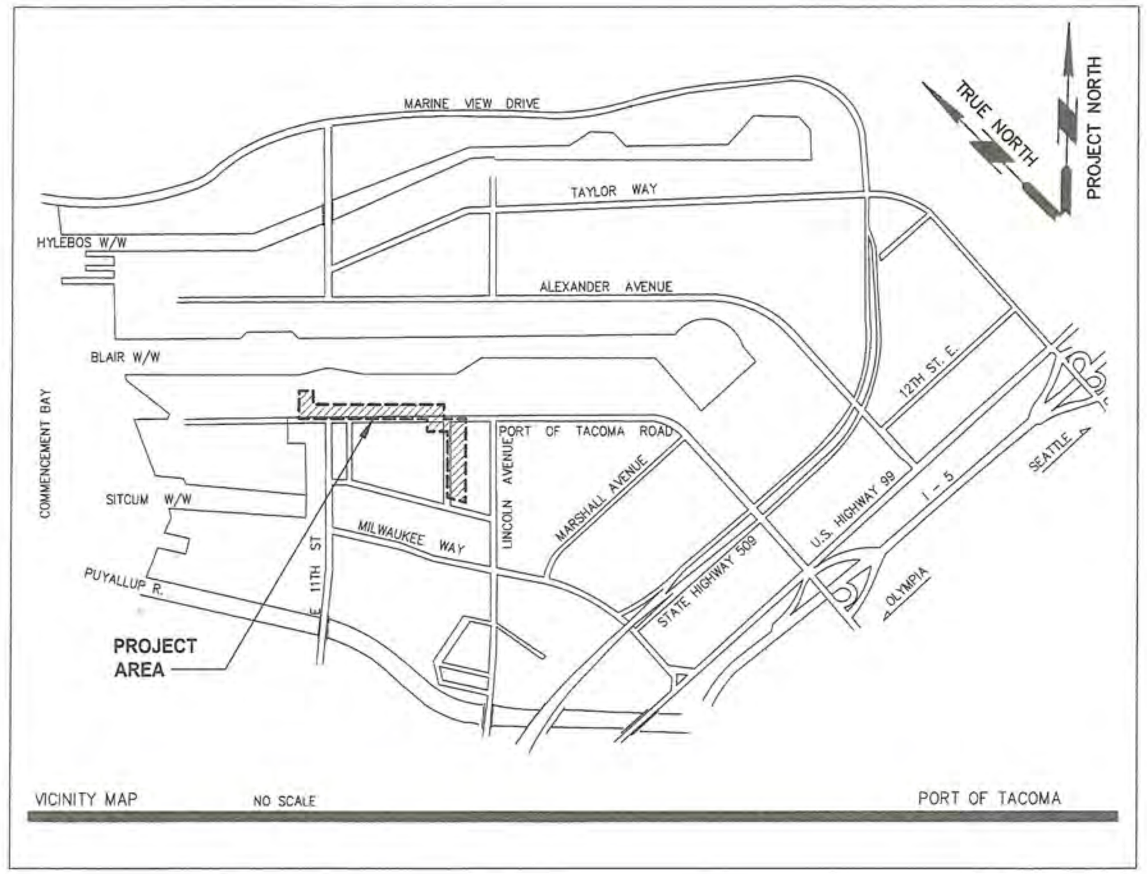
PORT STAFF:

ERIC JOHNSON
Executive Director

DAKOTA CHAMBERLAIN, P.E.
Chief Facilities
Development Officer

TREVOR THORNSLEY, P.E.
Director, Engineering

DAVE MYERS, Architect
Engineering Project Manager



SHEET LIST	
SHEET NUMBER	SHEET TITLE
G01.01	COVER
G01.02	GENERAL NOTES
G01.03	LEGEND AND ABBREVIATIONS
C01.01	TESC NOTES
C01.02	TESC PLAN 1
C01.03	TESC PLAN 2
C02.01	SITE PLAN
C03.01	CIVIL DETAILS 1
E1	OVERALL ELECTRICAL SITE PLAN
E2 – E5	PARTIAL ELECTRICAL SITE PLAN
E6	OVERALL LOT F ELECTRICAL SITE PLAN
E7	FIBER OPTIC CABLE RISER DIAGRAM
E8	TPU POWER POLE ELEVATIONS
E9	VAULT DETAILS
E10	POLE ATTACHMENT DETAILS
E11	PARTIAL ELECTRICAL SITE PLAN
E12	ELECTRICAL DETAILS
E13	ELECTRICAL VAULT DETAILS
E14	CONDUIT AND CONDUCTOR SCHEDULES
WO–01	COVER SHEET AND SHEET INDEX
WO–02	GENERAL NOTES
WO–03	TESC DETAILS
WO–04	TESC PLAN
WO–05	OVERALL PLAN
WO–06	CONDUIT THROUGH CONNECTIONS
WO–06	DETAILS

CONSULTANT:

moffatt & nichol
600 UNIVERSITY STREET
SUITE# 610
SEATTLE, WA 98101
(206) 622-0222

BID SET PLANS
ISSUED: 2019-12-09
NOT TO BE USED FOR CONSTRUCTION

Port of Tacoma
moffatt & nichol
600 UNIVERSITY STREET
SUITE 610
SEATTLE, WA 98101
(206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED: TREVOR THORNSLEY, DIRECTOR ENG. DATE
SG 12-09-19 CHECKED BY DATE
JT 12-09-19 PROJ. ENGR DATE
PRINTED BY: jtodd Dec 09, 2019
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837

PORT OF TACOMA
FIBER TO LOT F
COVER

TOWNSHIP: 21N RANGE: 3E SECTION: 34
DAT-HRZ: WA83-SF VERT: MLLW 19.39' @ TIDE 22 1933
PARCEL: DRAWING SCALE: AS NOTED

6636
G01.01
1 OF 22
CONT/CONS: 071169
M. ID: 101286.01
PHASE: BID SET PLANS

PORT OF TACOMA FILE: \\mne.net\projects\SEA\9506\CADD_Active_F2F\950610-G01.01 - COVER

GENERAL NOTES

1. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND PROTECT ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. CONTRACTOR SHALL VERIFY LOCATION, DEPTH, SIZE, TYPE AND CONDITION OF EXISTING UTILITIES BEFORE CONSTRUCTION.

2. THE CONTRACTOR SHALL HIRE, USE, AND PAY FOR SERVICES OF PRIVATE LOCATING COMPANY PRIOR TO STARTING WORK IN ANY AREA. CONTRACTOR SHALL LOCATE AND PROTECT ALL UTILITIES DURING CONSTRUCTION AND SHALL ALSO CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

3. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE BEFORE STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

4. SLOPE OF FINISHED GRADE SHALL MATCH EXISTING ON ALL SIDES AND EDGES.

5. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY EROSION AND SEDIMENTATION CONTROL FACILITIES AS REQUIRED IN THE SPECIFICATIONS AND TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC) PLANS. SEE TEMPORARY EROSION AND SEDIMENT CONTROL DRAWINGS.

6. ALL DEVIATIONS FROM THESE PLANS SHALL BE RECORDED ON A SET OF "AS-BUILT" DRAWINGS AS REQUIRED IN THE SPECIFICATIONS.

7. EXISTING UTILITIES WHICH ARE DAMAGED DUE TO CONSTRUCTION WORK SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AND INSPECTED AND ACCEPTED BY UTILITY OWNER'S REPRESENTATIVE PRIOR TO BACKFILLING.

8. THE CONTRACTOR SHALL KEEP PAVED AREAS ADJACENT TO THE SITE CLEAN AT ALL TIMES BY SWEEPING DAILY. WASHING OF THESE AREAS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL.

9. PARTS OF THE NORTHERN WORK ARE WITHIN AN OPERATING SECURED TERMINAL. ALL OF THE CONTRACTORS PERSONNEL ARE REQUIRED TO HAVE A VALID TWIC CARD ON THEIR PERSON WHEN ON SITE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

HORIZONTAL DATUM

1. WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83/2007
(PER PORT OF TACOMA SURVEY CONTROL MAP - 2007)

2. MEASURED SOUTH 31°00'47" EAST 3340.24 FEET BETWEEN PORT OF TACOMA MONUMENTS 923 AND 903 LOCATED ALONG MILWAUKEE WAY

VERTICAL DATUM

1. MLLW (PER PORT OF TACOMA 2007 SECTION CONTROL MAP)

2. TIDE 22 1933 BENCHMARK: LOCATED AT NE CORNER OF 11TH ST. BRIDGE AT THE INTERSECTION OF E. 11TH ST. AND MILWAUKEE WAY
ELEVATION = 19.39 (BASED ON 1960-1978 TIDAL EPOCH)

BID SET PLANS
ISSUED: 2019-12-09
NOT TO BE USED FOR CONSTRUCTION

Port of Tacoma

moffatt & nichol
600 UNIVERSITY STREET
SUITE 610
SEATTLE, WA 98101
(206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED: TREVOR THORNSLEY — DIRECTOR ENG. DATE
SG 12-09-19 — CHECKED BY DATE
JT 12-09-19 — PROJ. ENGR DATE
PRINTED BY: jtodd Dec 09, 2019
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837

PORT OF TACOMA
FIBER TO LOT F
GENERAL NOTES

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83-SF | VERT: MLLW 19.39' @ TIDE 22 1933
PARCEL: | DRAWING SCALE: AS NOTED

6636
G01.02
2 OF 22
CONT/CONS: 071169
M. ID: 101286.01
PHASE: BID SET PLANS

BINDING EDGE

ABBREVIATIONS

ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASPHALT CONCRETE PAVEMENT
ADD'L	ADDITIONAL
ADMIN	ADMINISTRATION
ADS	ADVANCED DRAINAGE SYSTEMS
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASS'Y	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
BLDG	BUILDING
BNSF	BURLINGTON NORTHERN SANTA FE RAILROAD
BOT, BOTT	BOTTOM
CB	CATCH BASIN
CBP	CUSTOMS AND BORDER PATROL
CDF	CONTROLLED DENSITY FILL
CFR	CODE OF FEDERAL REGULATIONS
CLR	CLEAR
CM	CENTIMETER
CMP	CORRUGATED METAL PIPE
COMM	COMMUNICATIONS
CONC	CONCRETE (PORTLAND CEMENT CONCRETE)
CONT	CONTINUOUS
COT	CITY OF TACOMA
CPP	CORRUGATED PLASTIC PIPE
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CY	CUBIC YARD
C/C	CENTER TO CENTER
DBA	DEFORMED BAR AREA
DI, DIP	DUCTILE IRON PIPE
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DHS	DEPARTMENT OF HOMELAND SECURITY
E	EAST, OR EASTING
EA	EACH
ECP	ENTRY CONTROL POINT
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
EST	EAST SITCUM TERMINAL
EW	EACH WAY
EX	EXISTING
FT	FEET
G or GA	GAUGE
GALV	GALVANIZED
GCP	GENERAL CENTRAL PENINSULA
H2O	WATER LEVEL
HAS	HEADED ANCHOR STUD
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HORIZ	HORIZONTAL
HPU	HYDRAULIC POWER UNIT
HYD	HYDRAULIC
ID	IDENTIFICATION OR INSIDE DIAMETER
IE	INVERT ELEVATION
KIPS	KILO-POUND (THOUSANDS OF POUNDS)
LB/FT	POUNDS PER FOOT
LBF	POUND FORCE
LBS	POUNDS
LF	LINEAR FEET
MAINT	MAINTENANCE
MAX	MAXIMUM
MFR's	MANUFACTURER'S
MH	MANHOLE
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MM	MILLIMETER
N	NORTH OR NORTHING
NA	NOT APPLICABLE
NAD	NORTH AMERICAN DATUM
NE	NORTHEAST
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NIM	NORTH INTERMODAL YARD
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST

ABBREVIATIONS (CONT'D)

OC	ON CENTER
OCR	OPTICAL CHARACTER RECOGNITION
OCT	OLYMPIC CONTAINER TERMINAL
OD	OUTSIDE DIAMETER
OWS	OIL-WATER SEPARATOR
PCS	PIECES
PG	PERFORMANCE GRADE
PK	PARKER KALON
PLC	POUNDS PER CUBIC INCH or PORTLAND CEMENT INSTITUTE
PLCS	PLACES
PLI	POUNDS PER LINEAR INCH
POT	PORT OF TACOMA
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PTZ	PAN-TILT-ZOOM
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
RCW	REVISED CODE OF WASHINGTON
REBAR	REINFORCING STEEL BAR
REINF	REINFORCEMENT
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
ROW	RIGHT OF WAY
RPM	RAISED PAVEMENT MARKER
RR	RAIL ROAD
RTG	RUBBER TIRED GANTRY
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAINAGE
SE	SOUTHEAST
SIM	SIMILAR
SPA	SPACING OR SPACED
SQ	SQUARE
SS	STAINLESS STEEL OR SANITARY SEWER
ST	STREET
STRAD	STRADDLE CARRIER
STL	STEEL
STD	STANDARD
SW	SOUTHWEST
T	TERMINAL
TBD	TO BE DETERMINED
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TPT	TESC PERIMETER TREATMENT
TPU	TACOMA PUBLIC UTILITIES
TWIC	TRANSPORTATION WORKER IDENTIFICATION CREDENTIAL
TYP	TYPICAL
T&B	TOP AND BOTTOM
UON	UNLESS OTHERWISE NOTED
UPRR	UNION PACIFIC RAILROAD
VDC	VOLTS DIRECT CURRENT
VERT	VERTICAL
W	WIDTH OR WEST
WAC	WASHINGTON ADMINISTRATIVE CODE
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WT	WEIGHT
w/	WITH
W/W	WATERWAY
&	AND
@	AT
*	ASTERISK
L	ANGLE
℄	CENTERLINE
Ø	NOMINAL DIAMETER OR PHASE
°	DEGREES
'	MINUTES OR FEET
#	NUMBER OR POUNDS
%	PERCENT
℄	PROPERTY LINE OR PLATE
"	SECONDS OR INCH

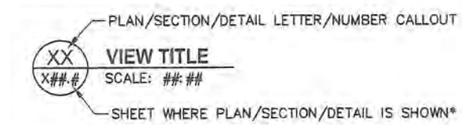
LEGEND

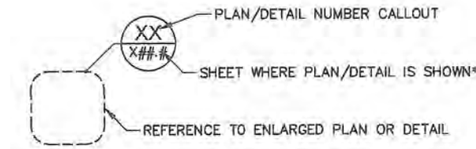
EXISTING	DESCRIPTION
	FOUND MONUMENT AS NOTED
	SET REBAR W/ CONTROL CAP
	SANITARY SEWER MANHOLE
	UTILITY CLEAN OUT
	STORM MANHOLE
	STORM CATCH BASIN
	STORM CULVERT
	ROOF DRAIN
	WATER MANHOLE
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	THRUST BLOCK
	WATER VAULT
	FIRE DEPARTMENT CONNECTION
	WATER BLOW OFF
	POST INDICATOR VALVE
	IRRIGATION CONTROL VALVE
	GAS VALVE
	GAS METER
	POWER METER
	POWER CABINET
	UTILITY POLE
	GUY ANCHOR
	JUNCTION BOX
	POWER VAULT
	POWER TRANSFORMER
	POWER MANHOLE
	LIGHT POLE
	TRAFFIC LOOP
	UTILITY VAULT
	UTILITY MANHOLE
	COLUMN
	BOLLARD
	UTILITY POLE
	SIGN
	SIGNAL MAST
	MONITORING WELL
TPN	TAX PARCEL NUMBER
	TELECOM VAULT
	TELECOM MANHOLE
	TELECOM CABINET
	MAILBOX
	STORM DRAIN LINE
	SANITARY SEWER LINE
	BURIED WATER LINE
	BURIED GAS LINE

LEGEND (CONT'D)

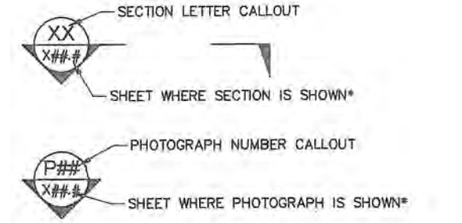
EXISTING	DESCRIPTION
	BURIED POWER LINE
	RECORD BURIED POWER
	BURIED TELECOM LINE
	RECORD TELECOM LINE
	OVERHEAD POWER LINE
	CHAIN LINK FENCE
	WOOD OR SPLIT RAIL FENCE
	RAILROAD TRACKS
	CONCRETE SURFACE
	ASPHALT SURFACE

REFERENCE CALLOUTS





*NOTE: DASH (-) INDICATES SECTION OR DETAIL FROM SAME SHEET



NOTES:

1. ADDITIONAL LEGEND FOR SURVEY ITEMS SHOWN ON SURVEY SHEETS CONTAINED IN APPENDIX A.
2. ADDITIONAL LEGEND FOR ELECTRICAL AND COMMUNICATIONS CONSTRUCTION CONTAINED ON ELECTRICAL SHEETS.

BID SET PLANS
ISSUED: 2019-12-09
NOT TO BE USED FOR CONSTRUCTION

Port of Tacoma
P.O. BOX 1837 | TACOMA, WA 98401-1837 | (253) 383-5841

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MARK:	REVISION:	BY:	APPR:	DATE:

SG 12-09-19 CHECKED BY DATE
JT 12-09-19 PROJ. ENGR DATE

APPROVED:
TREVOR THORNSLEY
DIRECTOR ENG. DATE

PRINTED BY: jtodd Dec 09, 2019
PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

PORT OF TACOMA
FIBER TO LOT F
LEGEND AND ABBREVIATIONS

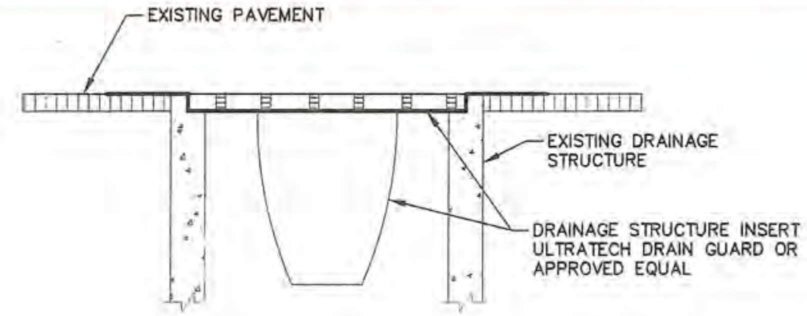
CONT/CONS: 0.71169	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101286.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PHASE: BID SET PLANS	PARCEL:	DRAWING SCALE: AS NOTED	

6636
G01.03
3 OF 22

PORT OF TACOMA FILE: \\tnna.net\projects\SEA\95051\CADD_Active_F2P\95051O-G01.03 - LEGEND & ABBV

TESC NOTES

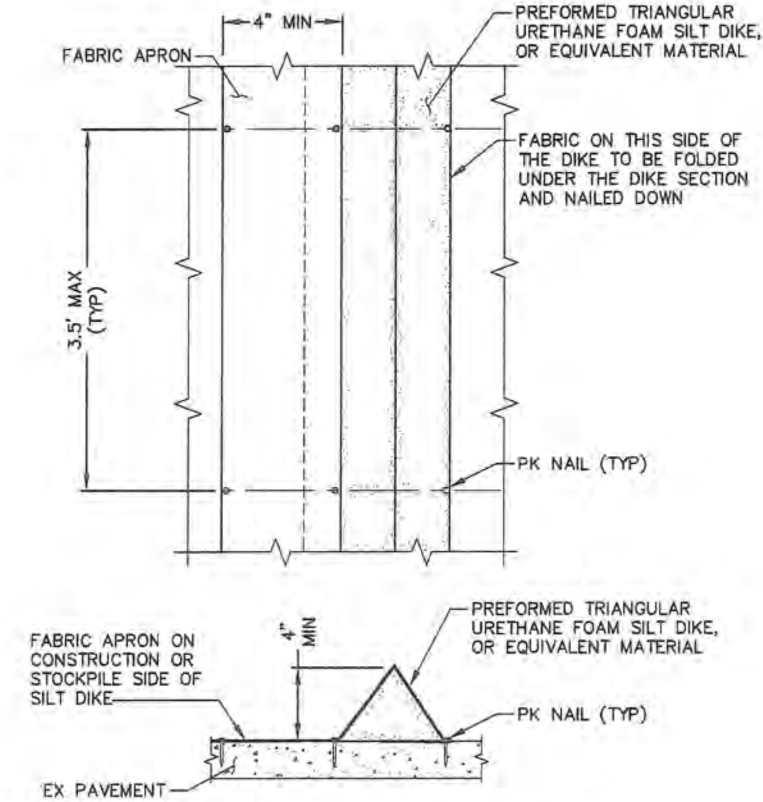
1. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED FOR THE SITE TO PREVENT ERODED SEDIMENT AND TURBID WATER FROM ENTERING THE PORT STORM DRAINAGE SYSTEM, RIGHT-OF-WAY, AND/OR ADJACENT PROPERTY DURING AND FOLLOWING CONSTRUCTION UNTIL ENTIRE SITE HAS BEEN STABILIZED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM ON-SITE EROSION CAUSING SEDIMENT TO BE DEPOSITED OFF SITE. IF SEDIMENT IS TRANSPORTED ONTO A ROAD SURFACE, THE ROADS SHALL BE CLEANED IMMEDIATELY USING A METHOD ACCEPTABLE TO THE ENGINEER AND/OR THE CITY OF TACOMA. IF A SWEEPER IS USED, IT SHALL BE A REGENERATIVE AIR SWEEPER.
3. THE IMPLEMENTATION OF THESE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND ACCEPTED AND SHALL BE CONDUCTED IN ACCORDANCE WITH CITY OF TACOMA CONSTRUCTION STORMWATER CONTROL TECHNICAL REQUIREMENTS AND ALL OTHER APPLICABLE STANDARDS AND REGULATIONS.
4. THE TESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH PAVEMENT REMOVAL AND/OR DEMOLITION ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT ERODED SEDIMENT OR TURBID WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE TESC FACILITIES DEPICTED ON THESE DRAWINGS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE CONTRACTOR SHOULD ANTICIPATE THAT MORE EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE PROJECT SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY THE CONTRACTOR'S ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THESE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND WATER QUALITY OF THE RECEIVING DRAINAGE SYSTEM AND AS REQUIRED BY THE ENGINEER.
6. THE TESC FACILITIES SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NOTED IN DIVISION 01 OF THE CONTRACT SPECIFICATIONS AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING UNTIL CONSTRUCTION IS COMPLETED AND POTENTIAL FOR ON-SITE EROSION HAS PASSED.
7. IF EROSION CONTROL FACILITIES FAIL, THEY SHALL BE REPAIRED OR REPLACED IMMEDIATELY UPON RECEIVING VERBAL NOTICE OF SAID FAILURE BY THE CONTRACTOR FROM ENGINEER OR CITY OF TACOMA.
8. TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.
9. REFER TO SPECIFICATIONS FOR REQUIREMENTS TO MAINTAIN AND CLEAN DRAINAGE STRUCTURE INSERTS. ALL DRAINAGE STRUCTURES AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO WORK COMPLETION. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
10. THE CONTRACTOR SHALL PUT PLASTIC DOWN BEFORE STOCKPILING AND PROTECT STOCK PILE AREAS FROM RELEASE OF ERODED SEDIMENT OR TURBID WATER. STOCK PILES SHALL BE COVERED WITH PLASTIC AT ALL TIMES WHILE NOT IN USE TO KEEP THE STORED MATERIAL DRY.
11. ALL DISTURBED AREAS SHALL BE STABILIZED BY ACCEPTABLE METHODS FOR THE PREVENTION OF ON-SITE EROSION AFTER COMPLETION OF CONSTRUCTION.
12. EXISTING PAVED ROADS MAY BE USED AS CONSTRUCTION ENTRANCES.
13. CONTRACTOR SHALL REMOVE ALL TEMPORARY TESC FACILITIES UPON COMPLETION OF WORK IN EACH WORK AREA.



NOTES:

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC SHALL BE REMOVED. ALL SEDIMENT SHALL BE DISPOSED OF OFF-SITE.
2. REFER TO SPECIFICATION SECTION 01 57 13, PARAGRAPH 3.03B FOR REQUIREMENTS TO MAINTAIN AND CLEAN DRAINAGE STRUCTURE INSERTS.

1 / VARIES — **TEMPORARY DRAINAGE STRUCTURE INSERT DETAIL**
SCALE: NTS



TRIANGULAR SILT DIKE NOTES

1. PK NAILS SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF A 7-FOOT UNIT AS SHOWN ON THE DIKE PLAN.
2. ALTERNATE APPROVED HOLD DOWN DEVICE MAY BE SUBSTITUTED FOR PK NAILS (WIRE STAPLES, ETC.).

2 / VARIES — **TEMPORARY TRIANGULAR SILT DIKE**
SCALE: NTS

NOTE

1. ALTERNATE MEANS TO CONTROL SEDIMENT ON PAVEMENT MAY BE SUBSTITUTED FOR TRIANGULAR SILT DIKES SUBJECT TO ENGINEER APPROVAL.

BID SET PLANS
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NOT TO BE USED FOR CONSTRUCTION

PORT OF TACOMA
FIBER TO LOT F
TESC NOTES

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C01.01
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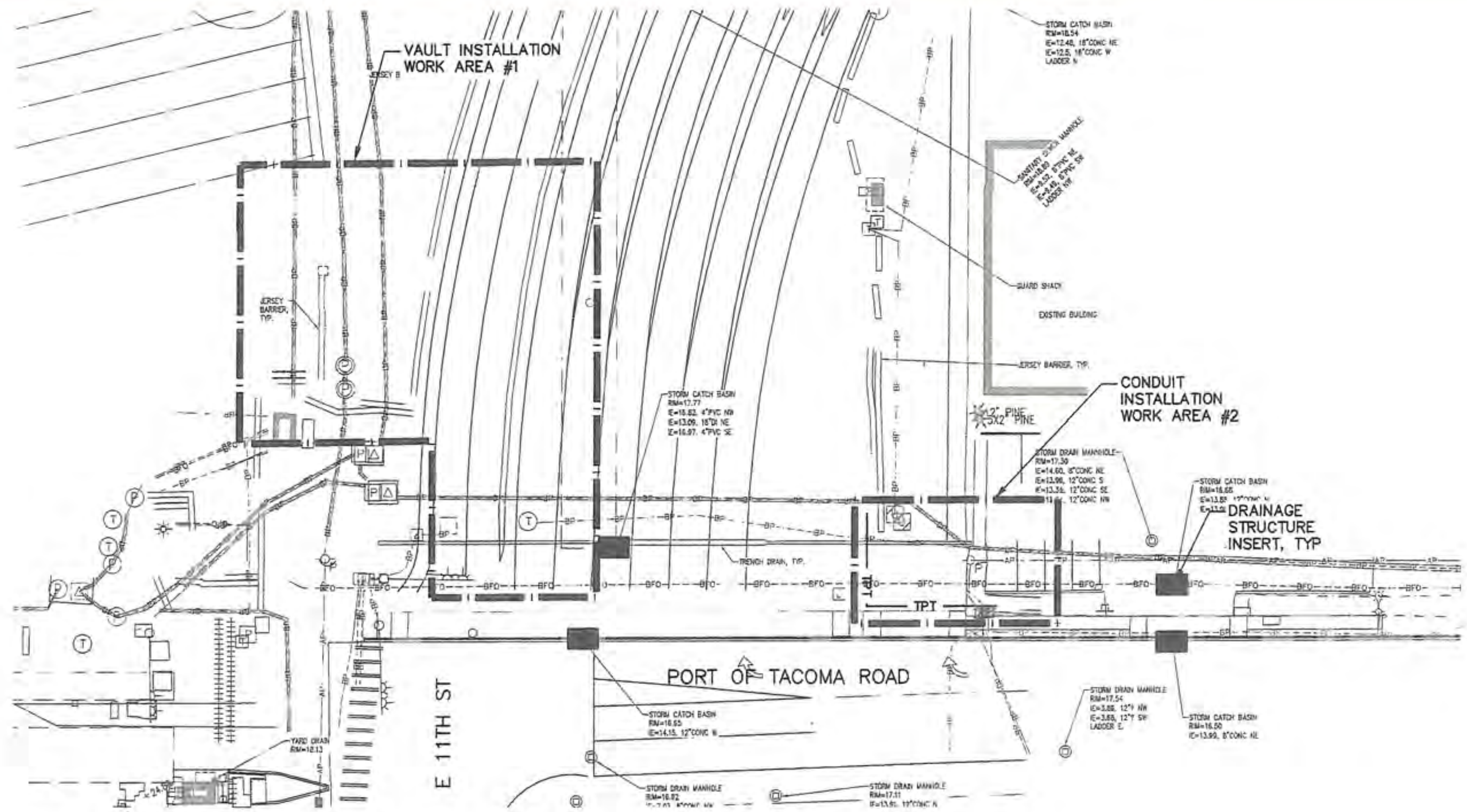
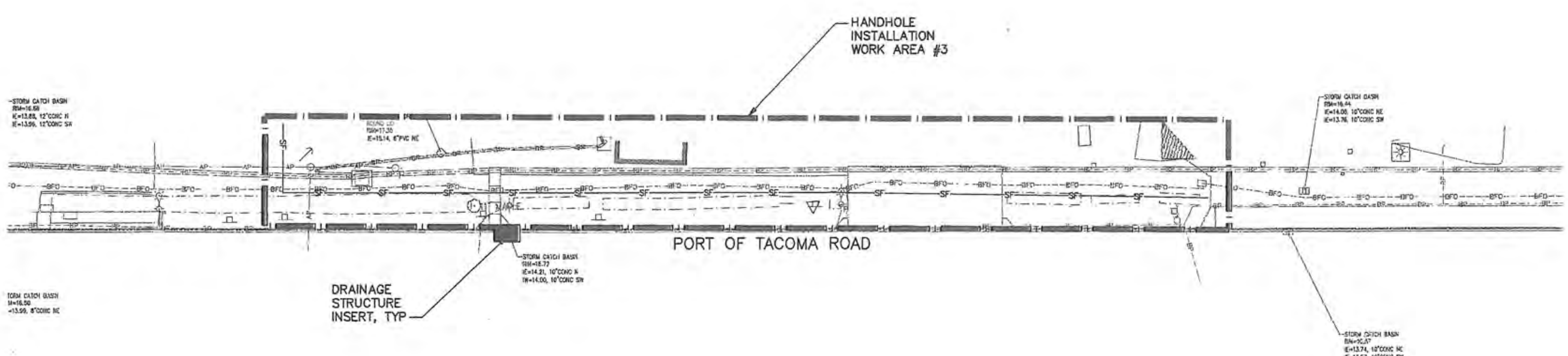


1 TESC PLAN - WORK AREAS 1 & 2
C01.02 SCALE: 1"=30'



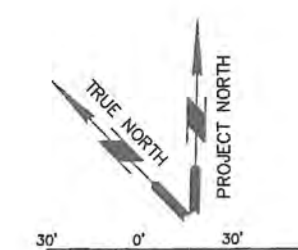
2 TESC PLAN - WORK AREA 3
C01.02 SCALE: 1"=30'

NOTES:

1. SEE SHEET C01.01 FOR TESC NOTES.
2. ONLY WORK AREAS REQUIRING EXCAVATION OR OTHER GROUND DISTURBING ACTIVITIES ARE SHOWN. AREAS OF AERIAL WORK NOT SHOWN. AREAS OF WORK UTILIZING EXISTING UNDERGROUND CONDUITS NOT SHOWN.
3. PLACE DRAINAGE STRUCTURE INSERTS IN ALL DRAINAGE STRUCTURES IN THE VICINITY OF THE WORK, PRIOR TO COMMENCEMENT OF WORK.
4. UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.

LEGEND

- CONSTRUCTION LIMITS
- TPT — TESC PERIMETER TREATMENT SEE 2/C01.01
- SF — SILT FENCE
- TEMPORARY DRAINAGE STRUCTURE INSERT SEE 1/C01.01



BID SET PLANS
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Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401

moffatt & nichol
600 UNIVERSITY STREET SUITE 610 SEATTLE, WA 98101 (206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN LEE GRAY — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 12/09/2019

APPROVED:
TREVOR THORNSLEY — DIRECTOR ENG. DATE
SG 12-09-19 CHECKED BY DATE
JT 12-09-19 PROJ. ENGR DATE
PRINTED BY: jtodd Dec 09, 2019
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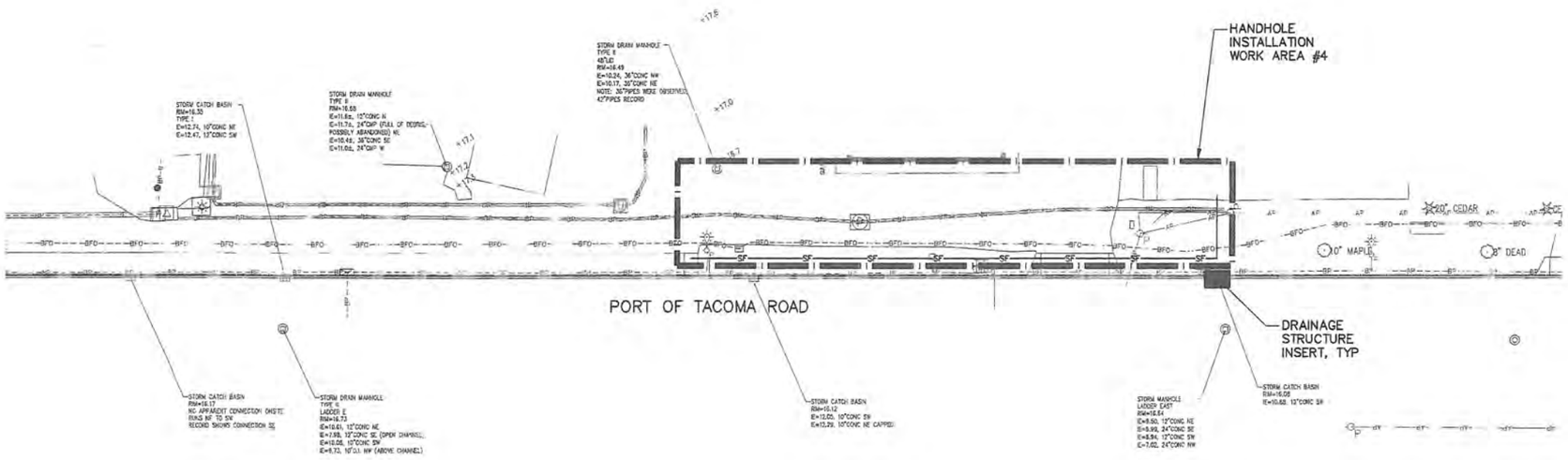
PORT OF TACOMA
FIBER TO LOT F
TESC PLAN 1

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83-SF | VERT: MLLW 19.39' @ TIDE 22 1933
PARCEL: | DRAWING SCALE: AS NOTED

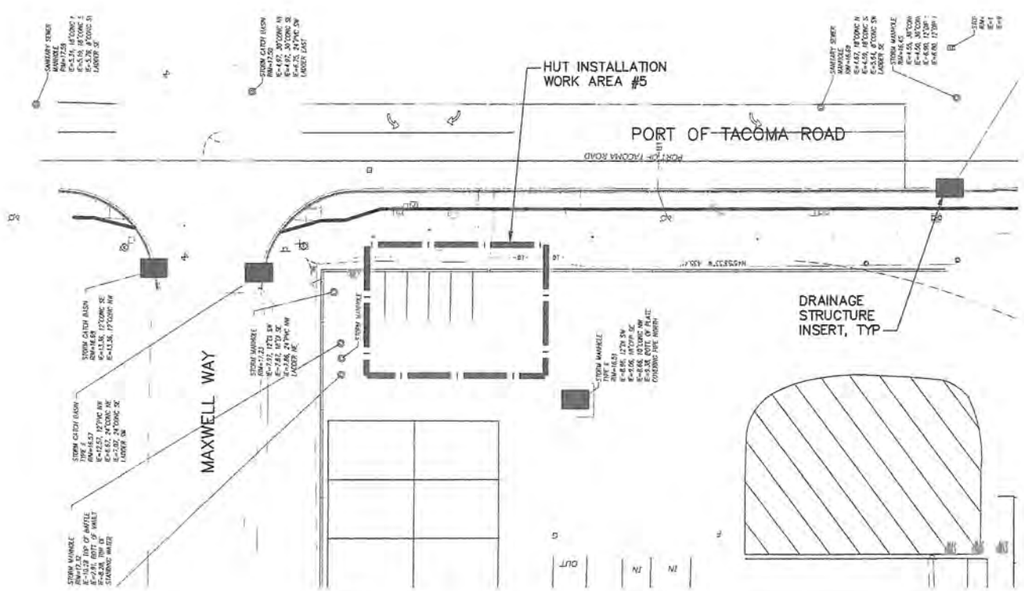
6636
C01.02
5 OF 22

CONT/CONS: 071169
M. ID: 101286.01
PHASE: BID SET PLANS

BINDING EDGE



1 C01.03 **TESC PLAN - WORK AREA 4**
SCALE: 1"=30'



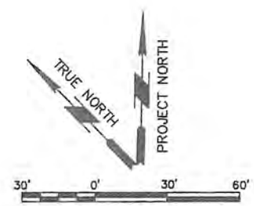
2 C01.02 **TESC PLAN - WORK AREA 5**
SCALE: 1"=30'

NOTES:

1. SEE SHEET C01.01 FOR TESC NOTES.
2. ONLY WORK AREAS REQUIRING EXCAVATION OR OTHER GROUND DISTURBING ACTIVITIES ARE SHOWN. AREAS OF AERIAL WORK NOT SHOWN. AREAS OF WORK UTILIZING EXISTING UNDERGROUND CONDUITS NOT SHOWN.
3. PLACE DRAINAGE STRUCTURE INSERTS IN ALL DRAINAGE STRUCTURES IN THE VICINITY OF THE WORK, PRIOR TO COMMENCEMENT OF WORK.
4. UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.

LEGEND

- CONSTRUCTION LIMITS
- TPT — TESC PERIMETER TREATMENT SEE 2/C01.01
- SF — SILT FENCE
- TEMPORARY DRAINAGE STRUCTURE INSERT SEE 1/C01.01



SCALE: 1"=30'

BID SET PLANS
ISSUED: 2019-12-09
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Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

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DRAWN:	SG	12-09-19
CHECKED BY:	JT	12-09-19
DIRECTOR ENG.:	TREVOR THORNSLEY	DATE
PRINTED BY:	jtodd Dec 09, 2019	PROJ. ENGR
PORT ADDRESS:	ONE SITCUM PLAZA	
	TACOMA, WA 98401-1837	

APPROVED:

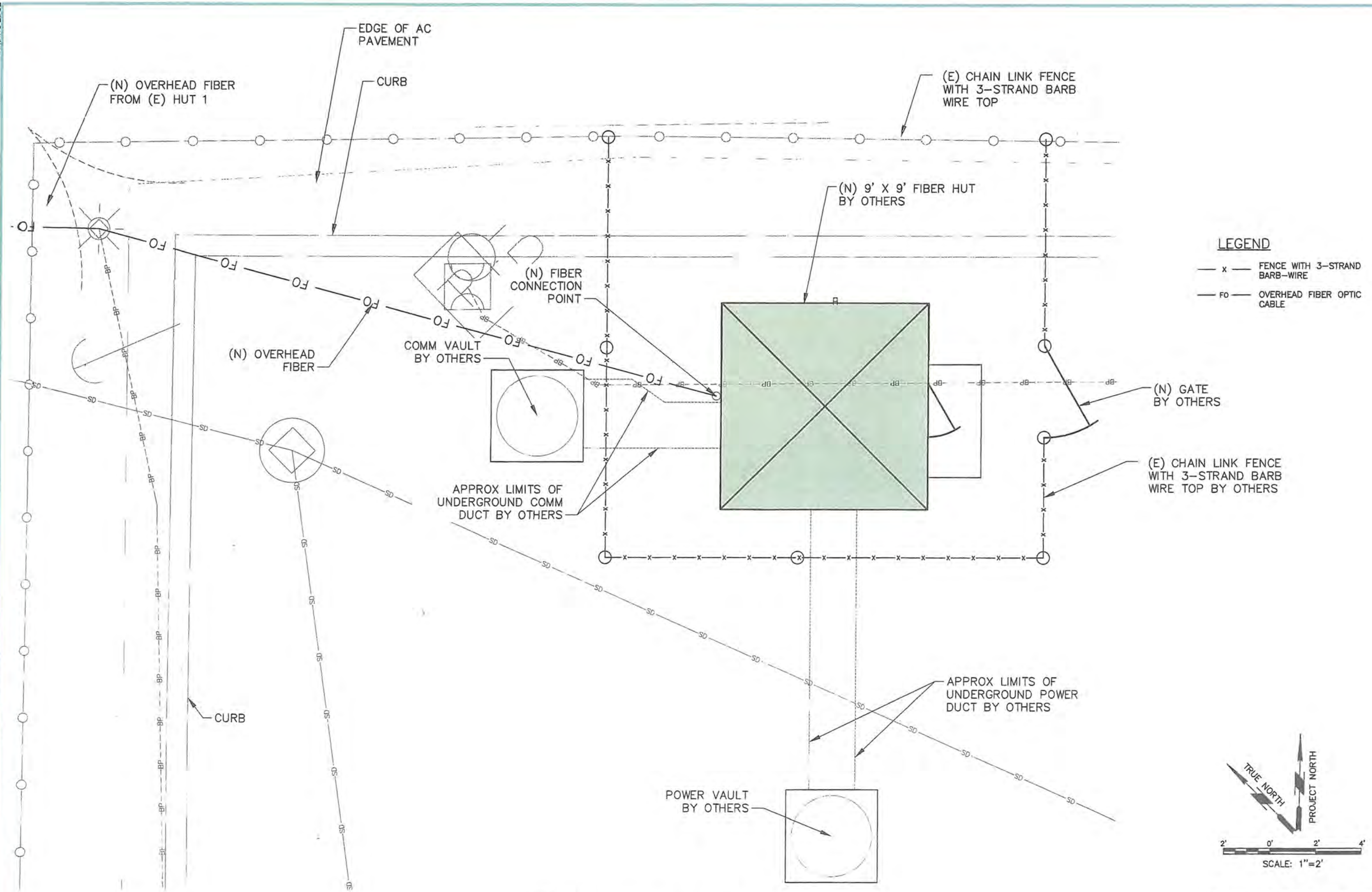
PORT OF TACOMA
FIBER TO LOT F
TESC PLAN 2

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22.1933		
PARCEL:	DRAWING SCALE: AS NOTED		

6636
C01.03
6 OF 22

CONT/CONS: 071169
M. ID: 101286.01
PHASE: BID SET PLANS

PORT OF TACOMA FILE: \\mne.net\projects\SEA\9508\CADD_Active_F2F\950610-C01.03 - TESC PLAN



1 C02.01 **HUT SITE PLAN - WORK AREA 5**
SCALE: 1"= 2'

BID SET PLANS
ISSUED: 2019-12-09
NOT TO BE USED FOR CONSTRUCTION

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Port of Tacoma

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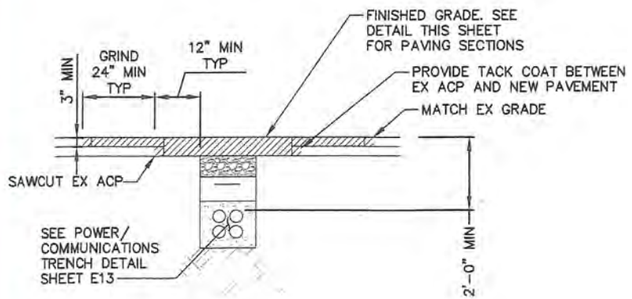
DIRECTOR ENG. DATE	JT 12-09-19
	PROJ. ENGR DATE
PRINTED BY: jtodd Dec 09, 2019	
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	

PORT OF TACOMA
FIBER TO LOT F
SITE PLAN

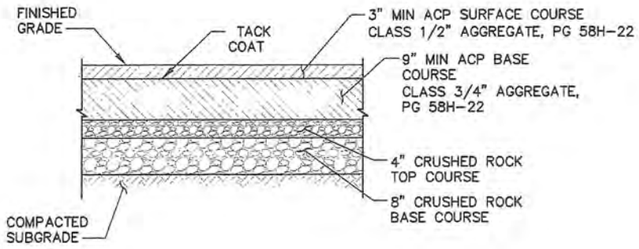
TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PARCEL:	DRAWING SCALE: AS NOTED	

6636
C02.01
7 OF 22

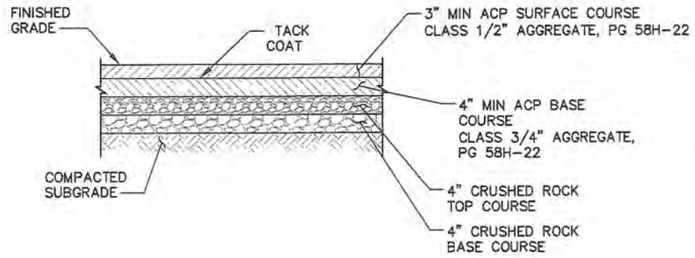
CONT/CONS: 071169
M. ID: 101286.01
PHASE: BID SET PLANS



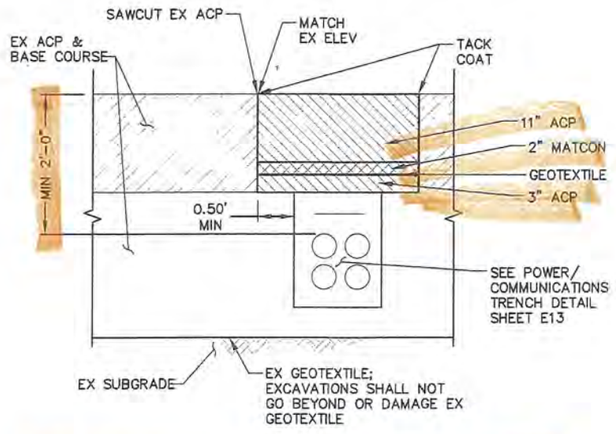
A C02.01 **UTILITY TRENCH SECTION**
SCALE: NTS



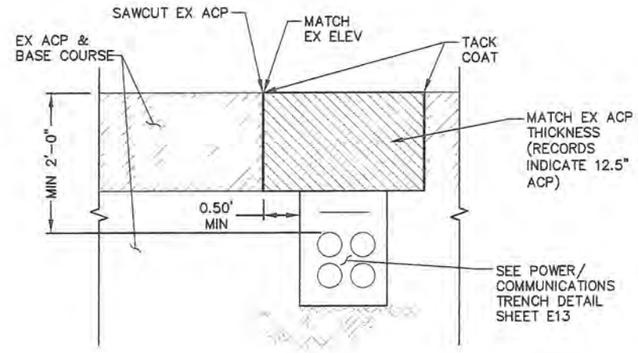
B – **TERMINAL PAVEMENT SECTION**
SCALE: NTS



C – **TYPICAL PAVEMENT SECTION**
SCALE: NTS



D E-6 **UTILITY TRENCH SECTION IN ENVIRONMENTAL CAP**
SCALE: NTS



D E-6 **LOT F UTILITY TRENCH SECTION**
SCALE: NTS

NOTES:

1. LOCATE AND POTHOLE EXISTING UTILITIES AS FIRST ORDER OF WORK. NOTIFY ENGINEER IF LOCATION OF EXISTING UTILITIES DIFFER FROM SHOWN ON THE PLANS.
2. PAVEMENT SECTION B, "TERMINAL PAVEMENT SECTION" SHALL BE USED FOR PAVEMENT RESTORATION INSIDE THE TERMINAL BOUNDARY.
3. PAVEMENT SECTION C, "TYPICAL PAVEMENT SECTION", SHALL BE USED FOR ALL PAVEMENT RESTORATION OUTSIDE THE TERMINAL BOUNDARY, INCLUDING ANY PAVEMENT WORK AT LOT F.
4. PROVIDE PVC CONDUIT SADDLE SPACERS WHERE MULTIPLE CONDUITS ARE INSTALLED.
5. NATIVE BACKFILL SHALL BE CLEANED ORGANIC MATERIAL AND COBBLE LARGER THAN 3" AND SHALL BE COMPACTED TO 95% DRY DENSITY.
6. PAVEMENT SECTION D, "TRENCH SECTION IN ENVIRONMENTAL CAP" SHALL APPLY ONLY TO CONDUIT RUNS FOB24 AND SD60 ON ELECTRICAL SHEET E-6.
7. PAVEMENT SECTION E, "LOT F UTILITY TRENCH SECTIONS SHALL APPLY TO ALL OTHER TRENCH PAVEMENT PRECONSTRUCTION WITHIN LOT F.AS SHOWN ON SHEET E-6
8. MINIMUM HORIZONTAL SEPARATION OF POWER AND COMMUNICATIONS SHALL BE 12".

BID SET PLANS
ISSUED: 2019-12-09
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BINDING EDGE

PORT OF TACOMA FILE: \\tmne.net\projects\SEA\9506\CADD_Active_F2F\9506I0-C03.01 - CIVIL DETAILS 1

Port of Tacoma
P.O. BOX 1837 TACOMA, WASHINGTON 98401-1837

MARK:	REVISION:	BY:	APPR:	DATE:

moffatt & nichol
600 UNIVERSITY STREET SUITE# 600 SEATTLE, WA 98101 (206) 622-0222

LEE GRAY — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 12/09/2019

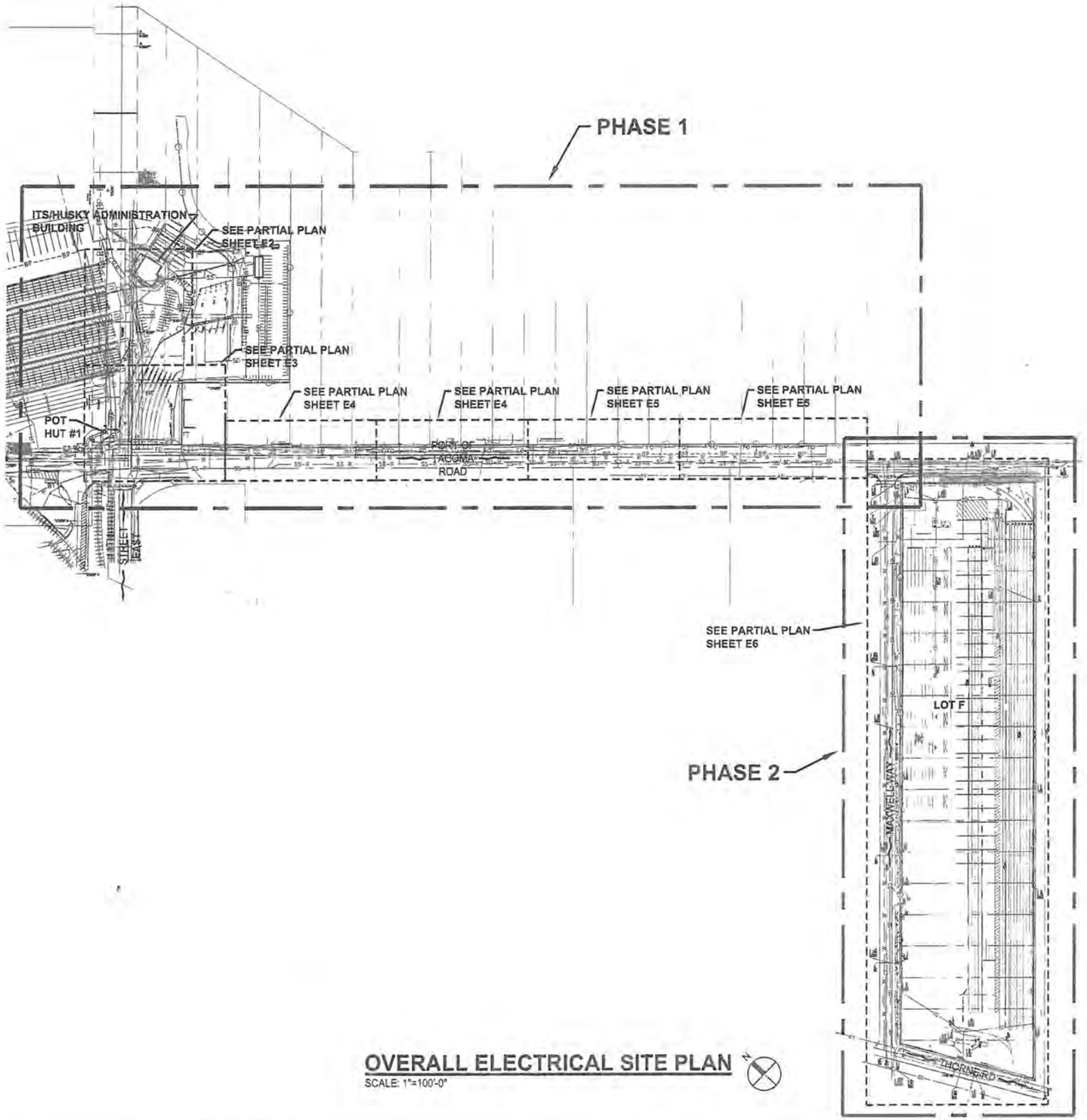
APPROVED: TREVOR THORNSLEY	SG 12-09-19		
DIRECTOR ENG. DATE	CHECKED BY DATE		
PRINTED BY: jtodd Dec 09, 2019	JT 12-09-19		
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	DRAWING SCALE: AS NOTED		

PORT OF TACOMA
FIBER TO LOT F
CIVIL DETAILS 1

CONT/CONS: 071169	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101286.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PHASE: BID SET PLANS	PARCEL:		

6636
C03.01
8 OF 22

BINDING EDGE



OVERALL ELECTRICAL SITE PLAN

SCALE: 1"=100'-0"

GENERAL NOTES:

1. ALL AERIAL FIBER OPTIC CABLE INSTALLED ON EXISTING TACOMA POWER(TPU), CENTURY LINK POLES ALONG PORT OF TACOMA ROAD SHALL BE INSTALLED AND LABELED (POT AND ITS/HUSKY) PER TPU STANDARDS AND REQUIREMENTS. TPU CONSTRUCTION STANDARDS ARE AVAILABLE ON ELECTRICAL CONSTRUCTION STANDARDS-MYTPU.ORG. CONTRACTOR SHALL CONTACT TPU, F & BM GROUP (PWRJOINTUTILITIES@CI.TACOMA.WA.US) PRIOR TO STARTING WORK AND COORDINATE WORK WITH TPU. THE PORT OF TACOMA HAS CONTRACTED WITH TPU FOR TREES UNDER EXISTING AERIAL LINES TO BE TRIMMED PRIOR TO START OF CONSTRUCTION.
2. POTM WILL SUPPLY THREE(3) EXISTING REELS OF 3-CELL(MAXCELL) FIBER OPTIC INNER DUCT TO THE CONTRACTOR AT THE CONSTRUCTION SITE FOR INSTALLATION AS PART OF THIS PROJECT. CONTRACTOR SHALL DOCUMENT TOTAL LENGTH OF INNER DUCT INSTALLED AND RETURN ANY REMAINING INNER DUCT TO POTM AT THEIR FACILITY.
3. THERE WILL BE MULTIPLE CONTRACTORS, POTM, IT, ITS/HUSKY CONTRACTORS WORKING, FURNISHING OR INSTALLING EQUIPMENT AT LOT F. WUT TENANT WILL ALSO BE USING PORTIONS OF LOT F DURING CONSTRUCTION. THIS CONTRACTOR WILL NEED TO COORDINATE WITH AND INSTALL EQUIPMENT PROVIDED AS PART OF THIS WORK.
4. ELECTRICAL REQUIREMENTS ARE NOT LIMITED TO ELECTRICAL DRAWINGS AND SPECIFICATIONS. THERE IS ADDITIONAL ELECTRICAL WORK REQUIRED TO BE INCLUDED IN THE BID, INDICATED ON CIVIL AND DRAWINGS. ADDITIONAL ELECTRICAL WORK REQUIRED IN THE BID IS ALSO LOCATED IN THE SPECIFICATIONS. CONTRACTOR SHALL REVIEW ALL CIVIL AND SPECIFICATIONS FOR ADDITIONAL ELECTRICAL INFORMATION AND INCLUDE COSTS FOR THIS WORK IN THE BID.
5. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATED LINE AT 1-(800)-424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.

ELECTRICAL SYMBOLS LEGEND

(E)	EXISTING
(N)	NEW
- - UGC - -	EXISTING UNDERGROUND COMMUNICATIONS CONDUIT.
— UGC —	NEW UNDERGROUND COMMUNICATIONS CONDUIT
X	CONDUIT AND CONDUCTOR IDENTIFICATION AS INDICATED ON CONDUIT AND CONDUCTOR SCHEDULE.
— AC —	NEW AERIAL (2)48 FIBER OPTIC(OSP) CABLES LASHED EVERY 12" WITH STAINLESS STEEL LASHING WIRE TYPE 316.045 TO 1/4" GALVANIZED, 1x7 GUY(MESSENGER) WIRE AND LABELED PER TPU STANDARDS AND REQUIREMENTS.
TPXXXX	EXISTING TACOMA POWER WOOD POLE. SUBSCRIPT IS TPU POLE ID #.
	EXISTING/NEW VAULT.
	EXISTING/NEW HANDHOLE.
POT	PORT OF TACOMA ENGINEER.
POTM	PORT OF TACOMA FACILITIES MAINTENANCE.
POTIT	PORT OF TACOMA INFORMATION TECHNOLOGY DEPARTMENT.
TPU	TACOMA POWER.
NIC	NOT IN CONTRACT
OSP	OUTSIDE PLANT.

TRUE NORTH
PROJECT NORTH

GRAPHIC SCALE
1"=100'-0" scale
100 0 100 200 feet

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STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — 12/9/19

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PROJ. ENGR	DATE		

APPROVED:
TREVOR THORNSLEY
DIRECTOR ENG. DATE

PORT OF TACOMA
FIBER TO LOT F
OVERALL ELECTRICAL SITE PLAN

CONT/CONS: 071169	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101286-01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PHASE: BID SET	PARCEL:	DRAWING SCALE: AS NOTED	

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PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

6636
E1
9 OF 22

PORT OF TACOMA FILE: N:\Jobs\2019\19-070\Dwgs\19-070 E1

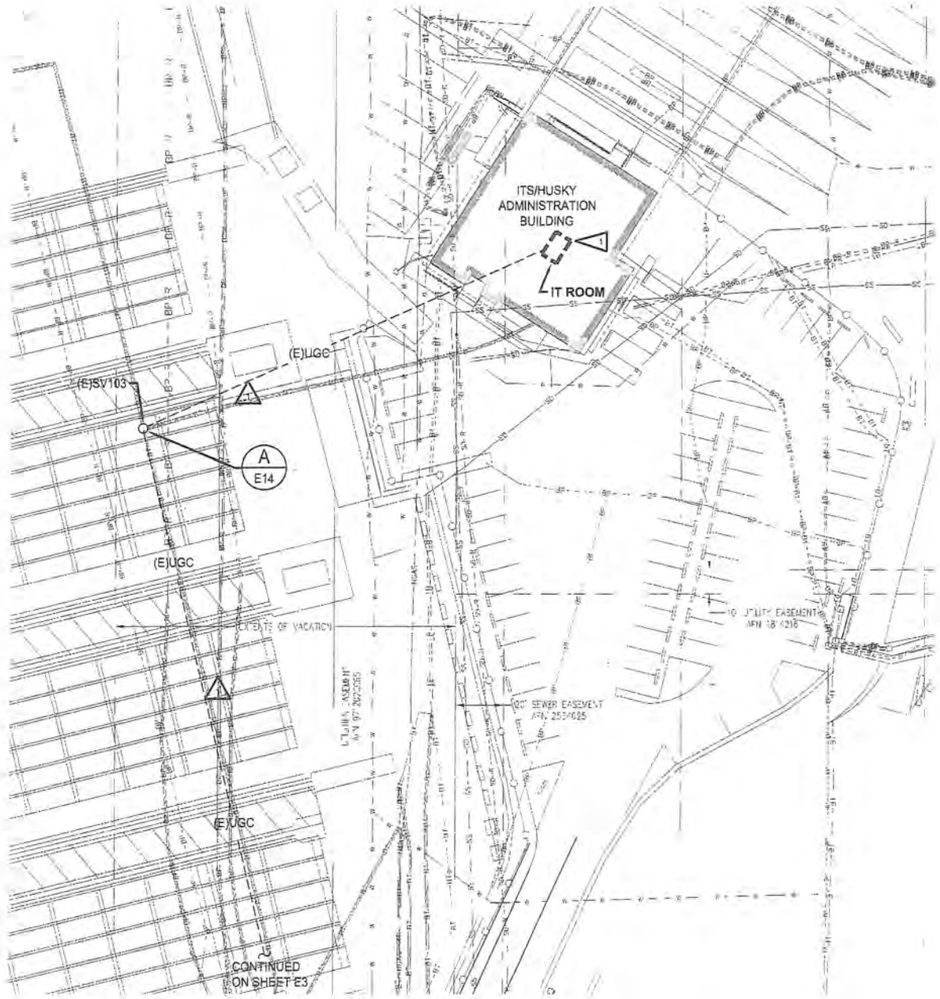
BINDING EDGE

CONDUIT AND CONDUCTOR SCHEDULE:

1. (E)4"C WITH (E)3-CELL MAXCELL FABRIC INNER DUCT. TWO (2) CELLS EMPTY. PROVIDE (2)NEW 48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET. OUTSIDE PLANT FIBER CABLES. (POT AND HUSKY).

ELECTRICAL NOTES:

1. ROUTE TWO(2) 48 FIBER COUNT, FO, OSP CABLING INTO IT ROOM. PROVIDE TWO(2) FO BULKHEADS SUITABLE TO TERMINATE 96 STRANDS OF FIBER EACH. TERMINATE ALL STRANDS WITH LC CONNECTORS. CONTRACTOR TO INSTALL POT AND ITS/HUSKY FURNISHED EQUIPMENT, TERMINATE, TEST AND LABEL ALL FIBER STRANDS.



PARTIAL ELECTRICAL SITE PLAN

SCALE: 1"=30'-0"

GRAPHIC SCALE
1"=30'-0" scale
30 0 30 60
feet

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maffoff & nichol

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STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 12/9/19

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PROJ. ENGR	DATE		

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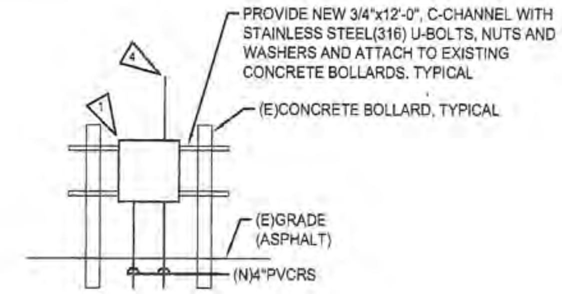
PORT OF TACOMA
FIBER TO LOT F
PARTIAL ELECTRICAL SITE PLAN

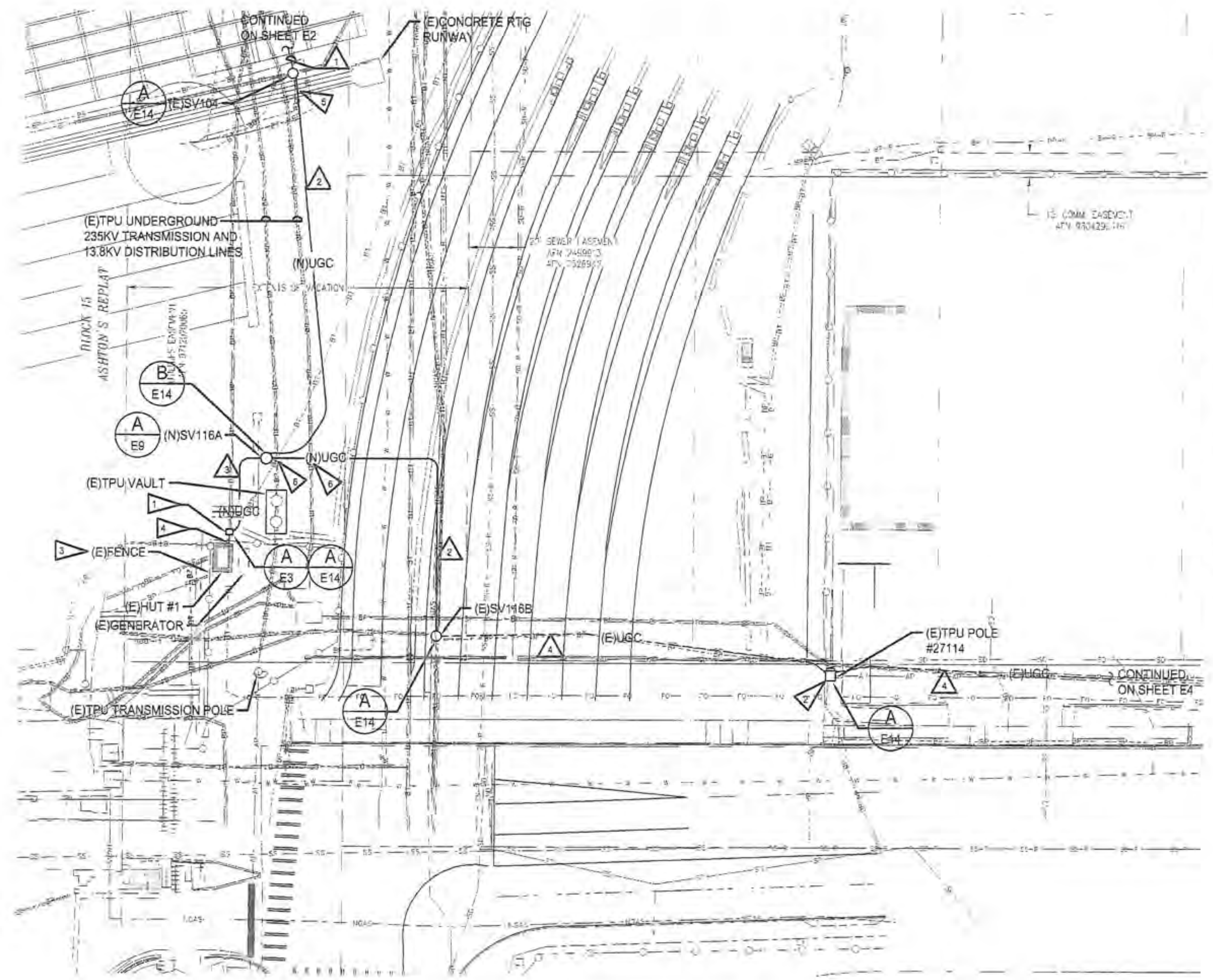
6636
E2
10 OF 22

CONT/CONS: 071169	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101286-01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PHASE: BID SET	PARCEL:	DRAWING SCALE: AS NOTED	

PORT OF TACOMA FILE: N:\Jobs\2019\19-070\Dwgs\19-070 E2



A / E3 COMMUNICATION CABINET MOUNTING
NO SCALE



PARTIAL ELECTRICAL SITE PLAN
SCALE: 1"=30'-0"

CONDUIT AND CONDUCTOR SCHEDULE:

1. (E)4"C WITH (E)3-CELL MAXCELL FABRIC INNER DUCT
PROVIDE (2)NEW 48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET OUTSIDE PLANT FIBER CABLES.

2. (N)(2)4"SCHEDULE 80 PVC
PROVIDE (1)4"C-EMPTY WITH PULLSTRING AND
PROVIDE (1)4"C WITH (1)-MAXCELL 3-CELL INNERDUCT
(1)-MAXCELL INNERDUCT CELL WITH (2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES. SAWCUT, TRENCH AND PATCH EXISTING PAVEMENT. SEE CIVIL.

3. (N)(2)4"SCHEDULE 80 PVC, (PVCRS ABOVE GRADE)
PROVIDE (2)4"C WITH (1)-MAXCELL 3-CELL INNERDUCT IN EACH
UTILIZE (2)-MAXCELL INNERDUCT CELLS IN ONE 4"C WITH (1)48 FIBER COUNT EACH, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES. SAWCUT, TRENCH AND PATCH EXISTING PAVEMENT. SEE CIVIL.

4. (E)2"C-(N)3-CELL MAXCELL FABRIC
PROVIDE NEW MAXCELL 3-CELL FABRIC INNERDUCT. LEAVE (2)INNER DUCT CELLS EMPTY WITH PULLSTRING AND (1)CELL WITH (2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES.

ELECTRICAL NOTES:

1. ROUTE NEW (2)48 COUNT OSP FO CABLING INTO NEW 36"x36"x10", NEMA 4X, 316 STAINLESS STEEL, SINGLE DOOR LOCKABLE (B-LINE OR EQUAL). COIL 50'-0" OF ITS/HUSKY (1)48 COUNT OSP FO CABLING AND CONTINUE OUT OF CABINET WITHOUT TERMINATING. CONTRACTOR TO TERMINATE ON PORT PROVIDED TWO (2) FO BREAKOUT PANELS (ENTERING AND LEAVING) FOR POT (N)48 COUNT FO CABLING. TERMINATE ALL STRANDS WITH LC CONNECTORS.

2. THERE ARE TWO(2) EXISTING CONDUITS STUBBED AT THIS LOCATION WITHIN 3'-0" OF EACH OTHER. CONTRACTOR SHALL PROVIDE A FREE STANDING TYPE NEMA 4X, 316 STAINLESS, SINGLE DOOR, LOCKABLE, 36"x30"x10" WITH LEGS (B-LINE OR EQUAL). PROVIDE 8"x8"x18"D CONCRETE PAD FOR EACH LEG. CONTRACTOR WILL BE REQUIRED TO REMOVE ASPHALT, HAND DIG AND EXTEND THE TWO(2) EXISTING CONDUITS INTO THEN NEW CABINET. DO NOT ATTACH CABINET TO TPU POLE. CABINET DOOR SHALL OPEN TO PROJECT WEST. PATCH ASPHALT TO MATCH EXISTING.

3. EXISTING TPU FENCED EQUIPMENT ENCLOSURE WITH POT IT HUT #1 AND GENERATOR. CONTRACTOR SHALL COORDINATE WITH TPU FOR ACCESS TO AREA AND POT FOR ACCESS TO HUT #1.

4. PROVIDE (1)4"PVCRS FROM COMMUNICATIONS CABINET THROUGH TPU FENCE AND INTO (E)HUT #1 WITH (1)48 COUNT, OSP FIBER CABLE INTO AND OUT OF HUT #1. TERMINATE ON POT PROVIDED CONTRACTOR INSTALLED FIBER BULKHEADS IN HUT. COORDINATE EXACT PENETRATION LOCATION WITH ENGINEER AND SEAL WEATHERTIGHT. PROVIDE ESCUTCHING AT FENCE PENETRATION.

5. CONTRACTOR SHALL PUSH CONDUIT UNDER EXISTING CONCRETE RTG RUNWAY AND FILL ANY VOIDS WITH CDF. DO NOT SAWCUT RTG CONCRETE RUNWAY.

6. WHERE COMMUNICATIONS CONDUITS CROSS EXISTING TPU DUCT BANKS CONTRACTOR SHALL ROUTE CONDUIT ABOVE TPU DUCTS AND ENCASE WITH CDF A MINIMUM OF 2'-0" PAST TPU DUCT EACH SIDE.

TRUE NORTH
PROJECT NORTH

GRAPHIC SCALE
1"=30'-0" 30 0 30 60
scale feet

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Port of Tacoma

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STEVEN L. HUBBS — PROFESSIONAL ENGINEER — 12/9/19

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TACOMA, WA 98401-1837		

PORT OF TACOMA
FIBER TO LOT F
PARTIAL ELECTRICAL SITE PLAN

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PARCEL:	DRAWING SCALE: AS NOTED	

6636
E3
11 OF 22

CONT/CONS: 071169
M. ID: 101286-01
PHASE: BID SET

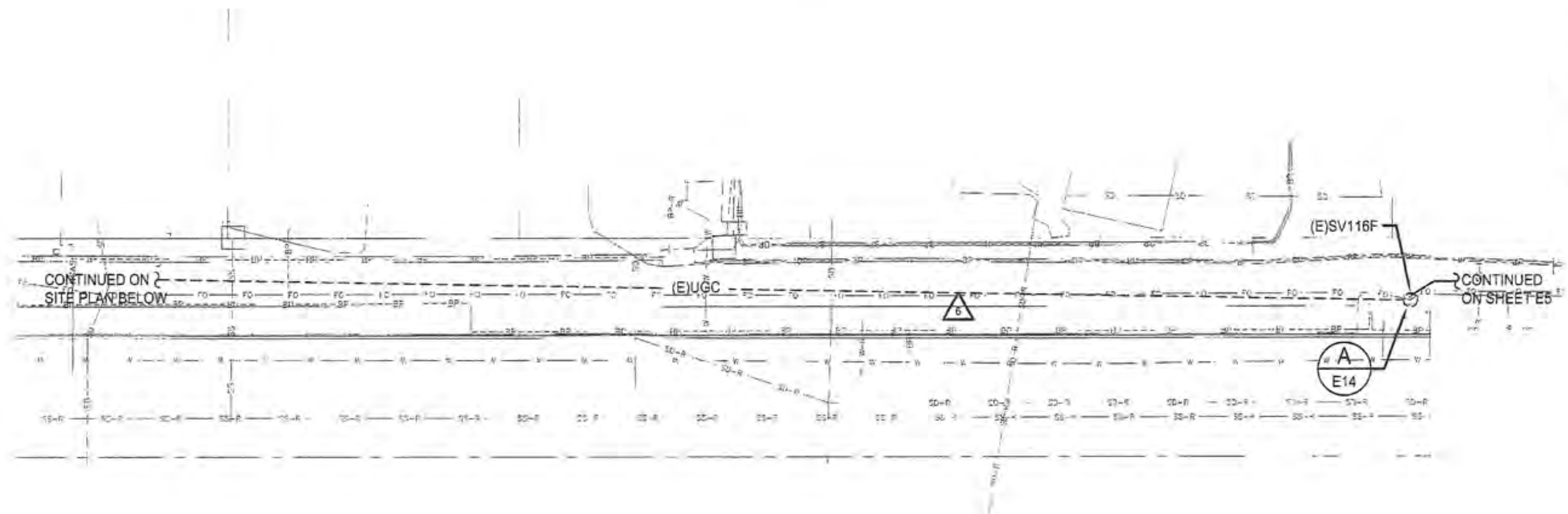
ELECTRICAL NOTES:

1. CONTRACTOR SHALL TRANSITION/EXTEND (E)UNDERGROUND 2" CONDUIT (STUB) AT EXISTING TACOMA POWER POLE INTO NEW VAULT.

CONDUIT AND CONDUCTOR SCHEDULE:

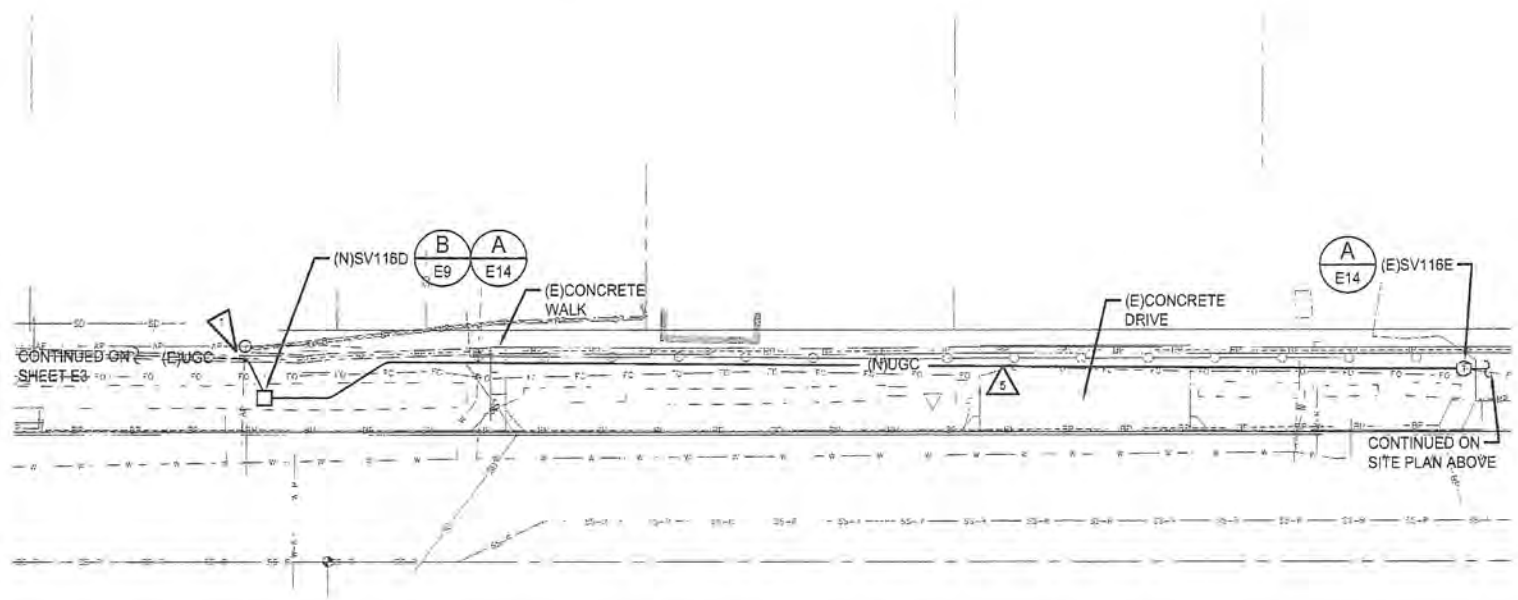
5. (N)(3)-2"SCHEDULE 80 PVC
   (1)-EMPTY WITH PULLSTRING
   (2)-MAXCELL 3-CELL INNERDUCT WITH PULLSTRINGS
   (1)-MAXCELL INNDERUCT CELL WITH (2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES.

6. (E)(3)2"SCHEDULE 80 PVC
   (1)-EMPTY WITH PULLSTRING
   (2)-MAXCELL 3-CELL INNERDUCT WITH PULLSTRINGS
   (1)-MAXCELL 3-CELL INNERDUCT WITH (E)CABLE. PROVIDE (N)(2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES IN (1)CELL OF THE (E)MAXCELL WITH (E)CABLE.
   (E)(2)2"C-WITH CABLES



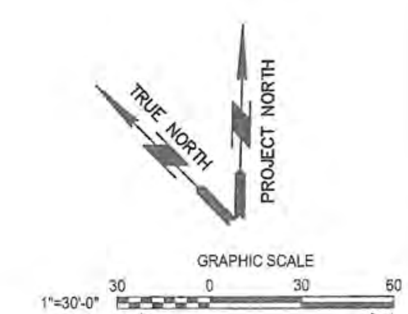
PARTIAL ELECTRICAL SITE PLAN

SCALE: 1"=30'-0"



PARTIAL ELECTRICAL SITE PLAN

SCALE: 1"=30'-0"



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BINDING EDGE

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DIRECTOR ENG. DATE PROJ. ENGR DATE
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PORT OF TACOMA
FIBER TO LOT F
PARTIAL ELECTRICAL SITE PLAN

TOWNSHIP: 21N RANGE: 3E SECTION: 34
DAT-HRZ: WA83-SF VERT: MLLW 19.39' @ TIDE 22 1933
PARCEL: DRAWING SCALE: AS NOTED

6636
E4
12 OF 22
CONT/CONS: 071169
M. ID: 101286-01
PHASE: BID SET

BINDING EDGE

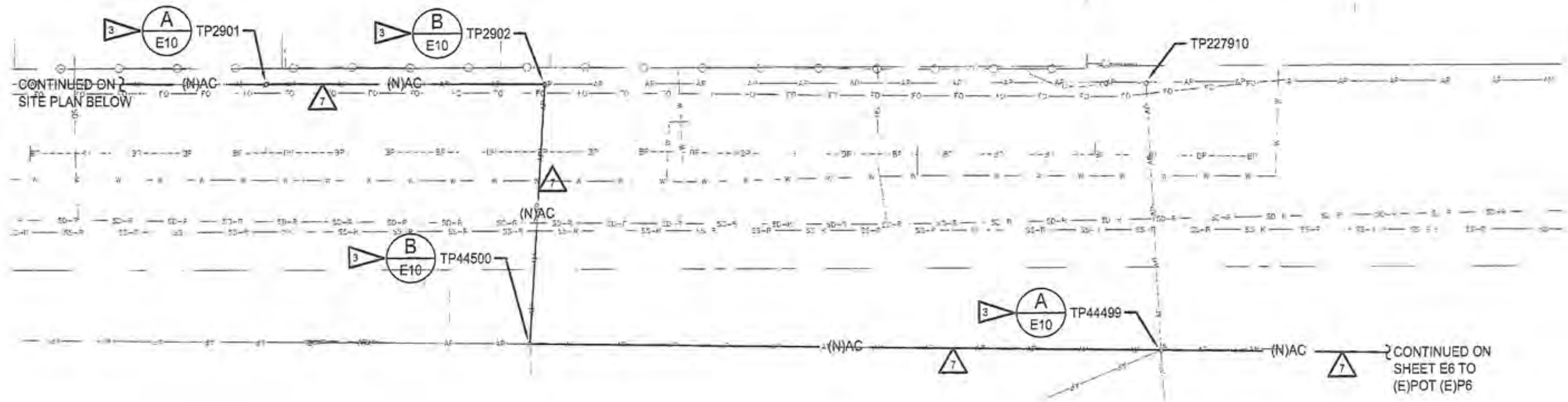
ELECTRICAL NOTES:

1. CONTRACTOR SHALL PROVIDE NEW UNDERGROUND CONDUIT INTO NEW HANDHOLE.
2. CONTRACTOR SHALL TRANSITION (2)48 STRAND OSP FO CABLING FROM UNDERGROUND TO OVERHEAD VIA A NEW POLE CONDUIT RISER PER TPU STANDARDS AND REQUIREMENTS.
3. CONTRACTOR SHALL ATTACH NEW (2)48 STRAND OSP FO CABLE WITH 1/4" STEEL MESSENGER AT HEIGHT NOTED. SEE SHEET E12.

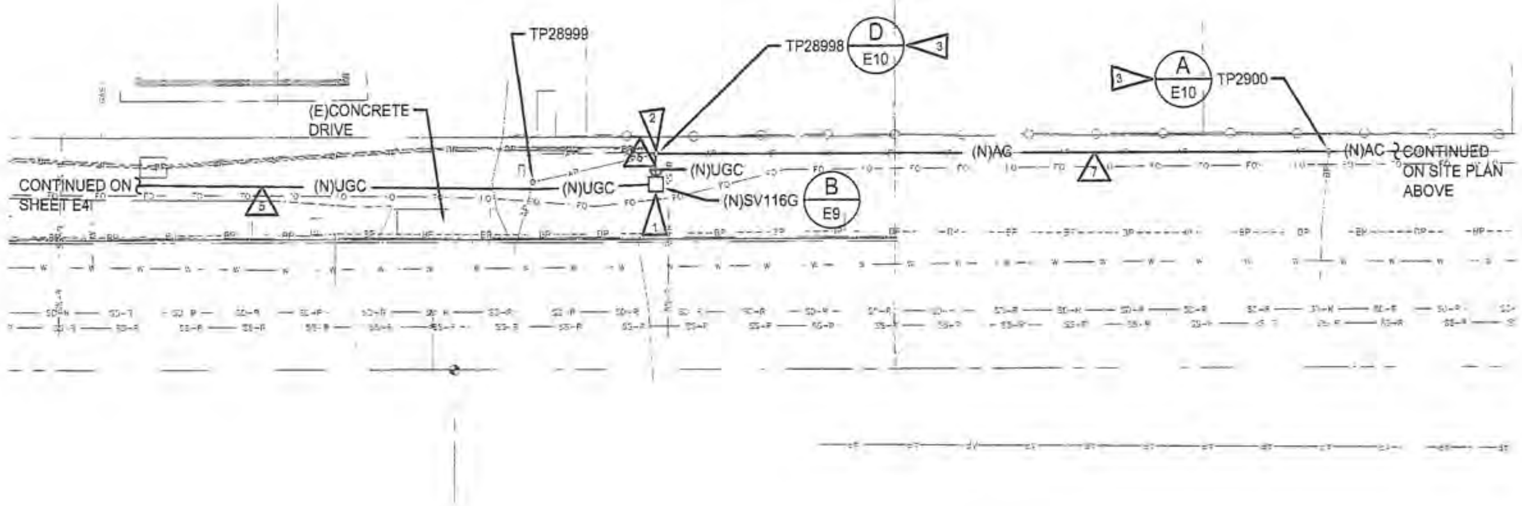
CONDUIT AND CONDUCTOR SCHEDULE:

5. (N)(3)-2"SCHEDULE 80 PVC
(1)-EMPTY WITH PULLSTRING
(2)-MAXCELL 3-CELL INNERDUCT WITH PULLSTRINGS
(1)-MAXCELL INNDERUCT CELL WITH (2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES.

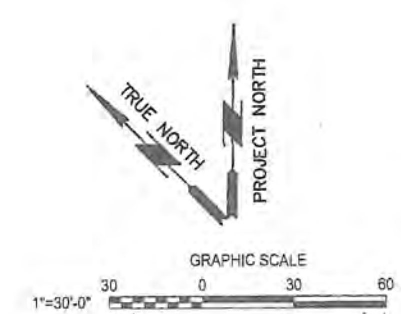
7. (N)(2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT FIBER CABLES, MESSENGER MOUNTED TO WOOD POLES. LASH FIBER CABLES EVER 12" TO MESSENGER.



PARTIAL ELECTRICAL SITE PLAN
SCALE: 1"=30'-0"



PARTIAL ELECTRICAL SITE PLAN
SCALE: 1"=30'-0"



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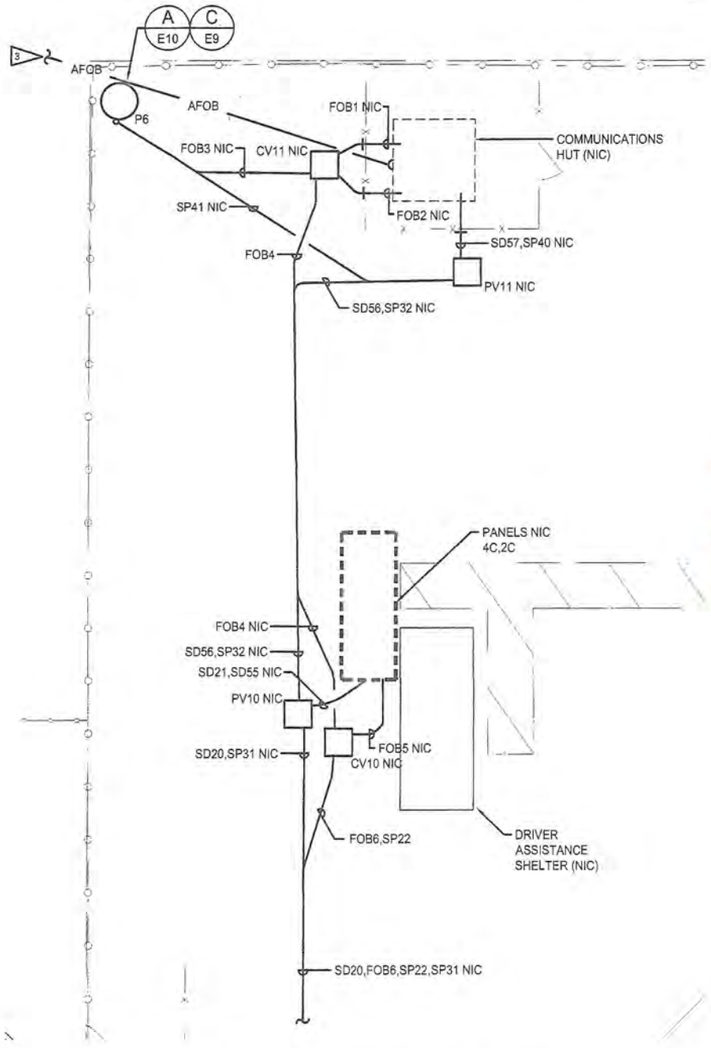
PORT OF TACOMA
FIBER TO LOT F
PARTIAL ELECTRICAL SITE PLAN

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83-SF | VERT: MLLW 19.39' @ TIDE 22 1933
PARCEL: | DRAWING SCALE: AS NOTED

6636
E5
13 OF 22
CONT/CONS: 071169
M. ID: 101286-01
PHASE: BID SET

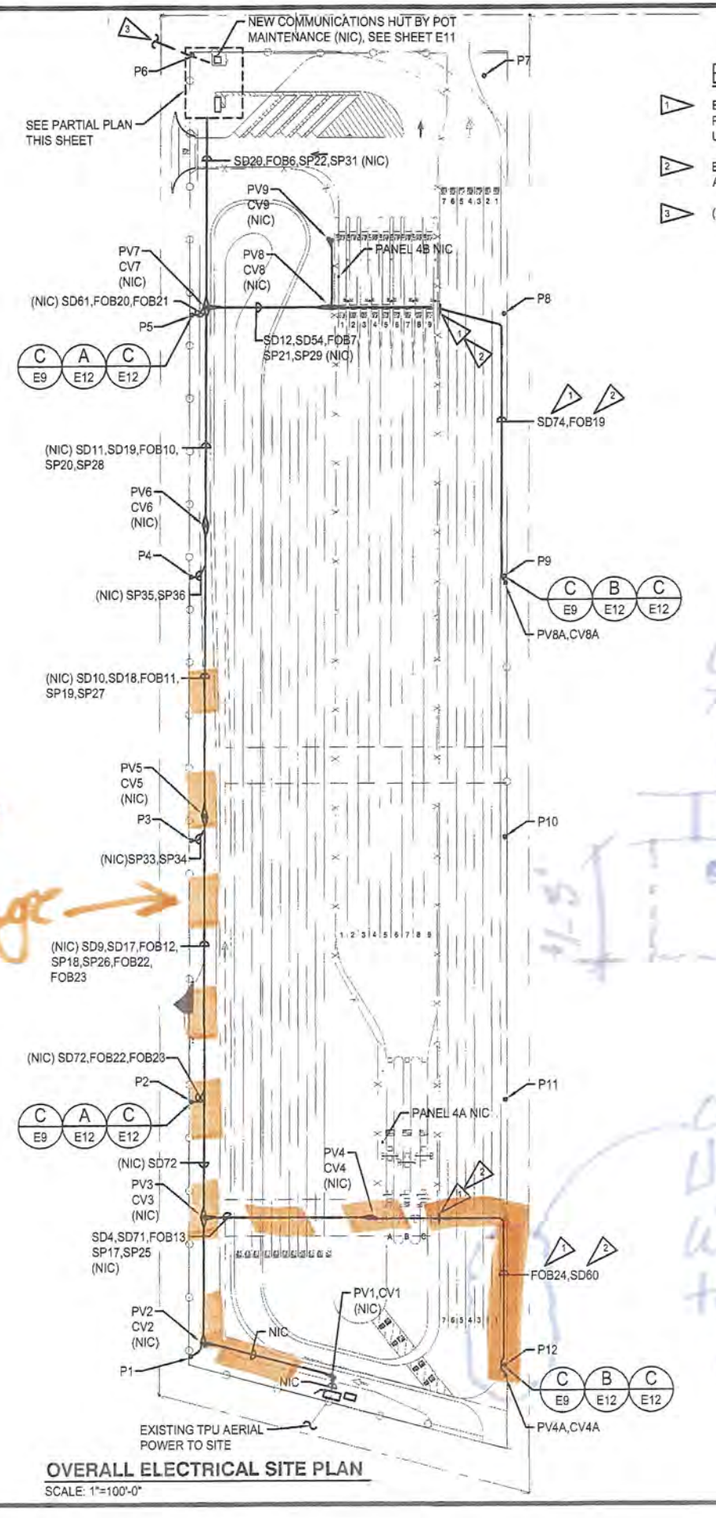
PORT OF TACOMA FILE: N:\Jobs\2019\19-070\Dwgs\19-070 E5

BINDING EDGE



PARTIAL ELECTRICAL SITE PLAN

SCALE: 1/8"=1'-0"



OVERALL ELECTRICAL SITE PLAN

SCALE: 1"=100'-0"

ELECTRICAL NOTES:

1. EXTENSION OF 1"C POWER CONDUIT FROM THIS LOCATION TO P9 AND P12 BY POT CONTRACTOR. WIRES (2#8 CU & 1#10 CU GRD) FROM PANELS 4A AND 4B TO UNIT SUB AT EACH POLE BY POT CONTRACTOR.
2. EXTENSION OF (2)2" COMMUNICATIONS CONDUIT FROM THIS LOCATION TO P9 AND P12 BY POT CONTRACTOR.
3. (2) 48 COUNT, AERIAL, OSP, FO CABLE TO HUT. ATTACH TO P6.

Husky Package →

3' to 5'

Conduit

Vault

Only work outside Utility Corridors. Will be close to edge of cap

GRAPHIC SCALE
1"=100'-0" scale
100 0 100 200 feet

TRUE NORTH
PROJECT NORTH

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LESTER L. HUBBS JR. REGISTERED PROFESSIONAL ENGINEER 11/9/19

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TACOMA, WA 98401-1837			

PORT OF TACOMA
FIBER TO LOT F
OVERALL LOT F ELECTRICAL SITE PLAN

CONT/CONS: 071169	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101286-01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PHASE: BID SET	PARCEL:	DRAWING SCALE: AS NOTED	

6636
E6
14 OF 22

PORT OF TACOMA FILE: N:\Jobs\2019\19-070\Dwgs\19-070 E6

ELECTRICAL NOTES:

1. THERE ARE TWO(2) EXISTING CONDUITS STUBBED AT THIS LOCATION WITHIN 3'-0" OF EACH OTHER. CONTRACTOR SHALL PROVIDE A FREE STANDING TYPE NEMA 4X, 316 STAINLESS, SINGLE DOOR, 36"x30"x10" WITH LEGS (B-LINE OR EQUAL). PROVIDE 8"x8"x18"D CONCRETE PAD WITH EACH LEG. CONTRACTOR WILL BE REQUIRED TO REMOVE ASPHALT, HAND DIG AND EXTEND THE TWO(2) EXISTING CONDUITS INTO THEN NEW CABINET. DO NOT ATTACH CABINET TO TPU POLE. CABINET DOOR SHALL OPEN TO PROJECT WEST. PATCH ASPHALT TO MATCH EXISTING.
2. PROVIDE (3)(N)2"C-SCHEDULE 80 UP POLE. CAP(2) AT 12'-0" AFG. EXTEND (1)2"C WITH (2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES UP POLE, ATTACH TO POLE AND CONTINUE AERIAL TO LOT F NEW HUT.
3. SECURE FIBER MESSENGER TO WEATHER HEAD. PROVIDE 4"PVCRS MAST WITH WEATHERHEAD AT HUT. EXTEND (2)48 FIBER COUNT CABLE THROUGH WEATHER HEAD AND TERMINATE ON PORT AND ITS/HUSKY EQUIPMENT RACKS. BULK HEADS AND RACKS SUPPLIED BY PORT AND INSTALLED BY CONTRACTOR. SEE SHEET E11.
4. SEE ELECTRICAL NOTE #1 AND #4 SHEET E3.

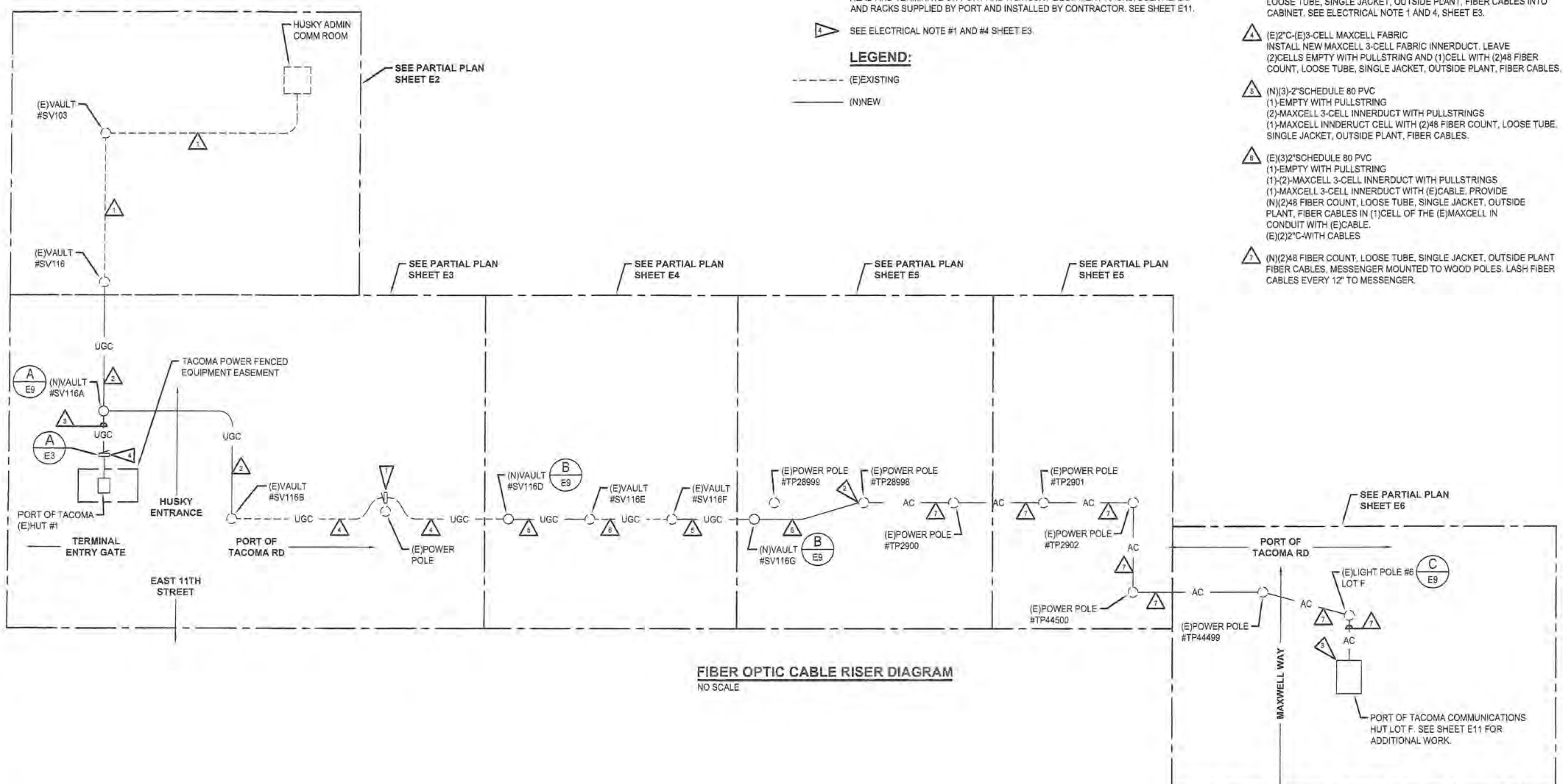
LEGEND:

- - - - - - (E)EXISTING

———— (N)NEW

CONDUIT AND CONDUCTOR SCHEDULE:

1. (E)4"C WITH (E)3-CELL MAXCELL FABRIC INNER DUCT
PROVIDE (2)NEW 48 FIBER COUNT, IN SINGLE CELL, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES.
2. (N)(2)4"SCHEDULE 80 PVC
PROVIDE (1)4"C-EMPTY WITH PULLSTRING
PROVIDE (1)4"C WITH (2)-MAXCELL 3-CELL INNERDUCT WITH PULLSTRINGS
PROVIDE (2)48 FIBER COUNT IN SINGLE CELL, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES.
3. (N)(2)4"SCHEDULE 80 PVC (PVCRS ABOVE GRADE)
PROVIDE (1)4"C-EMPTY WITH PULLSTRING
PROVIDE (1)4"C WITH (2)-MAXCELL 3-CELL INNERDUCT WITH PULLSTRINGS.
UTILIZE (2)-MAXCELL INNERDUCT CELLS EACH WITH (2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES INTO CABINET. SEE ELECTRICAL NOTE 1 AND 4, SHEET E3.
4. (E)2"C-(E)3-CELL MAXCELL FABRIC
INSTALL NEW MAXCELL 3-CELL FABRIC INNERDUCT. LEAVE (2)CELLS EMPTY WITH PULLSTRING AND (1)CELL WITH (2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES.
5. (N)(3)-2"SCHEDULE 80 PVC
(1)-EMPTY WITH PULLSTRING
(2)-MAXCELL 3-CELL INNERDUCT WITH PULLSTRINGS
(1)-MAXCELL INNDERUCT CELL WITH (2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES.
6. (E)(3)2"SCHEDULE 80 PVC
(1)-EMPTY WITH PULLSTRING
(1)-(2)-MAXCELL 3-CELL INNERDUCT WITH PULLSTRINGS
(1)-MAXCELL 3-CELL INNERDUCT WITH (E)CABLE. PROVIDE (N)(2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT, FIBER CABLES IN (1)CELL OF THE (E)MAXCELL IN CONDUIT WITH (E)CABLE.
(E)(2)2"C-WITH CABLES
7. (N)(2)48 FIBER COUNT, LOOSE TUBE, SINGLE JACKET, OUTSIDE PLANT FIBER CABLES, MESSENGER MOUNTED TO WOOD POLES. LASH FIBER CABLES EVERY 12" TO MESSENGER.



FIBER OPTIC CABLE RISER DIAGRAM
NO SCALE

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Job Number: 19-070

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APPROVED: TREVOR THORNSLEY, DIRECTOR ENG. DATE
SLH 12-09-19
CHECKED BY DATE: GLW 12-09-19, PROJ. ENGR DATE
PRINTED BY: ScottK Dec 09, 2019
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837

PORT OF TACOMA
FIBER TO LOT F
FIBER OPTIC CABLE RISER DIAGRAM

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83-SF | VERT: MLLW 19.39' @ TIDE 22 1933
PARCEL: | DRAWING SCALE: AS NOTED

6636
E7
15 OF 22
CONT/CONS: 071169
M. ID: 101286-01
PHASE: BID SET

BINDING EDGE
PORT OF TACOMA FILE: N:\Jobs\2019\19-070\Dwgs\19-070 E7

TPU POLE: TP2899

TPU POLE: TP28998

TPU POLE: TP29000

TPU POLE: TP29001

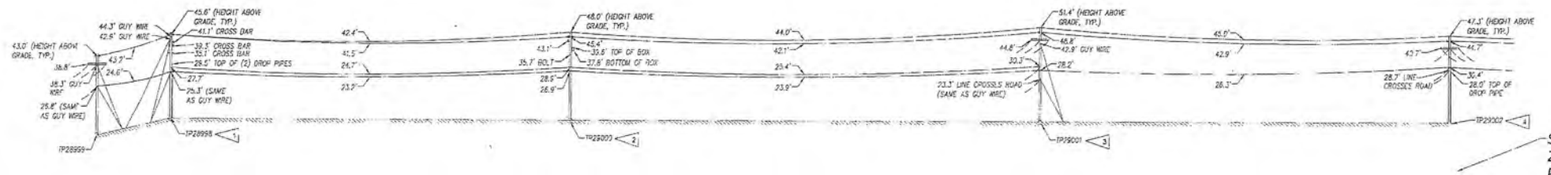
TPU POLE: TP29002

TPU POLE: TP44500

TPU POLE: TP44999

ELECTRICAL NOTES:

1. EXISTING TPU POLE #28998 - CONTRACTOR SHALL ATTACHED TWO(2) 48 PAIR AERIAL FIBER OPTIC CABLE WITH MESSENGER AT 26.3' ABOVE FINISHED GRADE.
2. EXISTING TPU POLE #29000 - CONTRACTOR SHALL ATTACHED TWO(2) 48 PAIR AERIAL FIBER OPTIC CABLE WITH MESSENGER AT 27.9' ABOVE FINISHED GRADE.
3. EXISTING TPU POLE #29001 - CONTRACTOR SHALL ATTACHED TWO(2) 48 PAIR AERIAL FIBER OPTIC CABLE WITH MESSENGER AT 29.2' ABOVE FINISHED GRADE.
4. EXISTING TPU POLE #29002 - CONTRACTOR SHALL ATTACHED TWO(2) 48 PAIR AERIAL FIBER OPTIC CABLE WITH MESSENGER AT 31.4' ABOVE FINISHED GRADE.
5. EXISTING TPU POLE #44500 - CONTRACTOR SHALL ATTACHED TWO(2) 48 PAIR AERIAL FIBER OPTIC CABLE WITH MESSENGER AT 29.5' ABOVE FINISHED GRADE.
6. EXISTING TPU POLE #44499 - CONTRACTOR SHALL ATTACHED TWO(2) 48 PAIR AERIAL FIBER OPTIC CABLE WITH MESSENGER AT 36.2' ABOVE FINISHED GRADE.



TACOMA POWER UTILITY POLE ELEVATIONS

NOT TO SCALE

NOTE: SEE PARTIAL SITE PLAN FOR DISTANCES.

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600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222
moffatt & nichol

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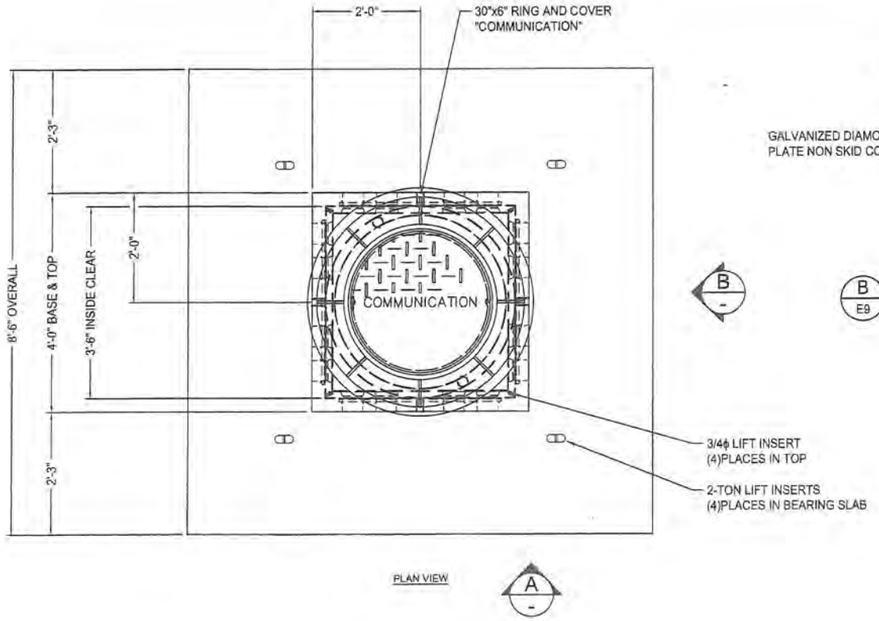
APPROVED:
TREVOR THORNSLEY
DIRECTOR ENG. DATE:
PRINTED BY: Scottk Dec 11, 2019
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837

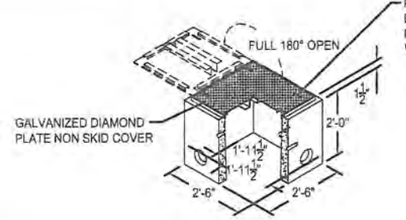
SLH	12-09-19		
CHECKED BY	DATE		
G.W	12-09-19		
PROJ. ENGR	DATE		
SECTION	34	TOWNSHIP:	21N
RANGE	3E	DAT-HRZ:	WA83-SF
VERT: MLLW	19.39' @ TIDE	PARCEL:	
	22 1933	DRAWING SCALE	AS NOTED

PORT OF TACOMA
FIBER TO LOT F
TPU POWER POLE ELEVATIONS

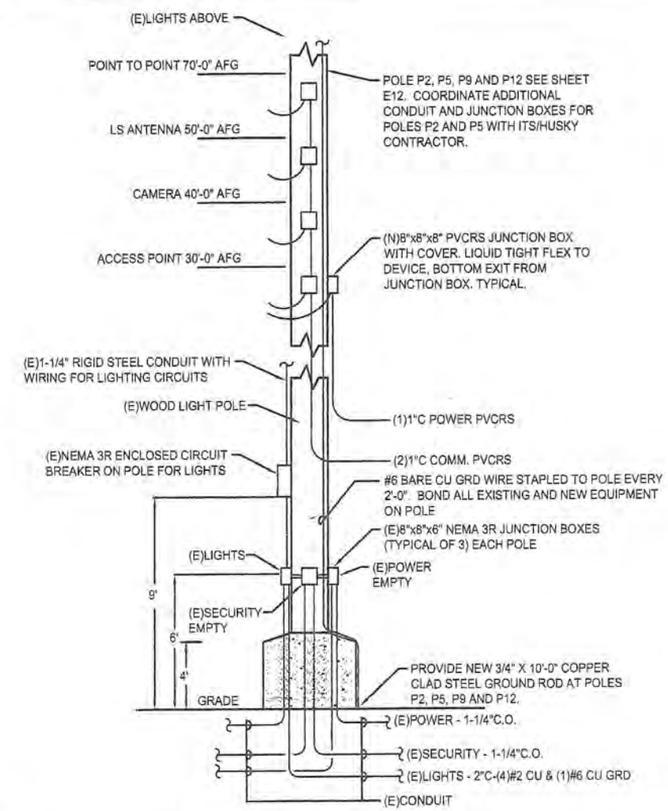
6636
E8
16 OF 22

CONT/CON: 071169
M. ID: 101786-01
PHASE: BID SET

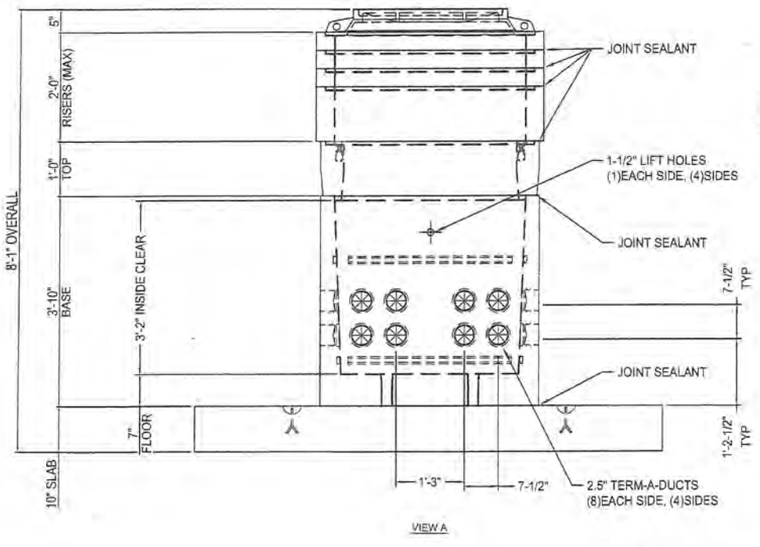


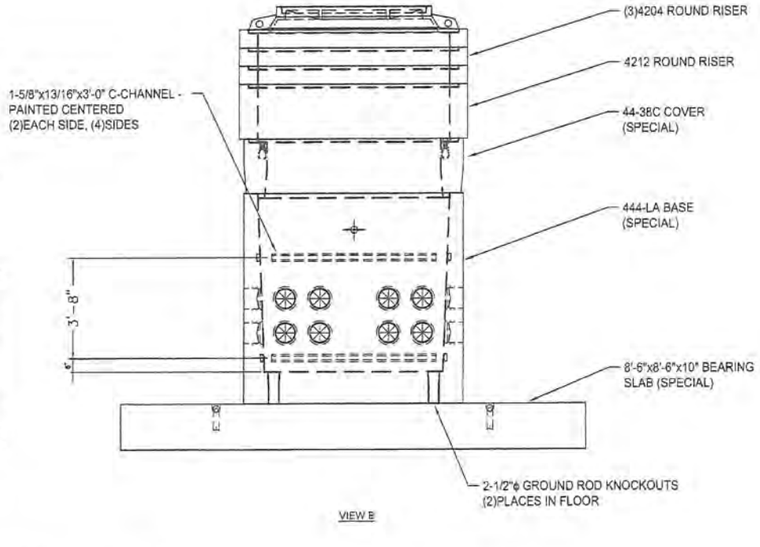


B / E9 COMMUNICATIONS HANDHOLE
NOT TO SCALE



C / E9 EXISTING LOT F WOOD LIGHT POLE/ BASE ELEVATION TYPICAL P1 THROUGH P12
NO SCALE





A / E9 COMMUNICATIONS VAULT
NOT TO SCALE

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STEVEN L. HUBBS
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12/9/19

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	CHECKED BY:	DATE
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DIRECTOR ENG. DATE	PROJ. ENGR	DATE

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PORT OF TACOMA
FIBER TO LOT F
VAULT DETAILS

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PARCEL:	DRAWING SCALE: AS NOTED	

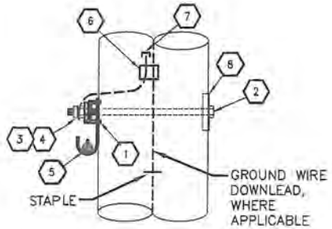
6636
E9
17 OF 22

CONT/CONS.: 071169
M. ID: 101286-01
PHASE: BID SET

BINDING EDGE

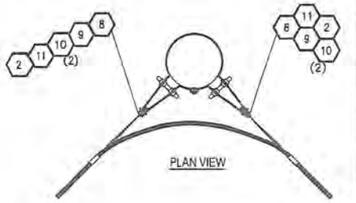
PORT OF TACOMA FILE: N:\Jobs\2019\19-070\Dwgs\19-070 E9

BINDING EDGE



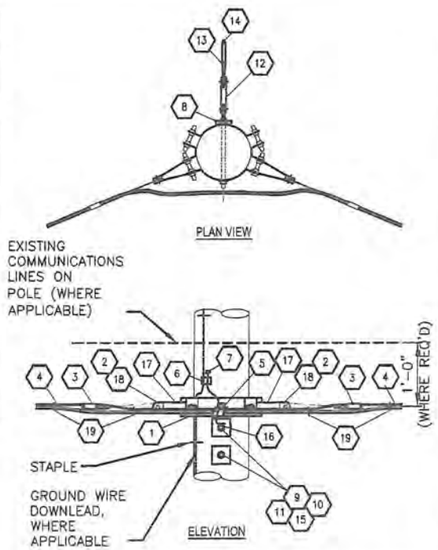
DETAIL "A" BILL OF MATERIAL		
ITEM	QUAN	DESCRIPTION
1	1	FIGURE 8 CABLE HANGER – MACLEAN POWER SYSTEMS #J2245
2	1	5/8" BOLT, MACHINE, GALVANIZED, LENGTH AS REQUIRED
3	2	5/8" LOCKNUT, MF TYPE, GALVANIZED
4	2	5/8" CLAMP, FOR 5/16" GROUNDWIRE, COMPLETE WITH EXTRA NUT (AS REQUIRED)
5	A/R	OSP, (2)24, FIBER FULL SPECTRUM, LOW WATER PEAK, SINGLE MODE, (ITU–T G.652.D,) LOOSE TUBE SINGLE JACKET FIGURE 8 FIBER OPTIC CABLES, WITH 1/4" STRANDED EHS GALV. STL. MESSENGER AND 12016 AERIAL SUPPORT OSP CABLE TIES AT 6'–0" ON CENTER
6	1	CONNECTOR, POWDER ACTUATED MECHANICAL WEDGE, 5/16" TO #8 THRU #2 AWG, BURNDY WEJTAP # FILED BOOSTER # FILED (WHERE REQUIRED)
7	1	SPLICE, 5/16" STRAND, BURNDY #YSU2R2R (IF REQUIRED)
8	1	WASHER, SQUARE CURVED, 4"x4", 3/4" DIA. HOLE, GALV. STL. HUGHES #CW60

A / E10 **DETAIL - TANGENT STRUCTURE**
SCALE: NTS



DETAIL "B" BILL OF MATERIAL		
ITEM	QUAN	DESCRIPTION
1	1	POLE BAND, LIGHT DUTY, 90°, 4 WAY, HUGHES #1111
2	3	3/4" x 2" GALV. STL. BOLT & NUT (PER ITEM 11 & 12)
3	2	SERVICE WEDGE CLAMP, 1/4", FLEXIBLE BAIL, T&B #W62–1FC
4	A/R	OSP, (2)24, FIBER FULL SPECTRUM, LOW WATER PEAK, SINGLE MODE, (ITU–T G.652.D,) LOOSE TUBE SINGLE JACKET FIGURE 8 FIBER OPTIC CABLES, WITH 1/4" STRANDED EHS GALV. STL. MESSENGER AND 12016 AERIAL SUPPORT OSP CABLE TIES AT 6'–0" ON CENTER
5	1	BONDING LUG, BAND MOUNTED, HUGHES #2718.55 (WHERE REQUIRED)
6	1	CONNECTOR, POWDER ACTUATED MECHANICAL WEDGE, 5/16" TO #8 THRU #2 AWG, BURNDY WEJTAP # FILED BOOSTER # FILED (WHERE REQUIRED)
7	1	SPLICE, 5/16" STRAND, BURNDY #YSU2R2R (IF REQUIRED)
8	2	GUY GRIP DEADEND, GALV. STL., FOR 5/16" GALV. STL. GUY WIRE, PREFORMED LINE PRODUCTS #GDE–1106
9	A/R	GUY STRAND, 5/16", E.H.S. GALV. STL.
10	8	CONNECTING LINK, HUGHES #3170
11	4	GUY ROLLER, HUGHES #28085
12	4	BLACK TEFZEL CABLE TIES, T&B TYZ SERIES TY–RAPS OR EQUAL

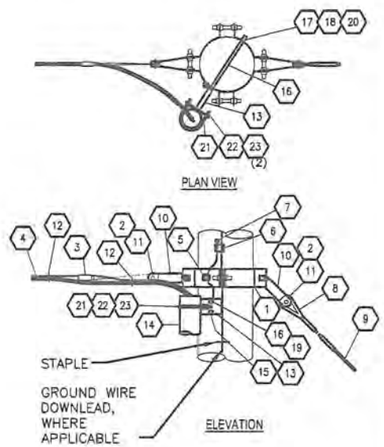
B / E10 **DETAIL - LARGE ANGLE STRUCTURE**
SCALE: NTS



C / E10 **DETAIL - SMALL ANGLE STRUCTURE**
SCALE: NTS

DETAIL "C" BILL OF MATERIAL		
ITEM	QUAN	DESCRIPTION
1	2	POLE BAND, LIGHT DUTY, 135°, 4 WAY, HUGHES #1111–A
2	2	3/4" x 2" GALV. STL. BOLT & NUT (PER ITEM 17 & 18)
3	2	SERVICE WEDGE CLAMP, 1/4", FLEXIBLE BAIL, T&B #W62–1FC
4	A/R	OSP, (2)24, FIBER FULL SPECTRUM, LOW WATER PEAK, SINGLE MODE, (ITU–T G.652.D,) LOOSE TUBE SINGLE JACKET FIGURE 8 FIBER OPTIC CABLES, WITH 1/4" STRANDED EHS GALV. STL. MESSENGER AND 12016 AERIAL SUPPORT OSP CABLE TIES AT 6'–0" ON CENTER
5	1	BONDING LUG, BAND MOUNTED, HUGHES #2718.55 (WHERE REQUIRED)
6	1	CONNECTOR, POWDER ACTUATED MECHANICAL WEDGE, 5/16" TO #8 THRU #2 AWG, BURNDY WEJTAP # FILED BOOSTER # FILED (WHERE REQUIRED)
7	1	SPLICE, 5/16" STRAND, BURNDY #YSU2R2R (WHERE REQUIRED)
8	1	DEAD END TEE, HUGHES #2817–S–15
9	2	7/8" HIGH STRENGTH BOLT, GALVANIZED STEEL, LENGTH AS REQ.
10	2	7/8" BELLVILLE WSWR, GALVANIZED STEEL
11	2	7/8" LOCKNUT, GALVANIZED STEEL
12	1	REA TYPE 1 GUY LINK ASSEMBLY, HUGHES #TG–92–1
13	1	GUY GRIP DEADEND, GALV. STL., FOR 5/16" GALV. STL. GUY WIRE, PREFORMED LINE PRODUCTS #GDE–1106
14	A/R	GUY STRAND, 5/16", E.H.S. GALV. STL.
15	2	WASHER, CURVED, 4" SQUARE x 1/4", 7/8" HOLE, GALVANIZED
16	1	7/8" CLAMP, FOR GROUND WIRE, COMPLETE W/ ADDITIONAL 7/8" NUT (WHERE REQUIRED)
17	4	CONNECTING LINK, HUGHES #3170
18	2	GUY ROLLER, HUGHES #28085
19	4	BLACK TEFZEL CABLE TIES, T&B TYZ SERIES TY–RAPS OR EQUAL

DETAIL "D" BILL OF MATERIAL		
ITEM	QUAN	DESCRIPTION
1	1	POLE BAND, LIGHT DUTY, 90°, 4 WAY, HUGHES #1111
2	2	3/4" x 2" GALV. STL. BOLT & NUT (PER ITEM 11 & 12)
3	1	SERVICE WEDGE CLAMP, 1/4", FLEXIBLE BAIL, T&B #W62–1FC
4	A/R	OSP, (2)24, FIBER FULL SPECTRUM, LOW WATER PEAK, SINGLE MODE, (ITU–T G.652.D,) LOOSE TUBE SINGLE JACKET FIGURE 8 FIBER OPTIC CABLES, WITH 1/4" STRANDED EHS GALV. STL. MESSENGER AND 12016 AERIAL SUPPORT OSP CABLE TIES AT 6'–0" ON CENTER
5	1	BONDING LUG, BAND MOUNTED, HUGHES #2718.55 (WHERE REQURED)
6	1	CONNECTOR, POWDER ACTUATED MECHANICAL WEDGE, 5/16" TO #8 THRU #2 AWG, BURNDY WEJTAP # FILED BOOSTER # FILED (WHERE REQURED)
7	1	SPLICE, 5/16" STRAND, BURNDY #YSU2R2R (WHERE REQURED)
8	1	GUY GRIP DEADEND, GALV. STL., FOR 5/16" GALV. STL. GUY WIRE, PREFORMED LINE PRODUCTS #GDE–1106
9	A/R	GUY STRAND, 5/16", EHS GALV. STL.
10	4	CONNECTING LINK, HUGHES #3170
11	2	GUY ROLLER, HUGHES #28085
12	2	BLACK TEFZEL CABLE TIES, T&B TYZ SERIES TY–RAPS OR EQUAL
13	3	CONDUIT STAND–OFF TEE SUPPORT, GALV., HUGHES #AS2477–A
14	A/R	4" SCHED. 40 PVC COND. SLEEVE 10 FT. LENGTH
15	3	5/8" LAG BOLT, x 6", GALV. STL.
16	3	5/8" HIGH STRENGTH BOLT, GALVANIZED, LENGTH AS REQUIRED
17	3	5/8" BELLVILLE WASHER, GALV. STL.
18	3	5/8" LOCKNUT, GALV. STL.
19	3	5/8" CLAMP, FOR 5/16" GROUNDWIRE, COMPLETE WITH EXTRA NUT (WHERE REQUIRED)
20	3	WASHER, CURVED, 3" SQUARE x 1/4", 11/16" HOLE, GALV. STL. – HUGHES #SCW3–60
21	3	4"ø x 3/8"–16NC U–BOLT, GALVANIZED STL.
22	6	3/8" LOCK WASHER, GALV. STL.
23	12	3/8"–16NC HEX NUT, GALV. STL.



D / E10 **DETAIL - DEADEND STRUCTURE RISER**
SCALE: NTS

KEY NOTES:

(X) DENOTES ITEM NUMBER, PER DETAIL BILL OF MATERIAL

E.H.S. EXTRA HIGH STRENGTH STRANDED GALVANIZED STEEL WIRE

→ DENOTES TENSION OR COMPRESSION FORCE VECTOR, IN LBS.

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MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUSSEY — REGISTERED PROFESSIONAL ENGINEER — 12/4/19

APPROVED:	SLH	12–09–19
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DIRECTOR ENG. DATE	PROJ. ENGR	DATE
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TACOMA, WA 98401–1837		

PORT OF TACOMA
FIBER TO LOT F
POLE ATTACHMENT DETAILS

6636
E10
18 OF 22

CONT/CONS: 071169	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101286–01	DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PHASE: BID SET	PARCEL:	DRAWING SCALE: AS NOTED	

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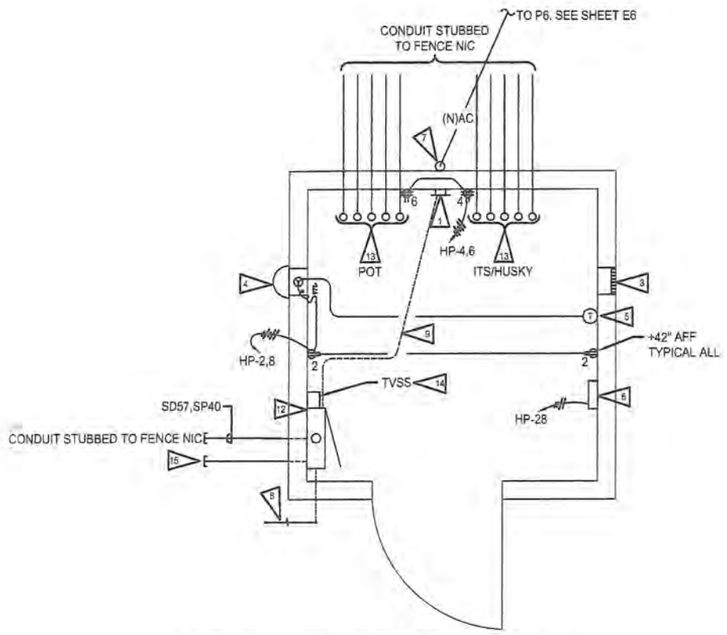


FIBER HUT (NIC) - POWER FLOOR PLAN

SCALE: 1/2"=1'-0"

(NIC)

PANEL SCHEDULE

SURFACE MOUNTING
10,000 AIC

NO. HP | LOCATION: HUT | SERVING: HUT | 120/240 VOLTS 1PHASE 3WIRE 60 AMPS WITH 60 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	RECEPT/LTS	.26	20		20	.36	RECEPTACLES	2
3	SPARE					1.00	RACK	4
5	SPARE					1.00	RACK	6
7	SPARE		20		20	.10	EXHAUST FAN	8
9	SPACE						SPACE	10
11								12
13								14
15								16
17								18
19								20
21								22
23								24
25	SPACE						SPACE	26
27	TVSS		30/2		20/2	1.50	HEATER	28
29								30

REMARKS:

CONNECTED LOAD: 4.2 KVA 18 AMPS
DEMAND LOAD: 4.2 KVA 18 AMPS

PROVIDE HANDLE TIES FOR ALL MULTI-CIRCUIT HOMERUNS SHARING A NEUTRAL PER THE NATIONAL ELECTRIC CODE ARTICLE 210.4 MULTIWIRE BRANCH CIRCUITS. PART (B) DISCONNECTING MEANS. DRAWINGS ARE DIAGRAMMATIC. WHERE THE CONTRACTOR MODIFIES THE CIRCUITING, THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL NEUTRAL PER CIRCUIT, MULTI-POLE CIRCUIT BREAKERS, OR CIRCUIT BREAKER HANDLE TIE TO MEET THE NEC ARTICLE. ALL COSTS ASSOCIATED WITH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

ELECTRICAL NOTES:

NIC 1 PROVIDE COPPER BAR 13 1/4"x4"x1/4" WITH 3 PAIR 7/16" HOLES AND 19 PAIR 5/16" HOLES. ERICO TMGB-A14L15PT OR EQUAL.

NIC 2 PROVIDE MOUNT SWITCH AND RECEPTACLE IN DOUBLE GANG JUNCTION BOX AT 42" AFF.

NIC 3 PROVIDE GREENHECK OR EQUAL AIR INTAKE VENT SIZE AS RATED FOR EXHAUST FAN.

NIC 4 PROVIDE GREENHECK 060, 1725 CFM OR EQUAL.

NIC 5 PROVIDE EXHAUST THERMOSTAT, 120V, SET AT 65° F. PROVIDE WIRING IN 3/4" EMT TO FAN.

NIC 6 PROVIDE KING ELECTRIC SL2422, 1500 WATT HEATER WITH INTEGRAL THERMOSTAT, SET AT 40° F. OR EQUAL.

NIC 7 PROVIDE 4"C-PVCRS AERIAL MAST ATTACHED TO STRUCTURE WITH WALL PENETRATION FOR FIBER OPTIC CABLE TO RACKS.

NIC 8 PROVIDE (2)3/4"x10' COPPER CLAD STEEL GROUND RODS SPACED 20' APART. #6 BARE CU TO PANEL.

NIC 9 PROVIDE #6 BARE CU FROM PANEL GROUND TO GROUND BAR.

NIC 10 PROVIDE METALUX #4-SNLED-LD5-37SL-LW-UNV-L840-CD-1 OR EQUAL.

11 24" x 72" x 6" DEEP CABLE TRAY MOUNTED ABOVE COMMUNICATIONS CABINETS FROM STRUCTURE. POT IT FURNISHED CONTRACTOR INSTALLED.

NIC 12 PROVIDE SERVICE ENTRANCE (SUSE) PANEL, 120/240V, 1PH, 3W, 10,000 AIC, 60A MB, 30 CKT, WITH SEPARATE NEUTRAL AND GROUND BAR. SEE PANEL SCHEDULE FOR BRANCH CIRCUIT BREAKERS.

NIC 13 2" CONDUITS STUBBED 6" ABOVE FINISHED FLOOR.

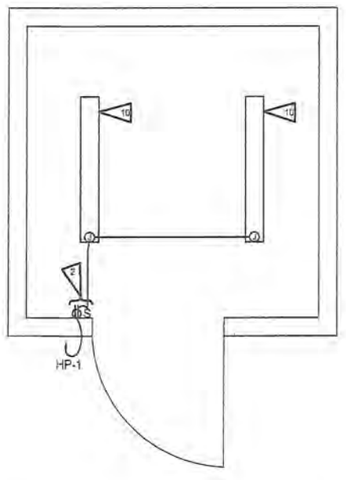
NIC 14 TVSS. SIEMENS #TPS3-A-11-15-D2 OR EQUAL.

NIC 15 3/4"C TO FENCE WITH #8 BARE CU SERVICE GROUND. PROVIDE 3/4"C x 10'-0" GROUND RODS AT TWO(2) FENCE CORNER POSTS.

16 POT IT FURNISHED RACKS. CONTRACTOR INSTALLED.

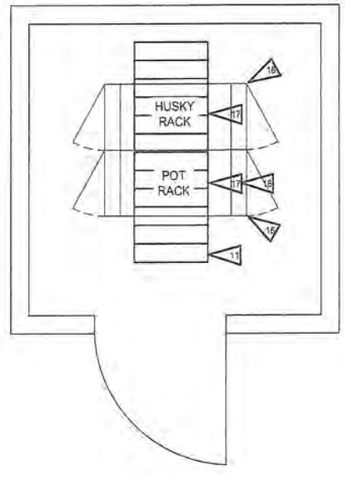
17 POT IT FURNISHED FIBER BULKHEADS (2)48 IN, 48 OUT AND FORTY(40) CLOSED CONNECTOR HOUSING(CCH) WITH LC ADAPTERS, SINGLE NODE(OS2), (6)LC DUPLEX ADAPTERS FOR 12-STRAND FIBER(8 PER PANEL) TO BE INSTALLED, TESTED AND LABELED BY CONTRACTOR.

18 POT RACK MOUNTED EQUIPMENT FURNISHED BY POT IT. INSTALLED, CONNECTED, TESTED AND LABELED BY CONTRACTOR:
(1)UPS
(2)MODEL 9300 SWITCHES
(4)10GB SFP + FOR SWITCH UPLINKS
(9)LC SFP LC-1GB-LX



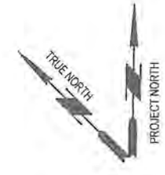
FIBER HUT (NIC) - LIGHTING FLOOR PLAN

SCALE: 1/2"=1'-0"



FIBER HUT (NIC) - CABLE TRAY, RACK FLOOR PLAN

SCALE: 1/2"=1'-0"



GRAPHIC SCALE
1/2"=1'-0" scale
2 0 2 4 feet

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MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — 12/9/19

SLH	12-09-19	APPROVED:	
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GLW	12-09-19	TREVOR THORNSLEY	
PROJ. ENGR	DATE	DIRECTOR ENG.	DATE
Scottk Dec 09, 2019		PRINTED BY:	
ONE SITCUM PLAZA		PORT ADDRESS:	
TACOMA, WA 98401-1837		DRAWING SCALE: AS NOTED	

PORT OF TACOMA
FIBER TO LOT F
LOT F FIBER HUT PLAN AND DETAILS

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WAB3-SF	VERT: MLLW 19.39' @ TIDE 22 1933		
PARCEL:			

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6636
E11
19 OF 22

CONT/CONS:	071169
M. ID:	101286-01
PHASE:	BID SET

BINDING EDGE

PORT OF TACOMA FILE: N:\Jobs\2019\19-070\Dwgs\19-070 E11

ELECTRICAL NOTES:

1. TWO (2) 2" C STUBBED 5' PAST EXISTING CURB. SAW CUT CURB, ASPHALT AND REMOVE (BY POTM). FO CABLE AND TERMINATION BY PORT CONTRACTOR FOR POT COMMUNICATION BOX AND BY ITS/HUSKY SITE CONTRACTOR FOR ITS/HUSKY COMMUNICATIONS BOX.

2. ONE (1) 1"C STUBBED 5' PAST EXISTING CURB. SAWCUT CURB, ASPHALT, AND REMOVE (BY POTM). POWER CABLES BY ITS/HUSKY SITE CONTRACTOR POLES 2 AND 5. POWER CABLES BY POT CONTRACTOR POLES 9 AND 12.

3. 5KVA, NEMA 3R, 316 STAINLESS STEEL UNIT SUB, 480V, 1PH TO 120/240V, 1PH WITH TWELVE(12) CIRCUIT BREAKER SPACES AND SIX(6), 20/1P CIRCUIT BREAKERS BY CONTRACTOR. PROVIDE PAINTED 3/4"C-(2)#12 CU & (1)#12 CU GRD, CAST 4 SQUARE BOX WITH 125V, 20A, GFI RECEPTACLE AND NEMA 3R "IN USE" COVER BY ITS/HUSKY CONTRACTOR POLES 2 AND 5. POLES 9 AND 12 BY PORT CONTRACTOR.

EQUIPMENT SCHEDULE

(1) NEMA 4X, 316 STAINLESS STEEL, 36"x36"x12"D, HINGED, LATCHING AND PAD LOCKABLE COMMUNICATIONS CABINET. CONTRACTOR PROVIDED.

(2) DIN BAR(S) FOR MOUNTING EQUIPMENT INTERIOR TO COMMUNICATIONS CABINET. CONTRACTOR PROVIDED.

(3) POINT TO POINT POT IT FURNISHED CONTRACTOR INSTALLED:
(1)ANTENNA SET
(1)POWER SUPPLY
(1)MEDIA CONVERTER
(1)SFP LC-1GB-LX

(4) LS ANTENNA POT IT FURNISHED CONTRACTOR INSTALLED AT P2 AND P5:
(1)LS ANTENNA
(1)POE POWER SUPPLY
(1)MEDIA CONVERTER
(1)SFP LC-1GB-LX

(5) CAST 3-GANG BOX WITH COVER, MOTOR RATED TOGGLE SWITCH (ACCESS POINT POWER DISCONNECT) AND (2)20A, 125V DUPLEX RECEPTACLES. CONTRACTOR PROVIDED. FIBER PATCH CORDS AND (2)CLOSET CONNECTOR HOUSING(CCH) WITH LC ADAPTERS, SINGLE MODE(OS2), (12)LC DUPLEX ADAPTERS FOR 24 STRAND FIBER, UPC.

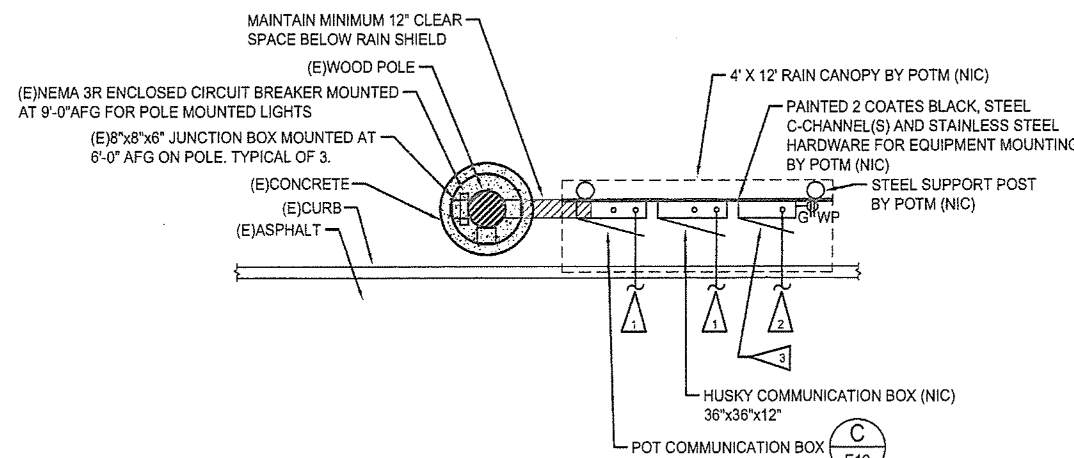
(6) FIBER BULKHEAD, POT IT FURNISHED, CONTRACTOR INSTALLED.

(7) GROUND BAR. CONTRACTOR PROVIDED.

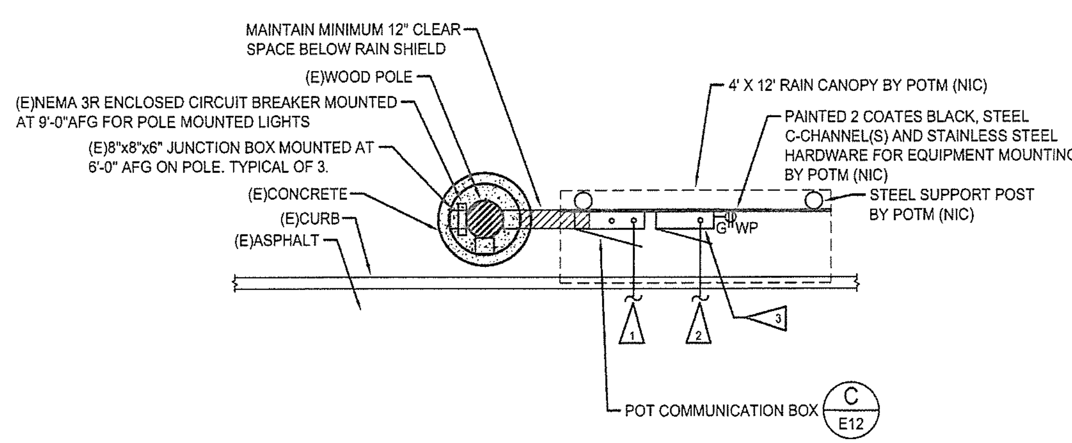
(8) CAMERAS POT IT FURNISHED CONTRACTOR INSTALLED AT P2, P5, P9, P12:
(1)CAMERA MOUNT ADAPTER
(1)CAMERA DOME
(1)CAMERA MOUNT
(1)CAMERA
(1)POWER SUPPLY
(1)MEDIA CONVERTER
(1)SFP LC-1GB-LX

(9) CAST 2-GANG BOX WITH COVER, MOTOR RATED TOGGLE SWITCH (CAMERA POWER DISCONNECT) AND 20A, 125V, DUPLEX RECEPTACLE. CONTRACTOR PROVIDED.

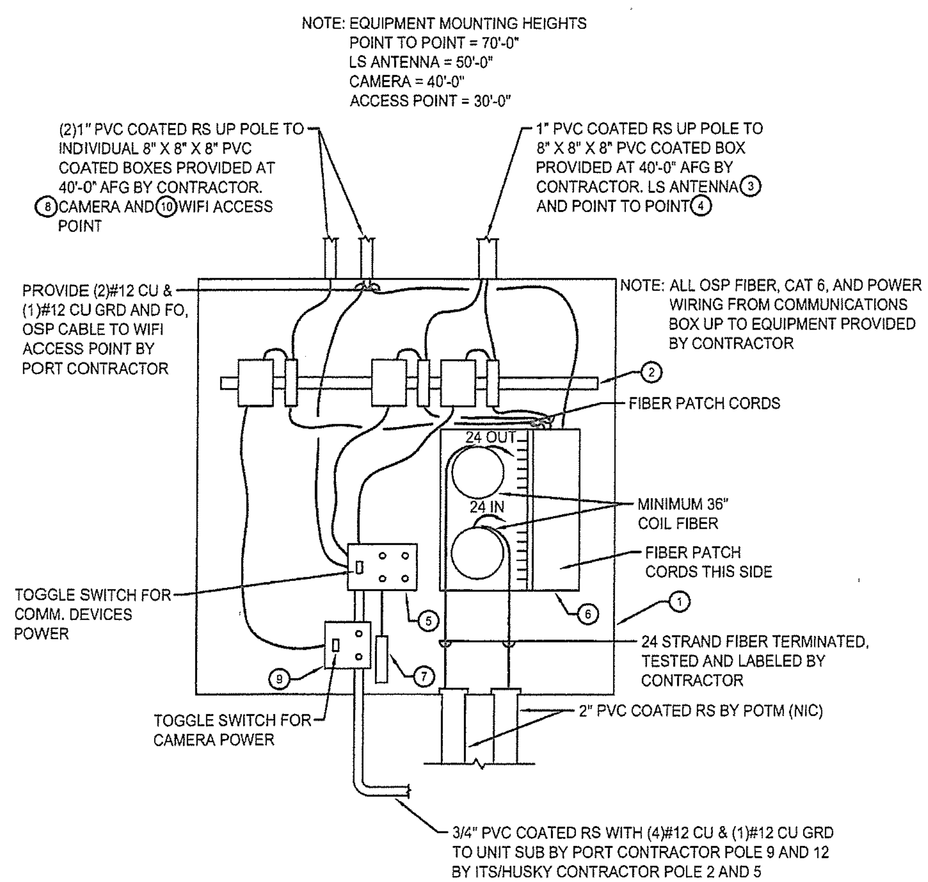
(10) WIRELESS ACCESS POINTS POT IT FURNISHED CONTRACTOR INSTALLED AT P2, P5, P9, P12:
(1)CISCO 1572 ACCESS POINT
(1)SFP LC-1GB-LX



A E12 **POWER/COMMUNICATIONS AT POLES 2 AND 5**
NO SCALE



B E12 **POWER/COMMUNICATIONS AT POLES 9 AND 12**
NO SCALE



C E12 **POT COMMUNICATIONS BOX**
NO SCALE

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923 MLK Jr. Way, Tacoma, WA 98405, info@crossengineers.com
Phone: (253) 759-0118, Job Number: 19-070

Port of Tacoma
moffatt & nichol — 600 UNIVERSITY STREET, SUITE 610, SEATTLE, WA 98101, (206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED: SLH 12-09-19
CHECKED BY DATE: TREVOR THORNSLEY GLW 12-09-19
DIRECTOR ENG. DATE / PROJ. ENGR DATE
PRINTED BY: ScottK Dec 09, 2019
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837

PORT OF TACOMA
FIBER TO LOT F
ELECTRICAL DETAILS

TOWNSHIP: 21N | RANGE: 3E | SECTION: 34
DAT-HRZ: WA83-SF | VERT: MLLW 19.39' @ TIDE 22 1933
PARCEL: | DRAWING SCALE: AS NOTED

6636
E12
20 OF 22
CONT/CONS: 071169
M. ID: 101286-01
PHASE: BID SET

PORT OF TACOMA FILE: N:\Jobs\2019\19-070\Dwgs\19-070 E12

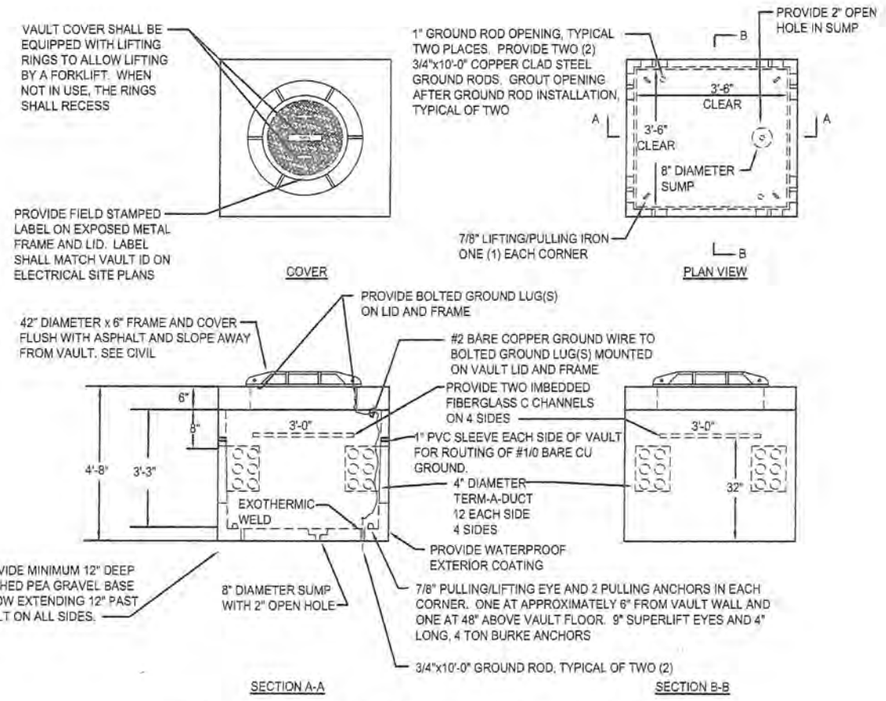
BINDING EDGE

BINDING EDGE

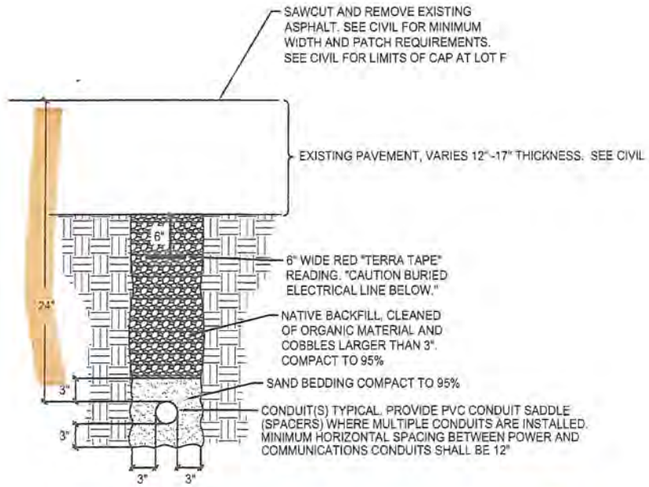
VAULT SCHEDULE			
ID	DESCRIPTION	LOADING	NOTES
PV4A,PV8A	CUSTOM 600V POWER VAULTS, SEE DETAIL A, THIS SHEET BY POT CONTRACTOR	MINIMUM 125 KIP.	1 2 3 4 5 6
CV4A,CV8A	CUSTOM COMMUNICATION VAULT SEE DETAIL A, THIS SHEET BY POT CONTRACTOR	MINIMUM 125 KIP.	1 2 3 4 5 6
SV116A	CUSTOM COMMUNICATION VAULT SEE DETAIL A, SHEET E9 BY POT CONTRACTOR	MINIMUM 125 KIP.	1 2 3 4 5 6
SV116D	CUSTOM COMMUNICATION VAULT SEE DETAIL A, SHEET E9 BY POT CONTRACTOR	TRAFFIC RATED H25	1 2 3 4 5 6

VAULT SCHEDULE NOTES:

1. ALL CONDUITS (2" AND LARGER) ENTERING OR LEAVING VAULTS SHALL USE TERM-A-DUCTS. ALL 3/4" AND 1" CONDUITS ENTERING OR LEAVING VAULTS MAY USE BLOCK-OUTS WITH BELL ENDS AND GROUTED. PROVIDE REMOVABLE FOAM FILL IN ALL EMPTY CONDUIT OPENINGS. PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS. PROVIDE MAXCELL EDGE DETECTABLE MXC2003 (3 CELL) OR EQUAL IN ALL FOB LABELED COMMUNICATIONS CONDUITS. ITS/HUSKY CONTRACTOR SHALL PROVIDE CONDUIT LABELS FOR ALL CONDUITS ENTERING AND LEAVING VAULTS. PROVIDE PHENOLIC LABEL ATTACHED TO VAULT WALL WITH TWO (2) PLASTIC INSERTS AND STAINLESS STEEL SCREWS ADJACENT TO EACH CONDUIT. PHENOLIC LABEL SHALL HAVE CONDUIT ID ENGRAVED AS INDICATED ON CONDUIT AND WIRE SCHEDULE DRAWINGS.
2. SEE SPECIFICATION SECTION 26 71 19 FOR ADDITIONAL VAULT INSTALLATION REQUIREMENTS.
3. ALL WIRE (POWER AND COMMUNICATIONS) SHALL COMPLETELY LOOP AROUND VAULT WALLS PRIOR TO EXITING VAULT.
4. CONTRACTOR SHALL PROVIDE CAST LABEL ON LID TO READ "ELECTRIC" OR "COMMUNICATIONS". PROVIDE FIELD STAMPED LABEL ON LID WITH VAULT ID TO MATCH ELECTRICAL SITE PLANS.
5. PROVIDE BOLTED GROUND LUG(S) ON LID AND FRAME. PROVIDE #2 BARE CU GROUND IN EACH VAULT TO TWO (2) 3/4" X 10'-0" GROUND RODS.
6. PROVIDE STENCIL PAINTED, VAULT KIP RATING ON INSIDE OF VAULT DIRECTLY BELOW LID. MINIMUM 4" HIGH LETTERS.



TYPICAL SITE POWER/ COMMUNICATIONS VAULTS (A / E13)
NOT TO SCALE



POWER/COMMUNICATIONS TRENCH - TYPICAL
NOT TO SCALE

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Port of Tacoma
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moffatt & nichol
800 UNIVERSITY STREET
SUITE# 510
SEATTLE, WA 98101
(206) 622-2222

MARK:	REVISION:	BY:	APPR:	DATE:

STATE OF WASHINGTON — STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — 12/9/19

APPROVED:		SLH	12-09-19
		CHECKED BY	DATE
TREVOR THORNSLEY		GLW	12-09-19
DIRECTOR ENG.	DATE	PROJ. ENGR	DATE
PRINTED BY:	Scottk Dec 09, 2019		
PORT ADDRESS:	ONE SITCUM PLAZA		
	TACOMA, WA 98401-1837		

PORT OF TACOMA
HUSKY PROCESSING LANES
ELECTRICAL VAULT DETAILS

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933		
PARCEL:	DRAWING SCALE: AS NOTED		

6636
E13
21 OF 22

CONT/CONS: 071169
M. ID: 101286-01
PHASE: BID SET

PORT OF TACOMA FILE: C:\Users\scottk.CROSSENGINEERS\appdata\local\temp\AcPublish_2300\19-070 E13

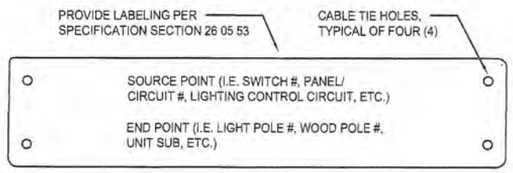
BINDING EDGE

CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT ID	CONDUIT NO.	CONDUIT SIZE	CONDUIT TYPE	CONDUCTORS PER CONDUIT NO.	CONDUCTORS PER CONDUIT SIZE	CONDUCTORS PER CONDUIT TYPE	FROM	TO	REMARKS
FOB2	5	2	②	6	-	-	HUT POT RACK	CV11	⑩
FOB3	2	2	②④	6	-	-	CV11	POLE 6	⑤
FOB4	8	2	②	6	-	-	CV11	CV10	⑭
FOB6	8	2	②	6	-	-	CV10	CV7	⑭
FOB7	6	2	②	6	-	-	CV7	CV8	⑮
FOB10	8	2	②	6	-	-	CV7	CV6	⑬
FOB11	8	2	②	6	-	-	CV6	CV5	⑬
FOB12	8	2	②	6	-	-	CV5	CV3	⑬
FOB13	4	2	②	6	-	-	CV3	CV4	⑬
FOB18	2	2	②	6	-	-	CV8	CV8A	⑭⑬
FOB19	2	2	②	6	-	-	CV8A	POT COMM BOX POLE 9	⑭⑫
FOB20	2	2	②	6	-	-	CV7	HUSKY COMM BOX POLE 5	
FOB21	2	2	②	6	-	-	CV7	POT COMM BOX POLE 5	⑭⑫
FOB23	2	2	②	6	-	-	CV5	POT COMM BOX POLE 2	⑬
FOB24	2	2	②	6	-	-	CV4	CV4A	⑬
FOB25	2	2	②	6	-	-	CV4A	POT COMM BOX POLE 12	⑬
SD58	1	1	②④	2/1	8/10	600V	PANEL 4A	PV4	
SD59	1	1	②	2/1	8/10	600V	PV4	PV4A	
SD60	1	1	②④	2/1	8/10	600V	PV4A	UNIT SUB POLE #12	
SD73	1	1	②④	2/1	8/10	600V	PANEL 4B	PV8	
SD74	1	1	②	2/1	8/10	600V	PV8	PV8A	
SD75	1	1	②	2/1	8/10	600V	PV8A	UNIT SUB POLE #9	

SCHEDULE ABBREVIATION LEGEND:

C	=	COMMUNICATIONS	SDV	=	SECONDARY POWER VAULT
CV	=	COMMUNICATIONS VAULT	SL	=	SITE LIGHTING
FOB	=	FIBER OPTIC	SP	=	SPARE CONDUIT
SD	=	SECONDARY 600V DISTRIBUTION	TPU	=	TACOMA PUBLIC UTILITIES
SC	=	SECURITY CAMERAS	WPC	=	WHERE-PORT COMMUNICATIONS



FIBER OPTIC CABLE AND CONDUCTOR IDENTIFICATION LABEL (A / E14)
NOT TO SCALE

SCHEDULE NOTES:

1. EXISTING CONDUIT
2. PVC SCHEDULE 80
3. STUB AND CAP AT TOP OF CONCRETE BASE.
4. PVC COATED GRS CONDUIT
5. STUB AND CAP 12" ABOVE FINISHED GRADE.
6. PROVIDE MAXCELL EDGE DETECTABLE 3 CELL INNER DUCT. MAXCELL MXC2003 OR EQUAL. POT FURNISHED CONTRACTOR INSTALLED.
7. COORDINATE AND INSTALL FIELD WIRING FOR SCALES SUPPLIED WITH SCALE EQUIPMENT.
8. NOT USED.
9. *NOT IN CONTRACT (NIC)*
10. REVIEW AND COORDINATE WITH TRUCK INTERCOM MANUFACTURER'S SHOP DRAWINGS. STUB PVC CONDUIT 2" ABOVE TOP OF CONCRETE, WITH 18" WIRE LOOP FOR CONNECTION TO RECEPTACLE BY INTERCOM CABINET SUPPLIER. SEE CIVIL.
11. STUB CONDUIT MINIMUM 6" ABOVE OCR PARTIAL FOUNDATION. LEAVE MINIMUM 24" LOOP OF POWER WIRE FOR EXTENSION BY OCR EQUIPMENT PROVIDER. SEE CIVIL.
12. REVIEW AND COORDINATE POWER CONNECTION WITH GATE ARM MANUFACTURER. COMMUNICATION'S WIRING BY GATE ARM MANUFACTURER. SEE CIVIL.
13. PROVIDE WATER TIGHT SPLICE(S) IN VAULT FOR GROUND WIRE. PROVIDE GROUND WIRE IN INDIVIDUAL CONDUITS TO EACH T-POLE, CHASSIS CAMERA PEDESTALS AND TRUCK INTERCOM PEDESTALS. SEE CIVIL.
14. PROVIDE OUTSIDE PLANT (OSP), (2)24 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLE IN SINGLE CELL OF INNER DUCT.
15. PROVIDE OUTSIDE PLANT (OSP), 24 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLE IN SINGLE CELL OF INNER DUCT.

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Tacoma, WA 98405
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Job Number: 19-070

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moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUSSEY — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 12/9/19

SLH	12-09-19		
CHECKED BY:	DATE		
GLW	12-09-19		
PROJ. ENGR	DATE		

DIRECTOR ENG.: TREVOR THORNSLEY — DATE
PRINTED BY: Scottk Dec 09, 2019
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837
APPROVED:

PORT OF TACOMA
HUSKY PROCESSING LANES
CONDUIT AND CONDUCTOR SCHEDULES

CONT/CONS: 071169	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101286-01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ TIDE 22 1933	
PHASE: BID SET	PARCEL:	DRAWING SCALE: AS NOTED	

6636
E14
22 OF 22

PORT OF TACOMA FILE: N:\Jobs\2019\19-070\Dwgs\19-070 E14

FIBER TO LOT F

TACOMA, WASHINGTON

ELEVATION DATUM:
MEAN LOWER LOW WATER (MLLW);
CONVERSION: MLLW DATUM MINUS 6.17' = NGVD 29 CITY OF TACOMA DATUM

HORIZONTAL DATUM:
NAD 83 (2007)

CONVERSION: PORT OF TACOMA DATUM MINUS N 0.22, E 0.00 = NAD 83/91 CITY OF TACOMA DATUM

SPECIAL TRAFFIC CONTROL REQUIREMENTS:

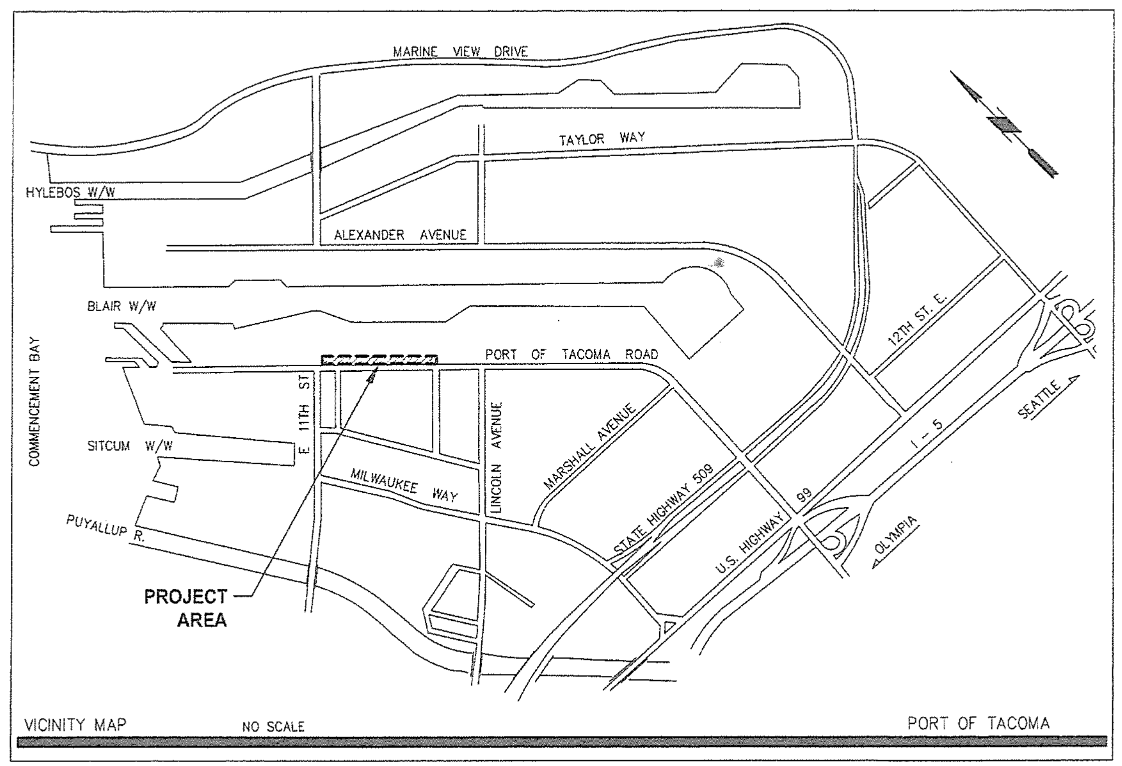
1. A MINIMUM OF ONE 20-FOOT WIDE ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES AT ALL TIMES.
2. THREE (3) WORKING DAYS PRIOR TO ANY STREET OR LANE CLOSURE, THE CONTRACTOR SHALL NOTIFY:

TACOMA PUBLIC WORKS ENGINEERING DIVISION	(253) 591-5500
TACOMA PUBLIC WORKS STREETS AND GROUNDS	(253) 591-5495
TACOMA PUBLIC WORKS SOLID WASTE	(253) 591-5544
TACOMA FIRE DEPARTMENT	(253) 591-5733
TACOMA POLICE DEPARTMENT	(253) 591-5951
LESA COMMUNICATION CENTER	(253) 798-4721 OPT. #3

3. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO, AND APPROVED BY THE TACOMA PUBLIC WORKS, ENGINEERING DIVISION, PRIOR TO BEGINNING ANY WORK ON CITY RIGHT OF WAY.

GENERAL CONSTRUCTION SEQUENCE:

1. HOLD AND ATTEND PRE-CONSTRUCTION MEETING WITH THE CITY OF TACOMA CONSTRUCTION DIVISION AND BUILDING AND LAND USE SERVICE, TACOMA POWER, TACOMA WATER, PORT OF TACOMA, ENGINEER AND OTHERS AS APPLICABLE PRIOR TO COMMENCEMENT OF WORK.
2. STAKE PROJECT LIMITS PRIOR TO BEGINNING CONSTRUCTION.
3. WHEN COMPLETED CONTACT CITY INSPECTOR FOR FINAL APPROVAL.



VICINITY MAP NO SCALE PORT OF TACOMA

PROJECT CONTACT INFORMATION

OWNER - PORT OF TACOMA
CONSULTING ENGINEER - MOFFATT & NICHOL

STEVEN GRAY, P.E.
PROJECT MANAGER
PHONE: (206) 622-0222
EMAIL: SGRAY@MOFFATTNICHOL.COM

SHEET LIST INDEX	
SHEET NUMBER	SHEET TITLE
WO-01	COVER SHEET AND SHEET INDEX
WO-02	GENERAL NOTES
WO-03	TESC DETAILS
WO-04	TESC PLAN
WO-05	OVERALL PLAN
WO-06	CONDUIT THROUGH CONNECTIONS
WO-07	DETAILS

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 11/01/2019 | SCALE AS NOTED
DESIGNED JAT | CHECKED SLG
SENIOR PM SLG | PROJECT NAME
DRAWING NAME

STEVEN LEE GRAY — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
11/5/20

ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

FIBER TO LOT F
COVER SHEET AND SHEET INDEX

WO-01
SHEET NO
SHEET 1 OF 7

Plotted By: Todd, James 11/5/2019 7:23 AM

GENERAL

- The following special provisions are to be used in conjunction with the "2010" Standard Specifications for Road, Bridge and Municipal Construction" and "Standard Plans for Road, Bridge and Municipal Construction" as prepared by the Washington State Department of Transportation (WSDOT). State Standard Specifications are available through WSDOT, by mail at Pre-Contract Section, P.O. Box 47408, Olympia, WA 98504-7408, or by telephoning (360) 705-7430.
- Any inconsistency between these work order drawings and the 2010 Standard Specifications or the WSDOT Standard Plans shall be resolved by the following order of precedence (e.g., 1 presiding over 2, 3, and so forth):
  1. Approved Work Order Drawings
  2. 2010 Standard Specifications
  3. WSDOT Standard Plans
- Any revisions to these plans must be reviewed and approved by the City of Tacoma Department of Public Works prior to any implementation in the field.
- Contractors shall familiarize themselves with the site and shall bring any discrepancies to the attention of the Engineer prior to undertaking the affected work.
- Any discrepancy in these drawings, specifications, these notes, and the site conditions shall be reported to the Engineer, who shall correct such discrepancy in writing after reviewing any changes. Any work done by the Contractor after the discovery of such discrepancy shall be done at the Contractor's risk. The Contractor shall verify and coordinate the dimensions among all drawings prior to proceeding with any work.
- A pre-construction meeting shall be held at the City of Tacoma with the applicant, contractor, and City inspectors prior to issuance of a permit.

ADDITIONAL PERMITS

- Separate permits are required for all retaining walls, grading, and erosion control. Adherence to all conditions of these permits is required as a part of this plan.
- Separate permits are required for sidewalk installation as well as curb and gutter removal and driveway construction when constructed at building permit stage.
- Separate storm and sanitary sewer connection permits are required for connections to the sanitary or storm sewer system.

UTILITIES

- The existing underground utilities shown hereon are based upon existing record drawings and are not guaranteed to be accurate, nor all-inclusive.
- All utilities must be verified prior to construction. If the project requires any excavation, the developer/contractor is required to call the Utility Underground Location Center at (800) 424-5555 at least two days before starting such excavation in accordance with RCW 19.122.
- It shall be the Contractor's responsibility to protect, in place, all utilities and/or structures whether shown or not shown on this plan. Damage due to the Contractor's operations shall be repaired at the Contractor's expense.

EXCAVATION

- If workers enter any trench or other excavation four feet or more in depth that does not meet the open pit requirements of Section 2-09.3(3)B, it shall be shored and cribbed. All trench safety systems shall meet the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Contractor alone shall be responsible for all worker safety, and neither the City of Tacoma nor the Engineer of record assumes any responsibility.

PAVEMENT PREPARATION / RESTORATION

- Additional removal and replacement of pavement may be required to provide proper transition/crown as directed by the City of Tacoma Construction Inspector in the field.
- The street sections shown on this plan are designed to be placed upon a firm and unyielding base.
- Subgrade compaction shall be tested by a professional geotechnical consultant prior to placing base material.
- Pavement restoration shall be constructed in accordance with the City of Tacoma Restoration policy.

HOT MIX ASPHALT

- The hot mix asphalt shall be HMA CL 1/2 inch PG 64-22. Mix design shall be based on Standard Plan PD-01-Pavement Design Standards.
- Section 5-04.3(8)A 'Acceptance Sampling and Testing' of the Standard Specifications is deleted.
- All hot mix asphalt shall be compacted to a minimum of 92 percent of the maximum density as determined by AASHTO T209. All hot mix asphalt utilized shall be considered compactable. The level of compaction attained will be determined as the average of not less than 5 nuclear density gauge tests taken on the day the mix is placed (after completion of the finish rolling) at randomly selected locations within each lot. The quantity represented by each lot will be no greater than a single day's production or approximately 400 tons, whichever is less.
- All testing results shall be provided to the City within 48 hours of the test.
- Control lots not meeting the minimum density standard shall be removed and replaced with satisfactory material.
- In addition to the randomly selected locations for test of the control lot, the Engineer reserves the right to test any area which appears defective and to require further compaction of areas that fall below acceptable density readings. These additional tests shall not impact the compaction evaluation of the entire control lot.
- Hot mix asphalt pavement shall not be placed on any traveled way between October 1 and April 1 without written approval from the Construction Division Manager.
- No traffic shall be allowed on any newly placed pavement without the approval of the Inspector.

CONCRETE

- Concrete pavement mix design shall be based on Standard Plan PD-01-Pavement Design Standards.
- Cold Weather Concrete Work. The following requirements for placing concrete shall be in effect from November 1 to April 1:
  1. The Engineer shall be notified at least 24 hours prior to any concrete placement.
  2. Weather permitting, all concrete placement shall be completed no later than 2:00 p.m. each day.
  3. Where forms have been placed and the subgrade has been subjected to severe frost, no concrete shall be placed until the ground is completely thawed. At that time, the forms shall be adjusted and subgrade repaired as determined by the Engineer.
- Curing of concrete shall be in accordance with Section 5-05.3(13) of the Standard Specifications.
- The slump for concrete used for sidewalks shall not exceed four inches +/- one inch.
- Sidewalks and curb ramps shall be constructed in accordance with ADA Standards for Accessible Design, 28 CFR, Part 35 and as supplemented by the Public Works Right of Way Accessibility Guidelines (PROWAG).

SANITARY AND STORM SEWERS

- 7-08.3(2)G Jointing of Dissimilar Pipe:

Dissimilar pipe shall be joined by use of rigid couplings manufactured by Romac Industries, Inc., or Engineer approved equal.

- 7-08.3(2)F Plugs and Connections:

Rigid Couplings, manufactured by Romanc Industries, Inc., or Engineer approved equal, shall be used at any pipe joint in which bell and spigot or fused joints are not used. Flexible couplings are not permitted.

- Section 7-04 of the Standard Specification is deleted. Storm sewers shall meet all the requirements of sanitary sewers.
- Sewers and appurtenances shall be cleaned and tested after backfilling by either exfiltration or low-pressure air method at the option of the Contractor, except where the ground water table is such that the Engineer may require the infiltration test.
- All sanitary and storm sewers shall be video inspected by City Forces prior to paving where paving occurs over sewers. All other sewers will be video inspected prior to final acceptance.
- All abandoned pipes encountered during construction and new storm and sanitary sewer stub outs shall be sealed with a watertight pipe plug.
- All frames and grates for standard catch basin inlets on this project shall be "vaned" type and shall conform to that shown on WSDOT Standard Plan No. B30.30-00
- Recycled concrete shall not be used for pipe zone backfill.

MISCELLANEOUS

- Any fence or structure replaced and/or relocated shall be maintained to remain functional.
- Independent quality assurance sampling and testing will be provided by a certified independant laboratory for all improvements within the right-of-way. All special inspection reports shall be forwarded to the Construction Division Office on a monthly basis, and / or as requested by the construction inspector.
- The Contractor shall only use those hydrants designated by the agency in charge of water distribution and in strict accordance with its requirements for hydrant use. Water applied by the Contractor shall not be from residential sources.

PRIVATE WORK ORDER GENERAL NOTES

GRADING, EXCAVATION, AND EROSION CONTROL NOTES

- All work is to be done in accordance with the approved grading plan, soils report, the most current WSDOT Standard Specification For Road, Bridge And Municipal Construction and the current Tacoma Surface Water Management Manual.
- When construction operations are such that debris from the work is deposited on the streets, the Contractor shall, as a minimum, remove on a daily basis any deposits or debris which may accumulate on the roadway surface. Should daily removal be insufficient to keep the streets clean, the Contractor shall perform removal operations on a more frequent basis. If the City of Tacoma Construction Inspector determines that a more frequent cleaning is impractical or if the Contractor fails to keep the streets free from deposits and debris resulting from the work, the Contractor shall, upon order of the City of Tacoma Construction Inspector, provide facilities for, and remove all clay or other deposits from the tires or between wheels before trucks or other equipment will be allowed to travel over paved streets. Should the Contractor fail or refuse to clean the streets in question, or the trucks or equipment in question, the City of Tacoma Construction Inspector may order the work suspended at the Contractor's risk until compliance with the Contractor's obligations is assured, or the City of Tacoma Construction Inspector may order the streets in question cleaned by others and such costs incurred by the City in achieving compliance with these requirements, including cleaning of the streets, shall be deducted from the work order account.
- The Contractor shall protect existing drainage structures using acceptable methods and materials as shown on this plan. If the methods and materials as shown on this plan are not adequate, the City of Tacoma Construction Inspector may require additional/alternative methods for erosion control and/or protection of existing drainage structures. Additional or alternative methods shall be submitted by the design engineer and accepted by the City of Tacoma Construction Inspector. Any damage caused to the City of Tacoma storm sewer system as a result of the work outlined on this plan shall be the sole responsibility of the Contractor. Resolving said damage may include, but not be limited to, the cleaning of the drainage system in question by the Contractor.
- Watering provisions when applicable must be in place to prevent dust from becoming air borne. Violation of this condition will resort in a stop work order until corrected.
- Fill that will support a street section or other structures shall be placed under the inspection of a licensed Geotechnical Engineer. Soil to be placed shall be tested and compacted to 95 percent of its maximum density. Engineer shall document existing site conditions, soil and its placement and allowable bearing capacity submitted. Standard requirements for cuts and fill are contained in the WSDOT Standard Specifications For Road, Bridges, and Municipal Construction.
- A stormwater pollution prevention plan is required for all work order projects. The plan must be in accordance with the current Tacoma Surfacewater Management Manual.

HYDROSEEDING

- All areas that are cleared and grubbed, graded, excavated or filled are subject to hydroseeding. Any of these areas that are left unpaved or unlandscaped shall be hydroseeded under the direction and approval of the Construction Inspector.
- Hydroseed only during the periods of April 1 though May 31 or September 1 though October 15. This hydroseeding requirement may be met during the months of June through August if irrigation is provided.
- Maintain hydroseeding throughout the winter wet season.

EROSION CONTROL MEASURES

A. Minimum Erosion Control measures shall include:
   1. Construction entrance.
   2. Perimeter erosion/sedimentation control.
   3. Protection of catch basins.
   4. Stabilization of exposed soils.

B. All erosion control shall be in place prior to clearing.

C. Erosion control measures shall be maintained at all times to the approval of the Construction Inspector.

D. Should temporary erosion and sedimentation control measures, as shown on plans become inadequate, the contractor shall install facilities as necessary to protect adjacent properties and the City of Tacoma drainage system, meeting approval of the Construction Inspector.

E. Grading, excavation, and filling prohibited. No permits to perform grading, excavation, or filling during the period from October 1st through March 31 shall be issued. EXCEPTION: The Building Official may approve a grading, excavation, or filling plan prepared by a licensed Civil or Geotechnical Engineer which specifically addresses the winter rain season and the associated erosion problems, and issue a permit based on such plan.

F. Call for inspection of the Construction Inspector upon completion of:
   1. Staking of clearing limits.
   2. Installation of erosion control and prior to site grading.
   3. Prior to removal of erosion control devices.

G. All material removed from site shall be placed only at a permitted site. Verify location of destination of material prior to exportation.

H. Traffic control provisions as approved by the traffic engineer shall be adhered to at all times.

I. Trees to be removed shall be clearly marked for removal. Trees to be saved shall be fenced with barricade fence at the drip line (outer edge of tree branches) to keep construction vehicles from compacting root zone and killing trees. This fencing shall be maintained until construction ends.

RECORD DRAWINGS CRITERIA FOR ACCEPTANCE OF ALL PRIVATE WORK ORDERS

- All revisions to the approved plans must be approved by the City of Tacoma Public Works Construction Division prior to implementation of the changes.
- A determination at the time of proposal shall be made whether the revision can be addressed with red line drawings submitted as a part of the record drawings or will require formal submission for approval.
- Record drawings shall show the station, offset, centerline and gutter flowline elevations, to nearest 0.01 foot; for all horizontal and vertical roadway alignment changes, at the intersection end of radius points and at the beginning and end of new paving.
- Record drawings shall show the station, offset, invert, and rim elevations to the nearest 0.01 foot for all storm and sanitary sewer structures. (i.e.: manholes, catch basins, etc.)
- After any new storm and/or sanitary sewer(s) have been cleaned and the manholes channeled, the main(s) shall be televised to provide a record of the constructed conditions and to verify side sewer connection locations by the City of Tacoma Public Works Sewer Maintenance Division.
- The property side ends of the side sewers shall be marked in the field by means of a 2-inch by 4-inch board and locate wire that extends from the flow line of the side sewer to at least 1 foot above the finished lot grade. Record drawings shall show all side sewers and shall locate them by measurements from permanent objects. (i.e.: curb, property corner, etc.) In addition, the depth of all side sewers shall be noted on the record drawings and locate board.
- Record drawings shall be received and accepted prior to issuing side sewer connection permits or release of performance bonds.
- Record drawings shall show vertical and horizontal datum for survey monuments (existing or new construction) within the limits of the project.
- Record drawings shall consist of a clean set of approved work order drawings with all changes noted above shown in red ink.
- Record drawings must be submitted within 30 days of substantial completion or City survey crews will collect the necessary data and bill against the work order

MONUMENT REMOVAL PERMIT PROCESS

"No survey monument shall be removed or destroyed (the physical desturbance or covering of a monument such that the survey point is no longer visible or readily accessible) before a permit is obtained from the Department of Natural Resources (DNR)." WAC 332-120-030(2) states "It shall be the responsibility of those performing construction work or other activity (including road and street resurfacing projects) to adequately search the records and the physical area of the proposed construction work or other activity for the purpose of locating and referencing any known or existing survey monuments." Construction shall not commence until WAC outlined in Chapter 332-120 is complied with.

SEWERS AND STORM

- Clearing stakes if needed.
- Stakes every 50 feet plus grade breaks. Try to maintain 12 foot offsets in streets and 8 foot offsets in alleys.
- Double offsets at manholes and catch basins (ahead and back stakes at angle points).
- Catch basin station shall be to the centerline of the basin. Catch basin offsets shall be to the face of the curb.

RESIDENTIAL STREETS

- Clearing stakes as needed.
- Slope stakes every 50 feet and grade breaks if cuts or fills exceed 2 feet.
- Curb stakes every 50 feet and grade breaks, on 4 foot offset to the face of curb. Curb stakes are set to the top of curb grade (Blue Tops).
- Also stake the beginning and end of all approaches.
- No centerline of street grades unless the street grade is warped. If street grades are needed, set blue tops for each course.

ARTERIAL STREETS

- Clearing stakes as needed.
- Slope stakes every 50 feet and grade breaks if cuts or fills exceed 2 feet.
- Curb stakes every 50 feet and grade breaks, on 4 foot offset to the face of curb.
- Curb stakes are set to the top of curb grade (Blue Tops). Also stake the beginning and end of all approaches.
- Stake centerline and quarterline grade every 50 feet and grade breaks at grade for each course.

ALLEYS

- Stake both sides every 50 feet and grade breaks, on a 2 foot offset to the edge of paving, with a cut of fill to edge of paving on high side and flow line on low side.

SIDEWALKS

- Offsets for walks are set on 50' intervals and grade breaks normally at 2 foot to edge of walk and at edge of walk grade (Blue Tops).
- Sidewalk alignment is normally at 5 feet from the face of curb. No walk grades are needed if curbs are built.

HORIZONTAL AND VERTICAL CURVES

- Grade stakes must be set every 25 feet and grade breaks with a minimum of 3 stakes for each curve. Radius points on street Returns.

moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE 11/01/2019	SCALE AS NOTED
BY	DESIGNED JAT	CHECKED SLG
DATE	SENIOR PM SLG	PROJECT NAME
FIELD BOOKS	DRAWING NAME	

STEVEN LEE GRAY, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER
11/5/

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

ASST. CONSTRUCTION DIVISION MANAGER

FIBER TO LOT F
GENERAL NOTES

WO-02
SHEET NO
SHEET 2 OF 7

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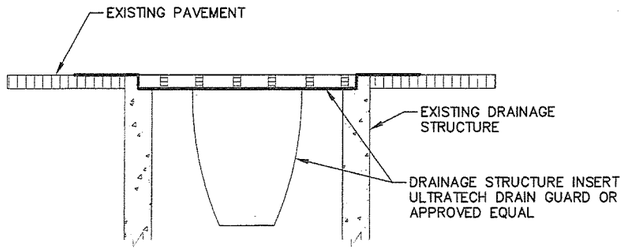
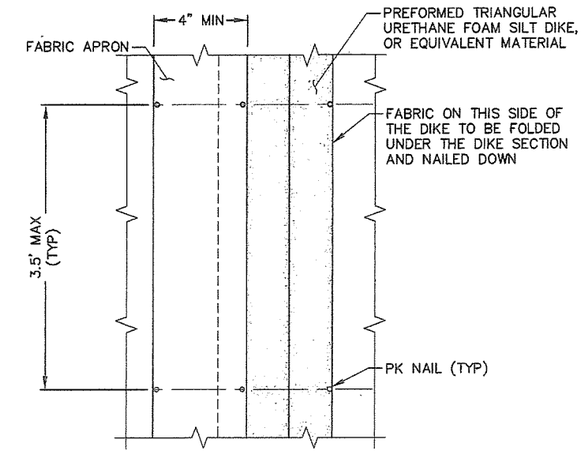
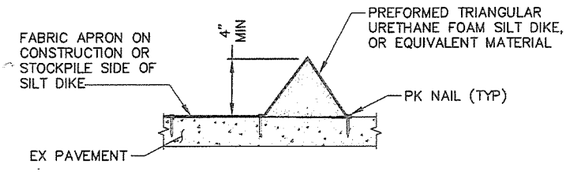


NOTES:

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC SHALL BE REMOVED. ALL SEDIMENT SHALL BE DISPOSED OF OFF-SITE.
2. REFER TO SPECIFICATION SECTION 01 57 13, PARAGRAPH 3.03B FOR REQUIREMENTS TO MAINTAIN AND CLEAN DRAINAGE STRUCTURE INSERTS.

1 / VARIES **TEMPORARY DRAINAGE STRUCTURE INSERT DETAIL**
SCALE: NTS





TRIANGULAR SILT DIKE NOTES

1. PK NAILS SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF A 7-FOOT UNIT AS SHOWN ON THE DIKE PLAN.
2. ALTERNATE APPROVED HOLD DOWN DEVICE MAY BE SUBSTITUTED FOR PK NAILS (WIRE STAPLES, ETC.).

2 / VARIES **TEMPORARY TRIANGULAR SILT DIKE**
SCALE: NTS

NOTE

1. ALTERNATE MEANS TO CONTROL SEDIMENT ON PAVEMENT MAY BE SUBSTITUTED FOR TRIANGULAR SILT DIKES SUBJECT TO ENGINEER APPROVAL.

moffatt & nichol

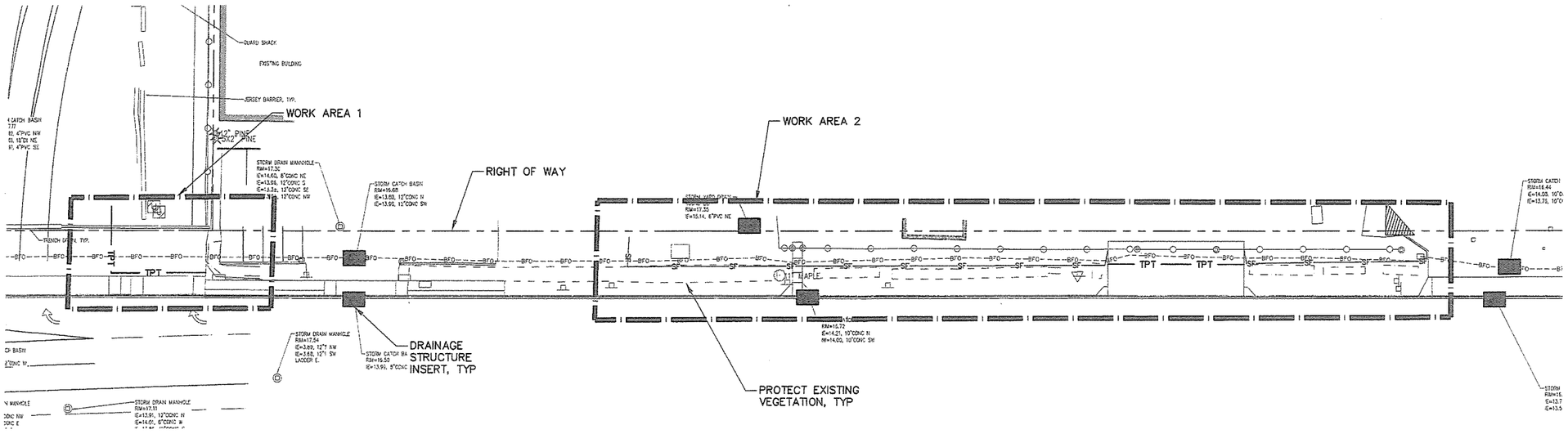
Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 11/01/2019 | SCALE AS NOTED
DESIGNED JAT | CHECKED SLG
SENIOR PM SLG | PROJECT NAME
DRAWING NAME

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
FIBER TO LOT F
TESC DETAILS
WO-03
SHEET NO
SHEET 3 OF 7



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1
WO-04

TESC PLAN - WORK AREAS 1 & 2

SCALE: 1"=30'

2
WO-04

TESC PLAN - WORK AREA 3

SCALE: 1"=30'

NOTES:

1. WORK AREAS REQUIRING EXCAVATION OR OTHER GROUND DISTURBING ACTIVITIES ARE SHOWN.
2. PLACE DRAINAGE STRUCTURE INSERTS IN ALL DRAINAGE STRUCTURES IN THE VICINITY OF THE WORK, PRIOR TO COMMENCEMENT OF WORK.
3. UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
4. DEMOLITION DRAWINGS DO NOT INCLUDE SAWCUTTING AND PAVEMENT REMOVAL REQUIRED FOR UTILITY WORK.

LEGEND

▬ · ▬	CONSTRUCTION LIMITS
—TPT—	TESC PERIMETER TREATMENT
—SF—	SILT FENCE
■	TEMPORARY DRAINAGE STRUCTURE INSERT

SCALE: 1"=30'

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moffatt & nichol

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 11/01/2019	SCALE AS NOTED
DESIGNED JAT	CHECKED SLG
SENIOR PM SLG	PROJECT NAME
DRAWING NAME	

STEVEN LEE GRAY
11/5/20

ASST. CONSTRUCTION DIVISION MANAGER

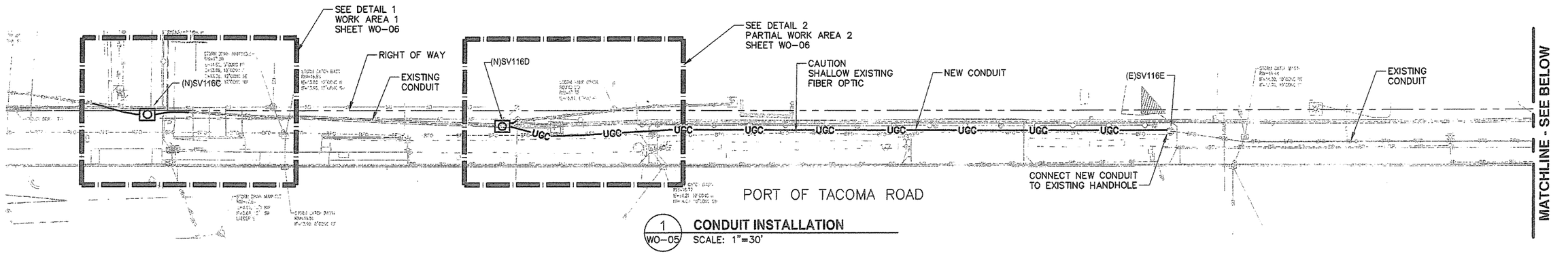
CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

FIBER TO LOT F

TESC PLAN

WO-04

SHEET NO 4 OF 7



1 WO-05 **CONDUIT INSTALLATION**
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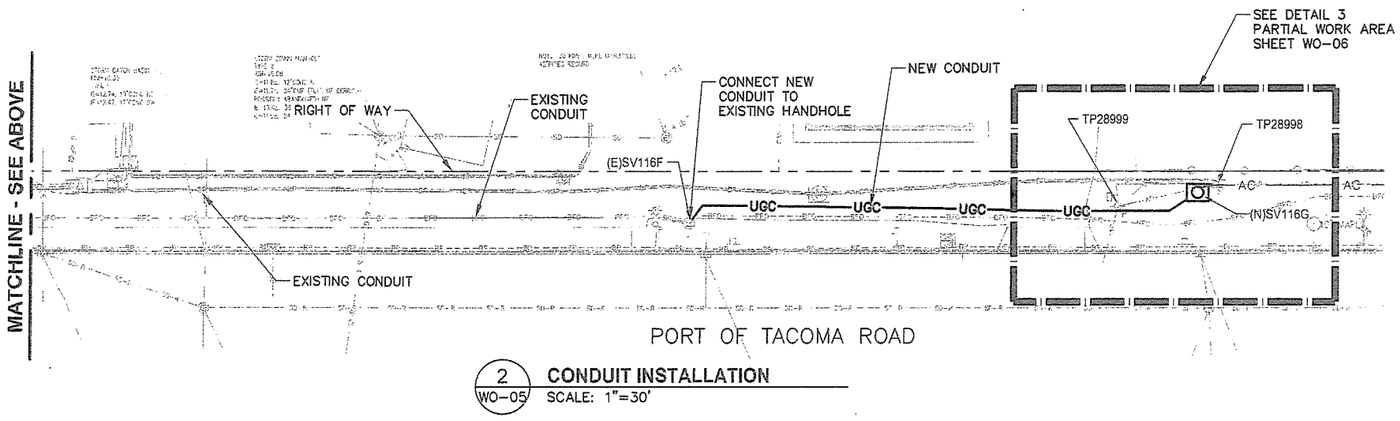
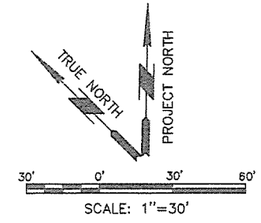


2 WO-05 **CONDUIT INSTALLATION**
SCALE: 1"=30'

NOTES:

1. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE BASED ON AVAILABLE SUBSURFACE INFORMATION. CONTRACTOR SHALL VERIFY DEPTH, LOCATION AND CONDITION OF ALL UNDERGROUND FACILITIES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
2. WORK TO RECONFIGURE CONDUIT CONNECTIONS SHOWN ON SHEET WO-06



SCALE: 1"=30'

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Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY / DATE / FIELD BOOKS	DATE 11/01/2019	SCALE AS NOTED
	DESIGNED JAT	CHECKED SLG
	SENIOR PM SLG	PROJECT NAME
	DRAWING NAME	

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

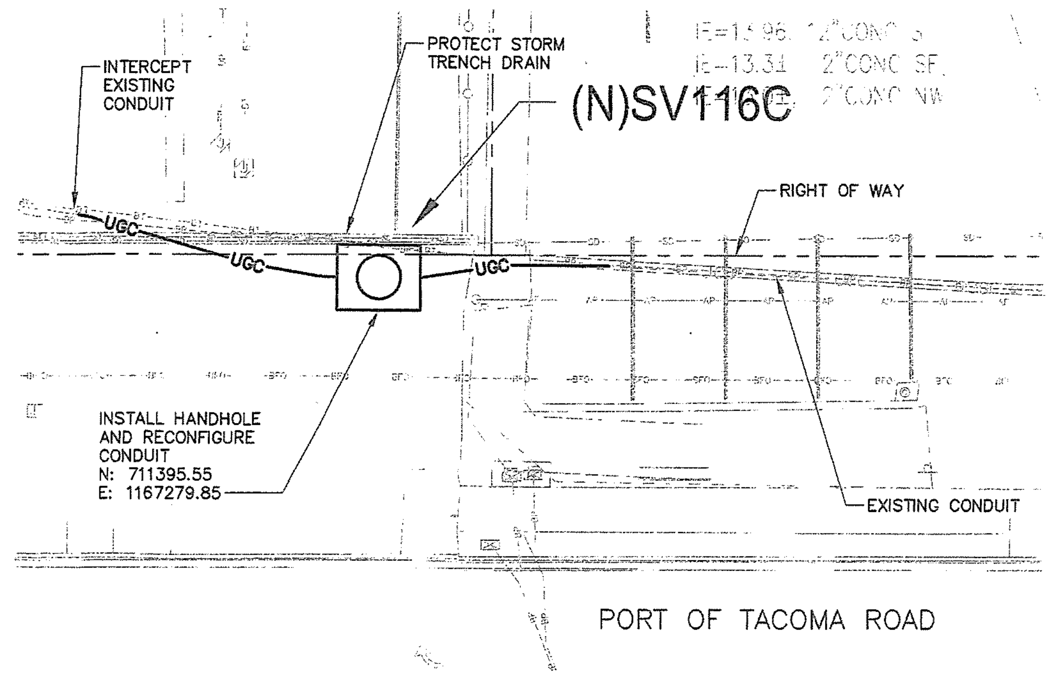
FIBER TO LOT F

OVERALL PLAN

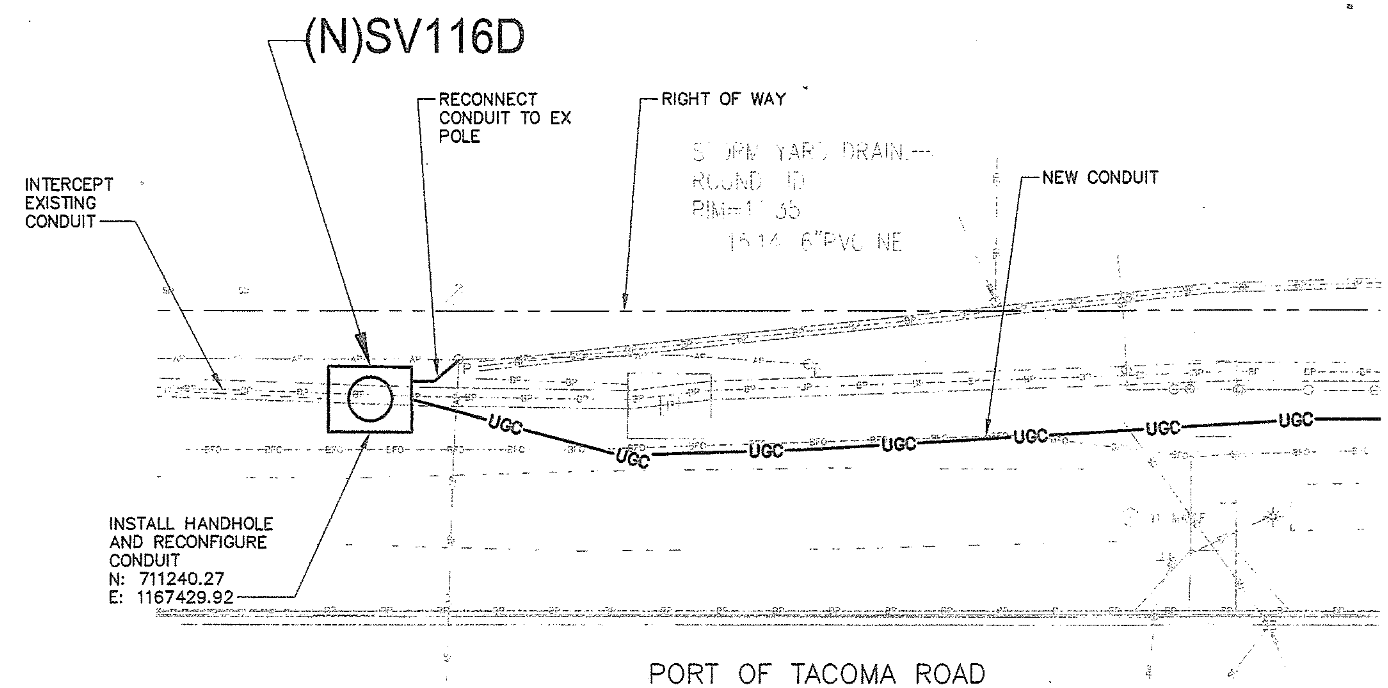
WO-05

SHEET NO

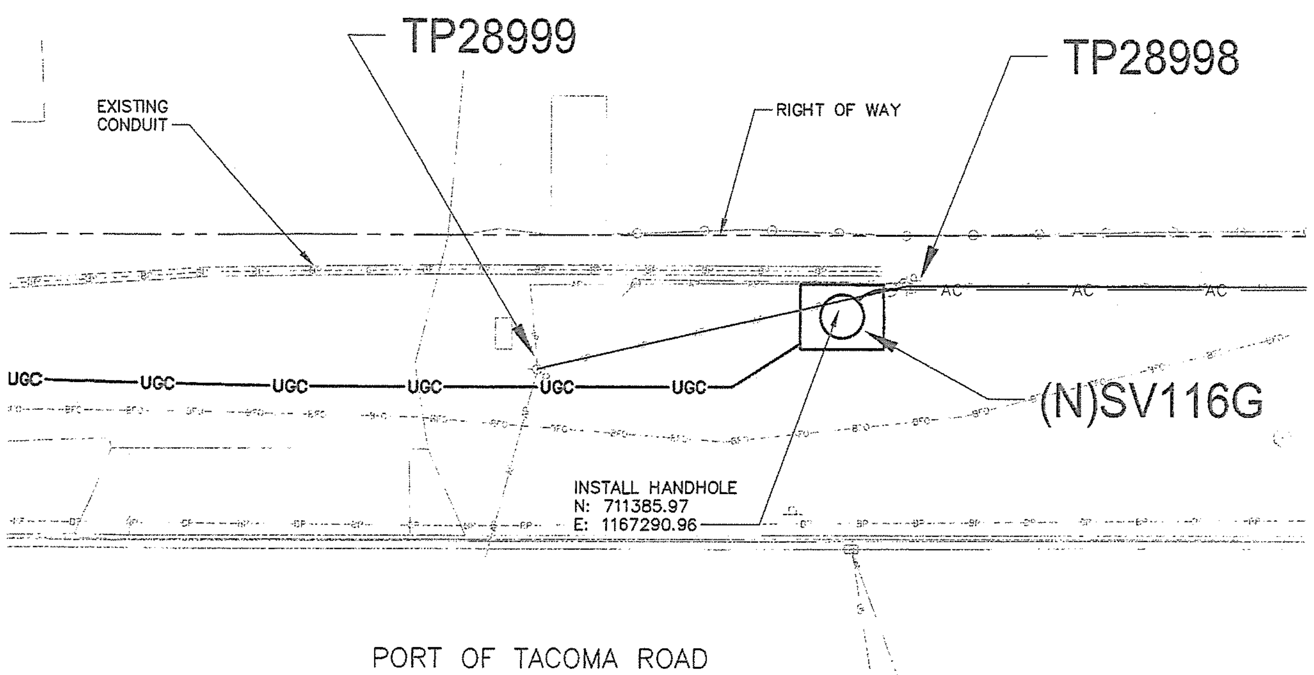
SHEET 5 OF 7



1 WO-06 **CONDUIT AND HANDHOLE 1**
SCALE: 1"=10'



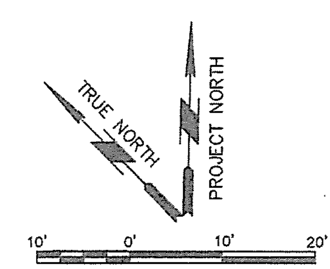
2 WO-06 **CONDUIT AND HANDHOLE 2**
SCALE: 1"=10'



1 WO-06 **CONDUIT AND HANDHOLE 1**
SCALE: 1"=10'

NOTES:

1. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE BASED ON AVAILABLE SUBSURFACE INFORMATION. CONTRACTOR SHALL VERIFY DEPTH, LOCATION AND CONDITION OF ALL UNDERGROUND FACILITIES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
2. WORK TO RECONFIGURE CONDUIT CONNECTIONS SHALL CONSIST OF THE FOLLOWING:
   - LOCATE EXISTING UNDERGROUND CONDUITS TO BE USED.
   - SAWCUT PAVEMENT TO ALLOW EXCAVATION TO THE CONDUITS
   - REMOVE LATERAL AND VERTICAL RUN OF EXISTING CONDUIT
   - INSTALL HANDHOLE
   - RECONFIGURE CONDUITS FOR TERMINATION AT NEW HANDHOLE



SCALE: 1"=10'

moffatt & nichol | Tacoma | NO | REVISION | DATE | APPD

FINAL CONSTRUCTION CHECKED | DATE 11/01/2019 | SCALE AS NOTED | DESIGNED JAT | CHECKED SLG | SENIOR PM SLG

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
FIBER TO LOT F
CONDUIT THROUGH CONNECTIONS

WO-06
SHEET 6 OF 7

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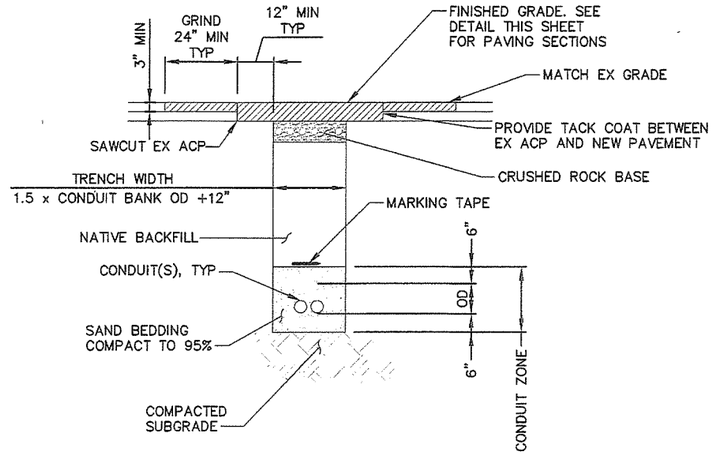
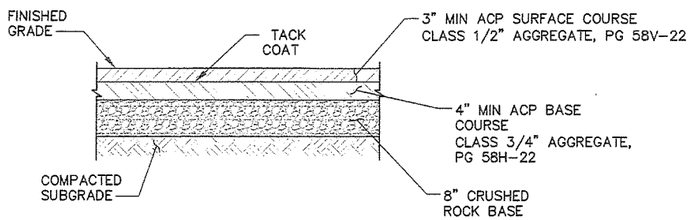


A C02.01 **UTILITY TRENCH SECTION**
SCALE: NTS

NOTES:
1. PROVIDE UNIFORM SUPPORT UNDER PIPE BARREL.
2. HAND TAMP UNDER HAUNCHES.
3. SEE SPECIFICATIONS AND COMPACTION REQUIREMENTS.
4. PROVIDE MARKING TAPE 6 INCHES ABOVE PIPE ZONE BEDDING.



B – **TYPICAL PAVEMENT SECTION**
SCALE: NTS

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Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 11/01/2019 | SCALE AS NOTED
DESIGNED JAT | CHECKED SLG
SENIOR PM SLG | PROJECT MANAGER
DRAWING NAME

STEVEN LEE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

FIBER TO LOT F

DETAILS

WO-07

SHEET 7 OF 7

LOT F REDEVELOPMENT SOIL SAMPLING PLAN UPDATED 05/14/2020

The contractor has exported **924 cy** of soils from the Low F Project as of 5/8/2020. They are anticipating an estimate of 1400 cy total of export soils. Per the Pierce County Dept. of Health guidelines for quantities of waste and number of samples, we took to take 3 additional samples in addition to the 9 that have already been taken. This would amount to 12 samples to cover up to 3000 cy of export material (1001cy to 2000 cy = 10 samples and 1 additional sample for every 500 cy above 2000 cy).

See below for sample locations and excavation locations. Analytical reports from Spectra are contained in this document for samples 1-12.

HUSKY LOT F REDEVELOPMENT					
DIRT EXPORT as pof 5/8/2020					
DATE	DIRT TOTAL		ASPHALT TOTAL		DUMP SITE
4/1/2020	110	CY	99	TON	JOHNSON CREEK _ Mountain Stone Aggregate
4/2/2020	154	CY	240	TON	JOHNSON CREEK _ Mountain Stone Aggregate
4/3/2020	132	CY	240	TON	JOHNSON CREEK _ Mountain Stone Aggregate
4/6/2020	176	CY	264	TON	JOHNSON CREEK _ Mountain Stone Aggregate
4/7/2020	44	CY	165	TON	JOHNSON CREEK _ Mountain Stone Aggregate
4/16/2020	44	CY	30	TON	JOHNSON CREEK _ Mountain Stone Aggregate
4/17/2020	22	CY	30	TON	JOHNSON CREEK _ Mountain Stone Aggregate
4/22/2020	0	CY	60	TON	JOHNSON CREEK _ Mountain Stone Aggregate
4/23/2020	22	CY	30	TON	JOHNSON CREEK _ Mountain Stone Aggregate
4/27/2020	66	CY	0		JOHNSON CREEK _ Mountain Stone Aggregate
4/29/2020	22	CY	0		JOHNSON CREEK _ Mountain Stone Aggregate
5/4/2020	66	CY	0		JOHNSON CREEK _ Mountain Stone Aggregate
5/5/2020	44	CY	0		JOHNSON CREEK _ Mountain Stone Aggregate
5/6/2020	22	CY	0		JOHNSON CREEK _ Mountain Stone Aggregate
TOTAL	**924**	**CY**	**1158**	**TON**	

LOT F REDEVELOPMENT SOIL SAMPLING PLAN UPDATED 04/14/2020

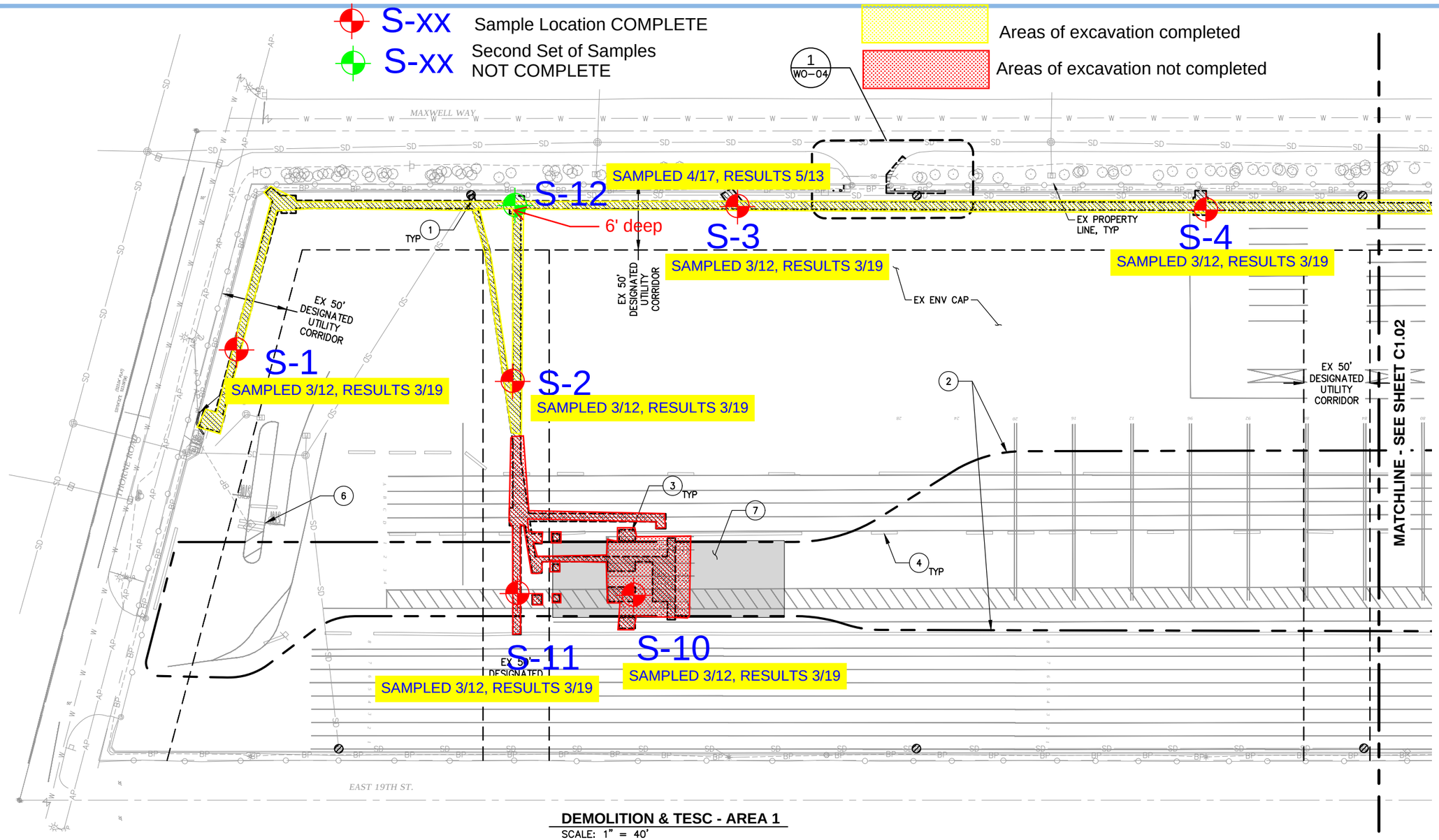
The contractor has exported 616 cy of soils from the Low F Project. They are now anticipating an estimate of 1400 cy of additional export. Per the Pierce County Dept. of Health guidelines for quantities of waste and number of samples, we are planning to take 3 additional samples in addition to the 9 that have already been taken. This would amount to 12 samples to cover up to 3000 cy of export material (1001cy to 2000 cy = 10 samples and 1 additional sample for every 500 cy above 2000 cy).

See below for sample locations and excavation locations.

LOT F REDEVELOPMENT SOIL SAMPLING PLAN 02/05/2020

Per the contract requirement, soils excavated during the project are subject to analytical testing prior to hauling off site. There is an estimated quantity of above 100 cy and below 500 cy of material excavated in both Phases 1 and 2 of construction. 11 total samples will be taken to meet the requirements of the Pierce County Dept. of Health sampling frequency, exhibited below. The total quantity of exported material on the project is estimated between 550 and 750 cy's.Due to the larger surface area in Phase 1, 7 samples will be taken in this area, 4 samples will be taken in the Phase 2 area. *Page 2 and 3 shows the sampling location planPage 4 shows the Piece County Dept of Health guidelines for sampling frequency and analysis the would apply to this projectPage 5 shows the Method A soil cleanup levels for unrestricted land use*

BINDING EDGE



DEMOLITION & TESC - AREA 1
SCALE: 1" = 40'

DEMOLITION/TESC NOTES:

1. SEE ELECTRICAL PLANS FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
2. SEE SHEET C1.03 FOR TESC NOTES.
3. ALL UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
4. SAWCUT AREAS SHOWN DO NOT INCLUDE ALL SAWCUTTING REQUIRED FOR UTILITY WORK. REFER TO THE ELECTRICAL PLANS FOR EXTENT OF BURIED UTILITY WORK. EXTENTS WILL VARY WITH CONTRACTOR MEANS AND METHODS.

CALL 2 DAYS
BEFORE YOU DIG
1-800-424-5555

DEMOLITION/TESC KEY NOTES:

1. PROVIDE DRAINAGE STRUCTURE INSERT, SEE SHEET C1.03 DETAIL 1
2. REMOVE EX PAVEMENT STRIPING WITHIN THE INDICATED IMPROVEMENT AREAS; SEE LIMITS ON SHEET C2.01
3. SAWCUT AND REMOVE EX ACP AT NEW FEATURES; SEE LIMITS ON SHEET C2.01
4. CONTRACTOR SHALL REPOSITION EX BARRIERS DURING PHASES 1 AND 2 TO SEPARATE HUSKY AND WUT QUEUE LANES AND THE CONTRACTOR WORK AREAS. APPROXIMATELY 3,955LF OF EX CONCRETE BARRIERS ON SITE. CONTRACTOR RESPONSIBLE FOR ANY ADDITIONAL BARRIERS REQUIRED TO CORDON OFF THE CONTRACTOR WORK AREAS.
5. REMOVE EX CONC CURB
6. REMOVE ABOVE GRADE EQUIPMENT TO 2-FT BELOW GRADE. REMOVE WIRING BACK TO POLE/PANEL. ABANDON CONDUIT IN PLACE.
7. GRIND ACP FOR PAVEMENT OVERLAY AT SCALE AREA

LEGEND:

- SAWCUT AND REMOVE FULL DEPTH ACP
- GRIND EX ACP
- CONCRETE SCALE PAD
- DRAINAGE STRUCTURE INSERT

TRUE NORTH
PROJECT NORTH

40' 0' 40' 80'
SCALE: 1"=40'

PORT OF TACOMA FILE: Q:\LB88897-07\CADD_Active_SheetSet\889707-C01.01_C01.02

DATE:	
APPR:	
BY:	
REVISION:	
MARK:	

600 UNIVERSITY STREET SUITE #100 SEATTLE, WA 98101 (206) 622-0222
moffatt & nichol

12/02/19

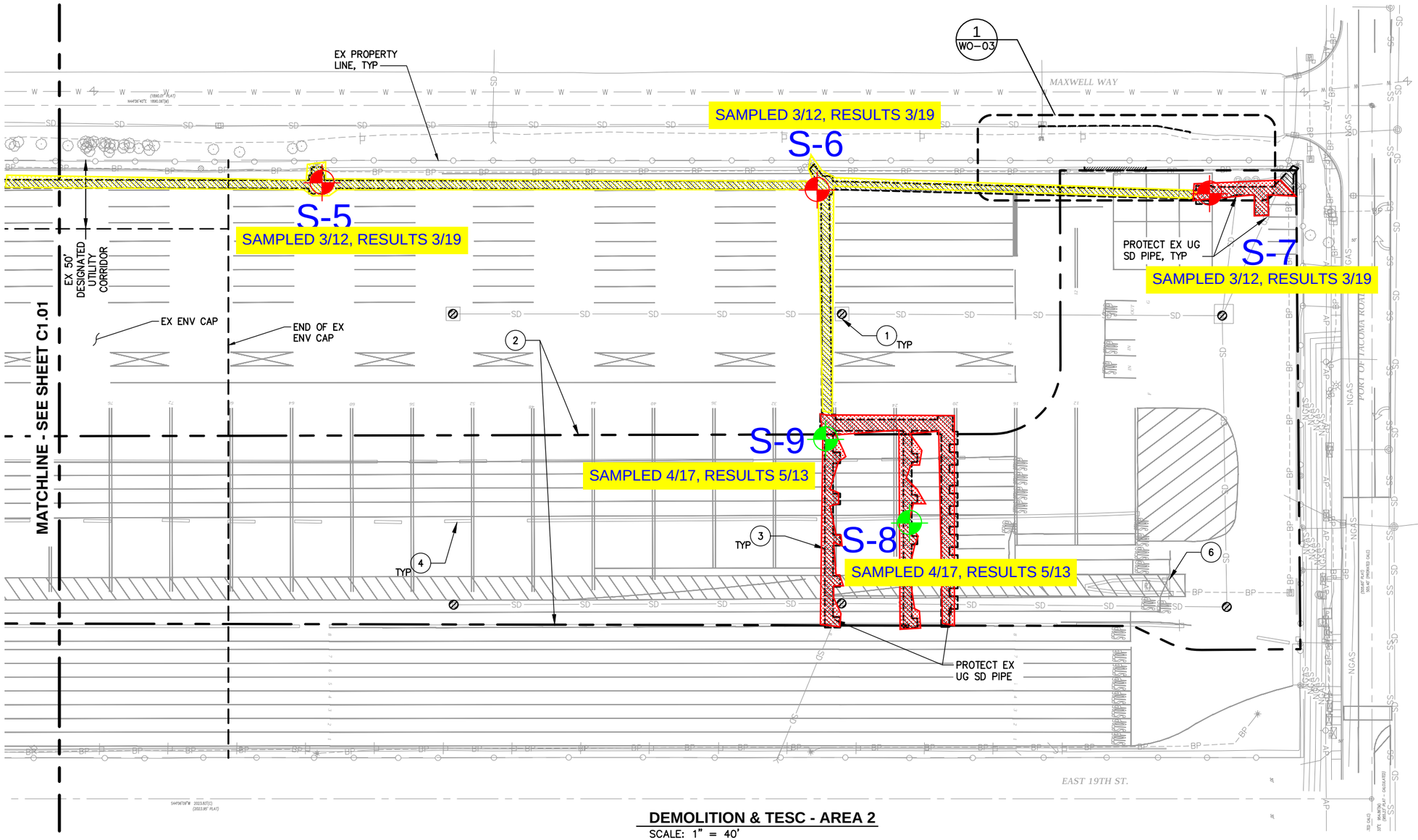
S. GRAY	11/19/19 DATE
CHECKED BY	
B. HALEY	11/19/19 DATE
PROJ. ENGR	
PRINTED BY:	mcoker Dec 02, 2019
SITE ADDRESS:	1754 THORNE RD TACOMA, WA 98421
DRAWING SCALE:	AS NOTED

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DEMOLITION AND TESC - AREA 1

TOWNSHIP:	21N
RANGE:	3E
SECTION:	34
DAT-HRZ:	WA83/2011-SF
VERT:	MLLW
PARCEL:	LOT F
PHASE:	BID

C1.01
17 OF 59

BINDING EDGE



DEMOLITION & TESC - AREA 2

SCALE: 1" = 40'

DEMOLITION/TESC NOTES:

1. SEE ELECTRICAL PLANS FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
2. SEE SHEET C1.03 FOR TESC NOTES.
3. ALL UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
4. SAWCUT AREAS SHOWN DO NOT INCLUDE ALL SAWCUTTING REQUIRED FOR UTILITY WORK. REFER TO THE ELECTRICAL PLANS FOR EXTENT OF BURIED UTILITY WORK. EXTENTS WILL VARY WITH CONTRACTOR MEANS AND METHODS.

CALL 2 DAYS
BEFORE YOU DIG
1-800-424-5555

DEMOLITION/TESC KEY NOTES:

(1) PROVIDE DRAINAGE STRUCTURE INSERT, SEE SHEET C1.03 DETAIL 1

(2) REMOVE EX PAVEMENT STRIPING WITHIN THE INDICATED IMPROVEMENT AREAS; SEE LIMITS ON SHEET C2.02

(3) SAWCUT AND REMOVE EX ACP AT NEW FEATURES; SEE LIMITS ON SHEET C2.02

(4) CONTRACTOR SHALL REPOSITION EX BARRIERS DURING PHASES 1 AND 2 TO SEPARATE HUSKY AND WUT QUEUE LANES AND THE CONTRACTOR WORK AREAS. APPROXIMATELY 3,955LF OF EX CONCRETE BARRIERS ON SITE. CONTRACTOR RESPONSIBLE FOR ANY ADDITIONAL BARRIERS REQUIRED TO CORDON OFF THE CONTRACTOR WORK AREAS.

(6) REMOVE ABOVE GRADE EQUIPMENT TO 2-FT BELOW GRADE. REMOVE WIRING BACK TO POLE/PANEL. ABANDON CONDUIT IN PLACE.

LEGEND:

SAWCUT AND REMOVE ACP

DRAINAGE STRUCTURE INSERT

PROJECT NORTH

40' 0' 40' 80'

SCALE: 1"=40'

600 UNIVERSITY STREET
SUITE #100
SEATTLE, WA 98101
(206) 622-0222
moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

12/02/19

DESIGNED BY	S. GRAY
DRAWN BY	CHECKED BY
11/19/19 DATE	B. HALEY
11/19/19 DATE	PROJ. ENGR

PRINTED BY: mcoker Dec 02, 2019
SITE ADDRESS: 1754 THORNE RD TACOMA, WA 98421

LOT F REDEVELOPMENT
HUSKY PROCESSING LANES
DEMOLITION AND TESC - AREA 2

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WA83/2011-SF	VERT: MLLW		
PARCEL: LOT F		DRAWING SCALE: AS NOTED	
PHASE: BID			

C1.02
18 OF 59

PORT OF TACOMA FILE: Q:\LB\8897-07\CADD_Active_SheetSet\8897707-C01.01_C01.02

Waste Disposal Authorization
Required Analysis

Tacoma-Pierce County Health Department
Healthy People in Healthy Communities

You must submit analytical results before disposal of waste in permitted Pierce County solid waste facility.

The volume of waste dictates the number of required samples.

Volume in Cubic Yards	Number of Samples
0 - 25	2
26 – 100	3
101 – 500	5
501 - 1000	7
1001 – 2000	10
One (1) additional sample for every 500 cubic yards of material over 2000 cubic yards.	

1000cy over 2000 = 2 additional samples

The following analyses may apply to your site. **Contact us** if you don't know which analyses will be required for your Waste Disposal Authorization.

Zinc and Copper tests must be included in testing

Analysis	Method
Total RCRA Metals (8 analytes)	EPA 6010D/7471B
TCLP RCRA Metals (8 analytes)	EPA 1311/6010D/7470A
TPH - Hydrocarbon Identification	NWTPH-HCID
TPH - Gasoline Range Organics	NWTPH-Gx
TPH - Diesel and Heavy Oil Range Organics	NWTPH-Dx
Volatile Organics (VOCs)	EPA 8260C
Halogenated Volatile Organics (HVOCs)	EPA 8260C
BTEX	EPA 8021B
Semivolatile Organics (with low level PAHs)	EPA 8270D/SIM
Semivolatile Organics	EPA 8270D
PAHs - low levels	EPA 8270D/SIM
PCBs (as Aroclors)	EPA 8082A
TCLP Semivolatile Organics	EPA 1311/8270D
TCLP Volatile Organics	EPA 1311/8260C
Paint Filter Test	EPA 9095
pH (soil)	EPA 9045D

Forward analytical results to:

Tacoma-Pierce County Health Department
Waste Management
3629 S. D St. MS 1045
Tacoma, WA 98418

Email: ehsolidwaste@tpchd.org

Questions? Call (253) 798-6047

j **Ethylene dibromide (1,2 dibromoethane or EDB).** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit.

k **Gross Alpha Particle Activity, excluding uranium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

l **Gross Beta Particle Activity, including gamma activity.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

m **Lead.** Cleanup level based on applicable state and federal law (40 C.F.R. 141.80).

n **Lindane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

o **Methylene chloride (dichloromethane).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

p **Mercury.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).

q **Methyl tertiary-butyl ether (MTBE).** Cleanup level based on federal drinking water advisory level (EPA-822-F-97-009, December 1997).

r **Naphthalenes.** Cleanup level based on concentration derived using Equation 720-1. This is a total value for naphthalene, 1-methyl naphthalene and 2-methyl naphthalene.

s **PCB mixtures.** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit. This cleanup level is a total value for all PCBs.

t **Radium 226 and 228.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

u **Radium 226.** Cleanup level based on applicable state law (WAC 246-290-310).

v **Tetrachloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

w **Toluene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

x **Total Petroleum Hydrocarbons (TPH).** TPH cleanup values have been provided for the most common petroleum products encountered at contaminated sites. Where there is a mixture of products or the product composition is unknown, samples must be tested using both the NWTPH-Gx and NWTPH-Dx methods and the lowest applicable TPH cleanup level must be met.

- **Gasoline range organics** means organic compounds measured using method NWTPH-Gx. Examples are aviation and automotive gasoline. The cleanup level is based on protection of groundwater for noncarcinogenic effects during drinking water use. Two cleanup levels are provided. The higher value is based on the assumption that no benzene is present in the groundwater sample. If any detectable amount of benzene is present in the groundwater sample, then the lower TPH cleanup level must be used. No interpolation between these cleanup levels is allowed. The groundwater cleanup level for any carcinogenic components of the petroleum [such as benzene, EDB and EDC] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and MTBE], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for gasoline releases.
- **Diesel range organics** means organic compounds measured using NWTPH-Dx. Examples are diesel, kerosene, and #1 and #2 heating oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. The groundwater cleanup level for any carcinogenic components of the petroleum [such as benzene and PAHs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for diesel releases.
- **Heavy oils** means organic compounds measured using NWTPH-Dx. Examples are #6 fuel oil, bunker C oil, hydraulic oil and waste oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use, assuming a product composition similar to diesel fuel. The groundwater cleanup level for any carcinogenic components of the petroleum [such as benzene, PAHs and PCBs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for heavy oil releases.
- **Mineral oil** means non-PCB mineral oil, typically used as an insulator and coolant in electrical devices such as transformers and capacitors measured using NWTPH-Dx. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. Sites using this cleanup level must analyze groundwater samples for PCBs and meet the PCB cleanup level in this table unless it can be demonstrated that: (1) The release originated from an electrical device manufactured after July 1, 1979; or (2) oil containing PCBs was never used in the equipment suspected as the source of the release; or (3) it can be documented that the oil released was recently tested and did not contain PCBs. Method B (or Method C, if applicable) must be used for releases of oils containing greater than 50 ppm PCBs. See Table 830-1 for the minimum testing requirements for mineral oil releases.

y **1,1,1 Trichloroethane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

z **Trichloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

aa **Vinyl chloride.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a 1 x 10^{-5} risk.

bb **Xylenes.** Cleanup level based on xylene not exceeding the maximum allowed cleanup level in this table for total petroleum hydrocarbons and on prevention of adverse aesthetic characteristics. This is a total value for all xylenes.

Table 740-1
Method A Soil Cleanup Levels for Unrestricted Land Uses.[a]

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	20 mg/kg[b]
Benzene	71-43-2	0.03 mg/kg[c]
Benzo(a)pyrene	50-32-8	0.1 mg/kg[d]
Cadmium	7440-43-9	2 mg/kg[e]
Chromium		
Chromium VI	18540-29-9	19 mg/kg[f1]
Chromium III	16065-83-1	2,000 mg/kg[f2]
DDT	50-29-3	3 mg/kg[g]
Ethylbenzene	100-41-4	6 mg/kg[h]
Ethylene dibromide (EDB)	106-93-4	0.005 mg/kg[i]
Lead	7439-92-1	250 mg/kg[l]
Lindane	58-89-9	0.01 mg/kg[k]
Methylene chloride	75-09-2	0.02 mg/kg[l]
Mercury (inorganic)	7439-97-6	2 mg/kg[m]
MTBE	1634-04-4	0.1 mg/kg[n]

Hazardous Substance	CAS Number	Cleanup Level
Naphthalenes	91-20-3	5 mg/kg[o]
PAHs (carcinogenic)		See benzo(a)pyrene[d]
PCB Mixtures		1 mg/kg[p]
Tetrachloroethylene	127-18-4	0.05 mg/kg[q]
Toluene	108-88-3	7 mg/kg[r]
Total Petroleum Hydrocarbons[s]		
[Note: Must also test for and meet cleanup levels for other petroleum components—see footnotes!]		
Gasoline Range Organics		
Gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture		100 mg/kg
All other gasoline mixtures		30 mg/kg
Diesel Range Organics		2,000 mg/kg
Heavy Oils		2,000 mg/kg
Mineral Oil		4,000 mg/kg
1,1,1 Trichloroethane	71-55-6	2 mg/kg[t]
Trichloroethylene	79-01-6	0.03 mg/kg[u]
Xylenes	1330-20-7	9 mg/kg[v]

Footnotes:

a **Caution on misusing this table.** This table has been developed for specific purposes. It is intended to provide conservative cleanup levels for sites undergoing routine cleanup actions or for sites with relatively few hazardous substances, and the site qualifies under WAC 173-340-7491 for an exclusion from conducting a simplified or site-specific terrestrial ecological evaluation, or it can be demonstrated using a terrestrial ecological evaluation under WAC 173-340-7492 or 173-340-7493 that the values in this table are ecologically protective for the site. This table may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in this table should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in this table do not necessarily mean the soil must be restored to these levels at a site. The level of restoration depends on the remedy selected under WAC 173-340-350 through 173-340-390.

b **Arsenic.** Cleanup level based on direct contact using Equation 740-2 and protection of groundwater for drinking water use using the procedures in WAC 173-340-747(4), adjusted for natural background for soil.

c **Benzene.** Cleanup level based on protection of groundwater for drinking water use, using the procedures in WAC 173-340-747 (4) and (6).

d **Benzo(a)pyrene.** Cleanup level based on direct contact using Equation 740-2. If other carcinogenic PAHs are suspected of being present at the site, test for them and use this value as the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency methodology in WAC 173-340-708(8).

e **Cadmium.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4), adjusted for the practical quantitation limit for soil.

f1 **Chromium VI.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

f2 **Chromium III.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4). Chromium VI must also be tested for and the cleanup level met when present at a site.

g **DDT (dichlorodiphenyltrichloroethane).** Cleanup level based on direct contact using Equation 740-2.

h **Ethylbenzene.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

i **Ethylene dibromide (1,2 dibromoethane or EDB).** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4), adjusted for the practical quantitation limit for soil.

j **Lead.** Cleanup level based on preventing unacceptable blood lead levels.

k **Lindane.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4), adjusted for the practical quantitation limit.

l **Methylene chloride (dichloromethane).** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

m **Mercury.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

n **Methyl tertiary-butyl ether (MTBE).** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

o **Naphthalenes.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4). This is a total value for naphthalene, 1-methyl naphthalene and 2-methyl naphthalene.

p **PCB Mixtures.** Cleanup level based on applicable federal law (40 C.F.R. 761.61). This is a total value for all PCBs.

q **Tetrachloroethylene.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

r **Toluene.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

s **Total Petroleum Hydrocarbons (TPH).** TPH cleanup values have been provided for the most common petroleum products encountered at contaminated sites. Where there is a mixture of products or the product composition is unknown, samples must be tested using both the NWTPH-Gx and NWTPH-Dx methods and the lowest applicable TPH cleanup level must be met.

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03/19/2020

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

P.O.#: 20-3077
Project: Lot F Redevelopment
Client ID: S-1 36" deep
Sample Matrix: Soil
Date Sampled: 03/12/2020
Date Received: 03/12/2020
Spectra Project: 2020030404
Spectra Number: 1
Rush

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	<50	mg/Kg	NWTPH-D
Total Arsenic	< 2.5	mg/Kg	SW846 6010D
Total Barium	16.6	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	1.4	mg/Kg	SW846 6010D
Total Copper	12	mg/Kg	SW846 6010D
Total Lead	< 2.5	mg/Kg	SW846 6010D
Total Nickel	2.5	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	14.8	mg/Kg	SW846 6010D
Total Mercury	< 0.05	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
Acenaphthene	<0.07	mg/Kg	SW846 8270D
Acenaphthylene	<0.07	mg/Kg	SW846 8270D
Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.07	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.07	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Chrysene	<0.07	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.07	mg/Kg	SW846 8270D
Fluoranthene	<0.07	mg/Kg	SW846 8270D
Fluorene	<0.07	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.07	mg/Kg	SW846 8270D
Naphthalene	<0.07	mg/Kg	SW846 8270D
Phenanthrene	<0.07	mg/Kg	SW846 8270D
Pyrene	<0.07	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	79	NWTPH-D
Nitrobenzene-d5	22	SW846 8270D
2-Fluorobiphenyl	20	SW846 8270D
p-Terphenyl-d14	43	SW846 8270D

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Authorized by: Devan Salter

a14/djs

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03/19/2020

P.O.#: 20-3077
Project: Lot F Redevelopment
Client ID: S-2 36" deep
Sample Matrix: Soil
Date Sampled: 03/12/2020
Date Received: 03/12/2020
Spectra Project: 2020030404
Spectra Number: 2
Rush

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	<50	mg/Kg	NWTPH-D
Total Arsenic	< 2.5	mg/Kg	SW846 6010D
Total Barium	22.9	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	7.4	mg/Kg	SW846 6010D
Total Copper	16.3	mg/Kg	SW846 6010D
Total Lead	< 2.5	mg/Kg	SW846 6010D
Total Nickel	5.8	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	20.8	mg/Kg	SW846 6010D
Total Mercury	< 0.05	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
Acenaphthene	<0.07	mg/Kg	SW846 8270D
Acenaphthylene	<0.07	mg/Kg	SW846 8270D
Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.07	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.07	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Chrysene	<0.07	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.07	mg/Kg	SW846 8270D
Fluoranthene	<0.07	mg/Kg	SW846 8270D
Fluorene	<0.07	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.07	mg/Kg	SW846 8270D
Naphthalene	<0.07	mg/Kg	SW846 8270D
Phenanthrene	<0.07	mg/Kg	SW846 8270D
Pyrene	<0.07	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	78	NWTPH-D
Nitrobenzene-d5	26	SW846 8270D
2-Fluorobiphenyl	27	SW846 8270D
p-Terphenyl-d14	52	SW846 8270D

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03/19/2020

P.O.#: 20-3077
Project: Lot F Redevelopment
Client ID: S3 36" deep
Sample Matrix: Soil
Date Sampled: 03/12/2020
Date Received: 03/12/2020
Spectra Project: 2020030404
Spectra Number: 3
Rush

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	<50	mg/Kg	NWTPH-D
Total Arsenic	< 2.5	mg/Kg	SW846 6010D
Total Barium	37	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	< 0.7	mg/Kg	SW846 6010D
Total Copper	14	mg/Kg	SW846 6010D
Total Lead	< 2.5	mg/Kg	SW846 6010D
Total Nickel	16.4	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	28.4	mg/Kg	SW846 6010D
Total Mercury	< 0.05	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
Acenaphthene	<0.07	mg/Kg	SW846 8270D
Acenaphthylene	<0.07	mg/Kg	SW846 8270D
Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.07	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.07	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Chrysene	<0.07	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.07	mg/Kg	SW846 8270D
Fluoranthene	<0.07	mg/Kg	SW846 8270D
Fluorene	<0.07	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.07	mg/Kg	SW846 8270D
Naphthalene	<0.07	mg/Kg	SW846 8270D
Phenanthrene	<0.07	mg/Kg	SW846 8270D
Pyrene	<0.07	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	90	NWTPH-D
Nitrobenzene-d5	26	SW846 8270D
2-Fluorobiphenyl	25	SW846 8270D
p-Terphenyl-d14	50	SW846 8270D

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03/19/2020

P.O.#: 20-3077
Project: Lot F Redevelopment
Client ID: S4 24"-30" deep
Sample Matrix: Soil
Date Sampled: 03/12/2020
Date Received: 03/12/2020
Spectra Project: 2020030404
Spectra Number: 4
Rush

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	<50	mg/Kg	NWTPH-D
Total Arsenic	< 2.5	mg/Kg	SW846 6010D
Total Barium	47.3	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	16.1	mg/Kg	SW846 6010D
Total Copper	12.1	mg/Kg	SW846 6010D
Total Lead	< 2.5	mg/Kg	SW846 6010D
Total Nickel	21.8	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	29	mg/Kg	SW846 6010D
Total Mercury	< 0.05	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
Acenaphthene	<0.07	mg/Kg	SW846 8270D
Acenaphthylene	<0.07	mg/Kg	SW846 8270D
Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.07	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.07	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Chrysene	<0.07	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.07	mg/Kg	SW846 8270D
Fluoranthene	<0.07	mg/Kg	SW846 8270D
Fluorene	<0.07	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.07	mg/Kg	SW846 8270D
Naphthalene	<0.07	mg/Kg	SW846 8270D
Phenanthrene	<0.07	mg/Kg	SW846 8270D
Pyrene	<0.07	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	85	NWTPH-D
Nitrobenzene-d5	24	SW846 8270D
2-Fluorobiphenyl	21	SW846 8270D
p-Terphenyl-d14	49	SW846 8270D

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03/19/2020

P.O.#: 20-3077
Project: Lot F Redevelopment
Client ID: S5 24"-30" deep
Sample Matrix: Soil
Date Sampled: 03/12/2020
Date Received: 03/12/2020
Spectra Project: 2020030404
Spectra Number: 5
Rush

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	497	mg/Kg	NWTPH-D
Total Arsenic	< 2.5	mg/Kg	SW846 6010D
Total Barium	37.2	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	17.8	mg/Kg	SW846 6010D
Total Copper	19.4	mg/Kg	SW846 6010D
Total Lead	15.8	mg/Kg	SW846 6010D
Total Nickel	12.9	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	59.7	mg/Kg	SW846 6010D
Total Mercury	< 0.05	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.4	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.4	mg/Kg	SW846 8270D
Acenaphthene	<0.4	mg/Kg	SW846 8270D
Acenaphthylene	<0.4	mg/Kg	SW846 8270D
Anthracene	<0.4	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.4	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.4	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.4	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.4	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.4	mg/Kg	SW846 8270D
Chrysene	<0.4	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.4	mg/Kg	SW846 8270D
Fluoranthene	<0.4	mg/Kg	SW846 8270D
Fluorene	<0.4	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.4	mg/Kg	SW846 8270D
Naphthalene	<0.4	mg/Kg	SW846 8270D
Phenanthrene	<0.4	mg/Kg	SW846 8270D
Pyrene	<0.4	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	85	NWTPH-D
Nitrobenzene-d5	38	SW846 8270D
2-Fluorobiphenyl	38	SW846 8270D
p-Terphenyl-d14	50	SW846 8270D

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03/19/2020

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1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

P.O.#: 20-3077
Project: Lot F Redevelopment
Client ID: S6 24"-30" deep
Sample Matrix: Soil
Date Sampled: 03/12/2020
Date Received: 03/12/2020
Spectra Project: 2020030404
Spectra Number: 6
Rush

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	242	mg/Kg	NWTPH-D
Total Arsenic	< 2.5	mg/Kg	SW846 6010D
Total Barium	42.4	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	13	mg/Kg	SW846 6010D
Total Copper	16.8	mg/Kg	SW846 6010D
Total Lead	16.3	mg/Kg	SW846 6010D
Total Nickel	12	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	54.3	mg/Kg	SW846 6010D
Total Mercury	< 0.05	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.4	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.4	mg/Kg	SW846 8270D
Acenaphthene	<0.4	mg/Kg	SW846 8270D
Acenaphthylene	<0.4	mg/Kg	SW846 8270D
Anthracene	<0.4	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.4	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.4	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.4	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.4	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.4	mg/Kg	SW846 8270D
Chrysene	<0.4	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.4	mg/Kg	SW846 8270D
Fluoranthene	<0.4	mg/Kg	SW846 8270D
Fluorene	<0.4	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.4	mg/Kg	SW846 8270D
Naphthalene	<0.4	mg/Kg	SW846 8270D
Phenanthrene	<0.4	mg/Kg	SW846 8270D
Pyrene	<0.4	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	97	NWTPH-D
Nitrobenzene-d5	41	SW846 8270D
2-Fluorobiphenyl	36	SW846 8270D
p-Terphenyl-d14	51	SW846 8270D

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1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

P.O.#: 20-3077
Project: Lot F Redevelopment
Client ID: S7 24"-30" deep
Sample Matrix: Soil
Date Sampled: 03/12/2020
Date Received: 03/12/2020
Spectra Project: 2020030404
Spectra Number: 7
Rush

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	91	mg/Kg	NWTPH-D
Total Arsenic	< 2.5	mg/Kg	SW846 6010D
Total Barium	40	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	14.8	mg/Kg	SW846 6010D
Total Copper	20.8	mg/Kg	SW846 6010D
Total Lead	22.3	mg/Kg	SW846 6010D
Total Nickel	10.6	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	53.8	mg/Kg	SW846 6010D
Total Mercury	0.05	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.4	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.4	mg/Kg	SW846 8270D
Acenaphthene	<0.4	mg/Kg	SW846 8270D
Acenaphthylene	<0.4	mg/Kg	SW846 8270D
Anthracene	<0.4	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.4	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.4	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.4	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.4	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.4	mg/Kg	SW846 8270D
Chrysene	<0.4	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.4	mg/Kg	SW846 8270D
Fluoranthene	<0.4	mg/Kg	SW846 8270D
Fluorene	<0.4	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.4	mg/Kg	SW846 8270D
Naphthalene	<0.4	mg/Kg	SW846 8270D
Phenanthrene	<0.4	mg/Kg	SW846 8270D
Pyrene	<0.4	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	93	NWTPH-D
Nitrobenzene-d5	28	SW846 8270D
2-Fluorobiphenyl	31	SW846 8270D
p-Terphenyl-d14	53	SW846 8270D

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03/19/2020

P.O.#: 20-3077
Project: Lot F Redevelopment
Client ID: S11 24"-30" deep
Sample Matrix: Soil
Date Sampled: 03/12/2020
Date Received: 03/12/2020
Spectra Project: 2020030404
Spectra Number: 8
Rush

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	54	mg/Kg	NWTPH-D
Total Arsenic	< 2.5	mg/Kg	SW846 6010D
Total Barium	30.4	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	11.2	mg/Kg	SW846 6010D
Total Copper	24.2	mg/Kg	SW846 6010D
Total Lead	< 2.5	mg/Kg	SW846 6010D
Total Nickel	7.1	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	28.8	mg/Kg	SW846 6010D
Total Mercury	< 0.05	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
Acenaphthene	<0.07	mg/Kg	SW846 8270D
Acenaphthylene	<0.07	mg/Kg	SW846 8270D
Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.07	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.07	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Chrysene	<0.07	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.07	mg/Kg	SW846 8270D
Fluoranthene	<0.07	mg/Kg	SW846 8270D
Fluorene	<0.07	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.07	mg/Kg	SW846 8270D
Naphthalene	<0.07	mg/Kg	SW846 8270D
Phenanthrene	<0.07	mg/Kg	SW846 8270D
Pyrene	<0.07	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	80	NWTPH-D
Nitrobenzene-d5	22	SW846 8270D
2-Fluorobiphenyl	22	SW846 8270D
p-Terphenyl-d14	44	SW846 8270D

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03/19/2020

P.O.#: 20-3077
Project: Lot F Redevelopment
Client ID: S10 24"-30" deep
Sample Matrix: Soil
Date Sampled: 03/12/2020
Date Received: 03/12/2020
Spectra Project: 2020030404
Spectra Number: 9
Rush

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	<50	mg/Kg	NWTPH-D
Total Arsenic	< 2.5	mg/Kg	SW846 6010D
Total Barium	209	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	13.6	mg/Kg	SW846 6010D
Total Copper	32.3	mg/Kg	SW846 6010D
Total Lead	3.8	mg/Kg	SW846 6010D
Total Nickel	8.0	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	43.2	mg/Kg	SW846 6010D
Total Mercury	< 0.05	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.07	mg/Kg	SW846 8270D
Acenaphthene	<0.07	mg/Kg	SW846 8270D
Acenaphthylene	<0.07	mg/Kg	SW846 8270D
Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.07	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.07	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.07	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.07	mg/Kg	SW846 8270D
Chrysene	<0.07	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.07	mg/Kg	SW846 8270D
Fluoranthene	<0.07	mg/Kg	SW846 8270D
Fluorene	<0.07	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.07	mg/Kg	SW846 8270D
Naphthalene	<0.07	mg/Kg	SW846 8270D
Phenanthrene	<0.07	mg/Kg	SW846 8270D
Pyrene	<0.07	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	78	NWTPH-D
Nitrobenzene-d5	22	SW846 8270D
2-Fluorobiphenyl	22	SW846 8270D
p-Terphenyl-d14	45	SW846 8270D

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March 13, 2020

Husky Terminal
1101 Port of Tacoma Road
Tacoma, WA 98421

Units: mg/Kg
Spectra Project: 2020030404
Applies to Spectra #'s: 1-9

QUALITY CONTROL RESULTS

Mercury by Cold Vapor - SW846 7471B - Soil/Solid

Laboratory Reagent Blank (LRB)

Date Digested: 3/13/2020 Date Analyzed: 3/13/2020

	CAS #	Result
Mercury	7439-97-6	< 0.05

Laboratory Control Spike (LCS)

Date Digested: 3/13/2020 Date Analyzed: 3/13/2020

	Spike Added	LCS Conc.	LCS %Rec
Mercury	5.0	5.29	105.8

LCS Recovery limits 85-115%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 3/13/2020 Date Analyzed: 3/13/2020
Sample Spiked: 2020030341-1

	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Mercury	1.15	5.0	6.05	98.0	6.40	105.0	6.9

Recovery Limits 70-130%
RPD Limit 20

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3/13/2020

Husky Terminal
1101 Port of Tacoma Road
Tacoma, WA 98421

Units: mg/Kg
Spectra Project: 2020030404
Applies to Spectra #'s 1-9
Analyst: SCJ

QUALITY CONTROL RESULTS

ICP Metals SW846 6010D - Soil/Solid

Method Blank

Date Digested: 3/13/2020 Date Analyzed: 3/13/2020

Element	Blank Result
Arsenic	< 2.5
Barium	< 0.2
Cadmium	< 0.3
Chromium	< 0.7
Copper	< 0.6
Lead	< 2.5
Nickel	< 1.5
Selenium	< 2.5
Silver	< 0.7
Zinc	< 0.6

Laboratory Control Sample (LCS)

Date Digested: 3/13/2020 Date Analyzed: 3/13/2020

Element	Spike Addition	LCS Conc.	LCS %Rec
Arsenic	200.0	175.3	87.7
Barium	200.0	195.0	97.5
Cadmium	200.0	180.9	90.5
Chromium	200.0	182.2	91.1
Copper	200.0	181.5	90.8
Lead	200.0	194.6	97.3
Nickel	200.0	180.9	90.5
Selenium	200.0	161.4	80.7
Silver	200.0	200.2	100.1
Zinc	200.0	183.1	91.6

LCS Recovery limits 80-120%

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Date Digested: 3/13/2020 Date Analyzed: 3/13/2020
Sample Spiked: 2020030214-1

Element	Sample Conc.	Spike Conc.	MS Conc.	MS %Rec	MSD Conc	MSD %Rec	RPD
Arsenic	0.0	200.0	166.3	83.2	165.8	82.9	0.3
Barium	82.3	200.0	283.4	100.6	278.4	98.1	2.5
Cadmium	0.0	200.0	186.4	93.2	185.0	92.5	0.8
Chromium	34.4	200.0	225.5	95.6	229.6	97.6	2.1
Copper	15.4	200.0	191.4	88.0	193.4	89.0	1.1
Lead	0.0	200.0	181.5	90.8	178.5	89.3	1.7
Nickel	36.8	200.0	207.3	85.3	206.8	85.0	0.3
Selenium	0.0	200.0	152.3	76.2	151.4	75.7	0.6
Silver	0.0	200.0	188.2	94.1	186.1	93.1	1.1
Zinc	48.6	200.0	220.3	85.9	221.6	86.5	0.8

Recovery Limits 75-125%
RPD Limit 20
Comment:

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March 19, 2020

Husky Terminal
1101 Port of Tacoma Rd.
Tacoma, WA 98421

Method:	NWTPH-Dx
Sample Matrix:	Soil
Spectra Project:	2020030404
Applies to Spectra #:	1 - 9
Units:	mg/Kg

HYDROCARBON ANALYSIS
QUALITY CONTROL RESULTS

BLANK SPIKE (LCS)

Date Extracted: 03/16/20 Date Analyzed: 03/18/20

Compound	Sample Result	Spike Amount Added	Spike Amount Found	Percent Recovery
Diesel	<10.0	125	85.1	68

METHOD BLANK

Date Extracted: 03/16/20 Date Analyzed: 03/18/20

Diesel	<10.0	mg/Kg
Heavy Oil	<50.0	mg/Kg

Surrogate Recovery:

p-terphenyl	82%

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March 19, 2020

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

METHOD BLANK RESULTS
Sample matrix: Solids
Spectra Project: 2020030404
Applies to: #1-9

Date Extracted: 3/16/2020
Date Analyzed: 3/17/2020
Dilution: 1
< = less than

POLYNUCLEAR AROMATIC HYDROCARBON ANALYSIS **METHOD 8270**

Compound	mg/Kg	Compound	mg/Kg
Naphthalene	< 0.067	Benzo(a)Anthracene	< 0.067
2-Methylnaphthalene	< 0.067	Chrysene	< 0.067
Acenaphthylene	< 0.067	Benzo(b)Fluoranthene	< 0.067
Acenaphthene	< 0.067	Benzo(k)Fluoranthene	< 0.067
Fluorene	< 0.067	Benzo(a)Pyrene	< 0.067
Phenanthrene	< 0.067	Indeno(1,2,3-cd)Pyrene	< 0.067
Anthracene	< 0.067	Dibenzo(a,h)Anthracene	< 0.067
Fluoranthene	< 0.067	Benzo(g,h,i)Perylene	< 0.067
Pyrene	< 0.067	1-Methylnaphthalene	< 0.067

*Reporting limits elevated due to low surrogate recovery.

SURROGATE RECOVERIES

Nitrobenzene-d5	22	%	*
2-Fluorobiphenyl	19	%	
p-Terphenyl-d14	46	%	

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March 19, 2020

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen - WSP

Spectra Project #	2020030404
Sample Spiked:	Method Blank
Date Extracted:	3/16/2020
Date Analyzed:	3/17/2020
Units:	mg/Kg
Applies to Spectra #'s:	#1-9

GCMS Semi-Volatile Organic Analysis, Method 8270D (Scan Mode)
Blank Spike (LCS) Results in Soil/ Solids

Compound	Blank Conc.	Spike Added	LCS Conc.	LCS %Rec	Rec. Limits
Phenol	<0.07	2.50	0.74	29	32-84
2-Chlorophenol	<0.07	2.50	0.74	30	35-84
1,4-Dichlorobenzene	<0.07	1.67	0.50	30	15-90
N-Nitroso-Di-N-Propylamine	<0.07	1.67	0.57	34	31-104
1,2,4-Trichlorobenzene	<0.07	1.67	0.49	29	24-82
4-Chloro-3-Methylphenol	<0.07	2.50	0.62	25	34-107
Acenaphthene	<0.07	1.67	0.58	35	34-98
2,4-Dinitrotoluene	<0.07	1.67	0.67	40	32-105
4-Nitrophenol	<0.07	2.50	0.67	27	26-156
Pentachlorophenol	<0.07	2.50	0.89	36	0-85
Pyrene	<0.07	1.67	0.85	51	40-135

Surrogates	%Rec
2-Fluorophenol	24
Phenol-d5	0
Nitrobenzene-d5	29
2-Fluorobiphenyl	26
2,4,6-Tribromophenol	36
p-Terphenyl-d14	46

Authorized by: Devan Salter

SPECTRA Laboratories

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(253) 272-4850 Fax (253) 572-9838
www.spectra-lab.com info@spectra-lab.com

SPECIAL INSTRUCTIONS/COMMENTS:

CHAIN OF CUSTODY

SPECTRA PROJECT #: 2020030404

Return Samples: Y N Page ____ of ____ STANDARD ☐ RUSH ☒

ADDRESS CHANGE ☐

CLIENT: Husky - ITS ADDRESS:

PROJECT: LOT F REDEVELOPMENT

CONTACT: Clint Nelsen

SAMPLED BY: Mike G

PHONE: 712-249-1436 FAX: X Prefer FAX ☐ or e-MAIL ☒

e-MAIL: clinton.nelsen@wsp.com

PURCHASE ORDER #

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270-625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	CU, ZN	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX/EOX	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)
1	S-1 36" deep	3/12/20	1:20pm							X						X		X	X									
2	S-2 36" deep	3/12/20	12:50pm																									
3	S3 36" deep	3/12/20	12:05pm																									
4	S4 24"-30" deep	3/12/20	9:55AM																									
5	S5 24"-36" deep	3/12/20	10:30AM																									
6	S6 " "	3/12/20	10:58AM																									
7	S7 " "	3/12/20	11:22AM																									
8	S11 " "	3/12/20	2:00pm																									
9	S10 " "	3/12/20	2:14pm																									
10																												

LAB USE ONLY

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Mike Gromek	OBE	3/12/20	2:29
RECEIVED BY		Abigail Deaton	Spectra	3/12/20	1430
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2% per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. Spectra Laboratories, LLC

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05/13/2020

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen

Project: Lot F Redevelopment
Client ID: S-12
Sample Matrix: Soil
Date Sampled: 04/17/2020
Date Received: 04/17/2020
Spectra Project: 2020040439
Spectra Number: 1

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	53	mg/Kg	NWTPH-D
Total Arsenic	9.7	mg/Kg	SW846 6010D
Total Barium	21.6	mg/Kg	SW846 6010D
Total Cadmium	< 0.7	mg/Kg	SW846 6010D
Total Chromium	14.2	mg/Kg	SW846 6010D
Total Copper	17.8	mg/Kg	SW846 6010D
Total Lead	20.7	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	49.3	mg/Kg	SW846 6010D
Total Mercury	<0.03*	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.04	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.04	mg/Kg	SW846 8270D
Acenaphthene	<0.04	mg/Kg	SW846 8270D
Acenaphthylene	<0.04	mg/Kg	SW846 8270D
Anthracene	<0.04	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.04	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.04	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.04	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.04	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.04	mg/Kg	SW846 8270D
Chrysene	<0.04	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.04	mg/Kg	SW846 8270D
Fluoranthene	<0.04	mg/Kg	SW846 8270D
Fluorene	<0.04	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.04	mg/Kg	SW846 8270D
Naphthalene	<0.04	mg/Kg	SW846 8270D
Phenanthrene	<0.04	mg/Kg	SW846 8270D
Pyrene	<0.04	mg/Kg	SW846 8270D

* Total Mercury analyzed by Spectra Laboratories-Kitsap. See complete report attached.

Surrogate	Recovery	Method
p-Terphenyl	100	NWTPH-D
Nitrobenzene-d5	43	SW846 8270D
2-Fluorobiphenyl	63	SW846 8270D
p-Terphenyl-d14	81	SW846 8270D

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Kristin Hintz

Authorized by: Kristin Hintz

a14/sks

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05/13/2020

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen

Project: Lot F Redevelopment
Client ID: S-08
Sample Matrix: Soil
Date Sampled: 04/17/2020
Date Received: 04/17/2020
Spectra Project: 2020040439
Spectra Number: 2

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	237	mg/Kg	NWTPH-D
Total Arsenic	3.7	mg/Kg	SW846 6010D
Total Barium	52.6	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	16.4	mg/Kg	SW846 6010D
Total Copper	21.5	mg/Kg	SW846 6010D
Total Lead	11.0	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	11	mg/Kg	SW846 6010D
Total Zinc	42.1	mg/Kg	SW846 6010D
Total Mercury	0.41*	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.04	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.04	mg/Kg	SW846 8270D
Acenaphthene	<0.04	mg/Kg	SW846 8270D
Acenaphthylene	<0.04	mg/Kg	SW846 8270D
Anthracene	<0.04	mg/Kg	SW846 8270D
Benzo(a)Anthracene	<0.04	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.04	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.04	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.04	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.04	mg/Kg	SW846 8270D
Chrysene	<0.04	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.04	mg/Kg	SW846 8270D
Fluoranthene	0.088	mg/Kg	SW846 8270D
Fluorene	<0.04	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.04	mg/Kg	SW846 8270D
Naphthalene	<0.04	mg/Kg	SW846 8270D
Phenanthrene	0.052	mg/Kg	SW846 8270D
Pyrene	0.096	mg/Kg	SW846 8270D

Surrogate	Recovery	Method
p-Terphenyl	104	NWTPH-D
Nitrobenzene-d5	53	SW846 8270D
2-Fluorobiphenyl	62	SW846 8270D
p-Terphenyl-d14	71	SW846 8270D

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Kristin Hintz

Authorized by: Kristin Hintz

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05/13/2020

Husky Terminal
1101 Port of Tacoma Rd
Tacoma, WA 98421
Attn: Clint Nelsen

Project: Lot F Redevelopment
Client ID: S-09
Sample Matrix: Soil
Date Sampled: 04/17/2020
Date Received: 04/17/2020
Spectra Project: 2020040439
Spectra Number: 3

Analyte	Result	Units	Method
Diesel	<10	mg/Kg	NWTPH-D
Oil	440	mg/Kg	NWTPH-D
Total Arsenic	2.8	mg/Kg	SW846 6010D
Total Barium	58.6	mg/Kg	SW846 6010D
Total Cadmium	< 0.3	mg/Kg	SW846 6010D
Total Chromium	20.8	mg/Kg	SW846 6010D
Total Copper	44.8	mg/Kg	SW846 6010D
Total Lead	140	mg/Kg	SW846 6010D
Total Selenium	< 2.5	mg/Kg	SW846 6010D
Total Silver	< 0.7	mg/Kg	SW846 6010D
Total Zinc	95.8	mg/Kg	SW846 6010D
Total Mercury	0.11*	mg/Kg	SW846 7471B
1-Methylnaphthalene	<0.04	mg/Kg	SW846 8270D
2-Methylnaphthalene	<0.04	mg/Kg	SW846 8270D
Acenaphthene	<0.04	mg/Kg	SW846 8270D
Acenaphthylene	<0.04	mg/Kg	SW846 8270D
Anthracene	<0.04	mg/Kg	SW846 8270D
Benzo(a)Anthracene	0.077	mg/Kg	SW846 8270D
Benzo(a)Pyrene	<0.35*	mg/Kg	SW846 8270D
Benzo(b)Fluoranthene	<0.35*	mg/Kg	SW846 8270D
Benzo(ghi)Perylene	<0.35*	mg/Kg	SW846 8270D
Benzo(k)Fluoranthene	<0.35*	mg/Kg	SW846 8270D
Chrysene	0.112	mg/Kg	SW846 8270D
Dibenz(a,h)Anthracene	<0.35*	mg/Kg	SW846 8270D
Fluoranthene	0.113	mg/Kg	SW846 8270D
Fluorene	<0.04	mg/Kg	SW846 8270D
Indeno(1,2,3-cd)Pyrene	<0.35*	mg/Kg	SW846 8270D
Naphthalene	<0.04	mg/Kg	SW846 8270D
Phenanthrene	0.048	mg/Kg	SW846 8270D
Pyrene	0.167	mg/Kg	SW846 8270D

*Reporting limit elevated due to matrix interference.

Surrogate	Recovery	Method
p-Terphenyl	62	NWTPH-D
Nitrobenzene-d5	65	SW846 8270D
2-Fluorobiphenyl	77	SW846 8270D
p-Terphenyl-d14	104	SW846 8270D

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Kristin Hintz

Authorized by: Kristin Hintz

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Certificate of Analysis

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Date Received: 5/1/2020
Date Reported: 5/5/2020
Sampler:

Project: 2020040439

Test		Result	Units	Method	Test Date	Initials
196484-01	**S-12**			**Date Sampled: 4/17/2020**		
Mercury		<0.03	mg/kg	EPA 7471 B	5/4/2020	KW
196484-02	**S-08**			**Date Sampled: 4/17/2020**		
Mercury		0.41	mg/kg	EPA 7471 B	5/4/2020	KW
196484-03	**S-09**			**Date Sampled: 4/17/2020**		
Mercury		0.11	mg/kg	EPA 7471 B	5/4/2020	KW

Approved For Release

Angela Kaelin

Angela Kaelin, Laboratory Supervisor

SPECTRA Laboratories - Kitsap

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May 5, 2020

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project: 2020040439
Sample Date: 4/17/20

Lab Work Order#: 196484
Sample Received: 5/1/20 1305

Quality Control Report

Laboratory Check Standard

Test	QC Sample ID	True Value mg/kg	Result mg/kg	% Recovery	Acceptance Limits %	Date Analyzed	Method
Mercury	050420-02	0.374	0.384	103	90 - 110	5/4/20	EPA 7471B

Blank

Test	QC Sample ID	Result mg/kg	Acceptance Limits mg/kg	Date Analyzed	Method
Mercury	MBLK050420-02	ND	<0.03	5/4/20	EPA 7471B

Approved for Release,

Angela Kaelin
Laboratory Supervisor
WDOE Accreditation #C594

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www.spectra-lab.com info@spectra-lab.com

SPECIAL INSTRUCTIONS/COMMENTS:

CHAIN OF CUSTODY

SPECTRA PROJECT # 2020040439

Return Samples: Y N Page _____ of _____ STANDARD ☒ RUSH ☐

CLIENT: Husky – ITS ADDRESS: ADDRESS CHANGE ☐

PROJECT: Lot F Redevelopment

CONTACT: Clint Nelsen

SAMPLED BY: Mike G

PHONE: 712-249-1438 FAX: X

e-MAIL: Clinton.Nelsen@BMSF.com Prefer FAX ☐ e-MAIL ☒

PURCHASE ORDER #

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-Dx	1664 SGT-HEM (TPH)	1664 HEM (FOG)	ORGANICS: 8260/624 VOA	8260 CHLOR SOLVENTS	8270-625 SEMI VOA	8270 PAH/PNA	8082/608 PCB	METALS: TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	Cu, Zn	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	OTHER: PH 9040/9045	TX/TOX/EOX	TURBIDITY	FLASH POINT	BOD	SOLIDS (SPECIFY)
1	S-12	4/17/20	10:00am							X						X		X	X									
2	S-08	4/17/20	11:45am							X						X		X	X									
3	S-09	4/17/20	12:15pm							X						X		X	X									
4																												
5																												
6																												
7																												
8																												
9																												
10																												

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	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Michael Cornish	OBE	4/17/20	12:51pm
RECEIVED BY	SB	S. Beck	Spectra	4/17/20	1253
RELINQUISHED BY					
RECEIVED BY					

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