

		LEGEND			
	EXISTING	PROPOSED		EXISTING	PROPOSED
CURB AND GUTTER	=====		STORM LINE	—— SD ——	
BARRIER CURB			CATCH BASIN TYPE 1		•
CONCRETE			CATCH BASIN TYPE 2		
ASPHALT			SANITARY SEWER LINE	ss ss] ———
PAINT STRIPING			SANITARY SEWER MANHOLE	\circ	•
DIRECTIONAL ARROW			CLEANOUT (AS NOTED)	0	•
SAWCUT			POWER OVERHEAD	——Р (ОН)——	———P(OH)———
BOLLARD	0	•	POWER UNDERGROUND	——Р (UG)——	———P(UG)———
SIGN	Ч	•	POWER METER	0	
BUILDING LINE			UTILITY POLE	-0-	•
CONTOURS	432	432	JUNCTION BOX (TYPE 1,2,3)		
WATER LINE	W	w	LUMINAIRE	$\diamondsuit \longrightarrow \!$	-
FIRE HYDRANT		•	YARD LIGHT		
WATER METER	\boxplus		TELEPHONE	T(UG)	тт
WATER VALVE	\bowtie	H	GAS	————G———	——-G——
FIRE DEPARTMENT CONN.		<	GAS METER		
POST INDICATOR VALVE	₩	$oldsymbol{\Theta}$	GAS VALVE	©∀	H

1,077 SF (0.025 AC)

SITE INFORMATION:

EXISTING PROJECT SITE SURFACE AREAS TOTAL SITE AREA:

52,078 SF (1.20 AC) **TOTAL IMPERVIOUS:** 47,343 SF (1.087 AC) PERVIOUS/LANDSCAPE AREA: 4,735 SF (0.1087 AC) TOTAL IMPERVIOUS (ADJACENT PROP.) 622 SF (0.014 AC) TOTAL IMPERVIOUS (R.O.W): 1,077 SF (0.025 AC)

PROPOSED PROJECT SITE SURFACE AREAS

52,078 SF (1.20 AC) TOTAL SITE AREA: TOTAL IMPERVIOUS (ON-SITE): 43,256 SF (0.993 AC) PERVIOUS/LANDSCAPE AREA: 8,822 SF (0.203 AC) TOTAL IMPERVIOUS (ADJACENT PROP.): 622 SF (0.014 AC)

ESTIMATED EARTHWORK QUANTITIES:

CUT: 1,550 CY

TOTAL IMPERVIOUS (R.O.W):

FILL: 1,800 CY

AREA TO BE DISTURBED = 1.24 AC PER THE GEOTECHNICAL RECOMMENDATION ON-SITE SOILS CANNOT

BE RE-USED. EARTHWORK QUANTITIES ARE APPROXIMATE AND HIGHLY DEPENDANT ON SOIL CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

PRELIMINARY SITE PLAN

PROJECT DATA LOCATION: 1402 S MERIDIAN

PUYALLUP, WASHINGTON PROPOSED LOT AREA: ±51,520 S.F. (1.18 AC)

ELECTRIC EASEMENT -

PROPOSED CONCRETE SWALE -

PROPOSED -

LANDSCAPE

PROPOSED CONCRETE PAVEMENT

10' ELEC. EASEMENT

AFN 2792268

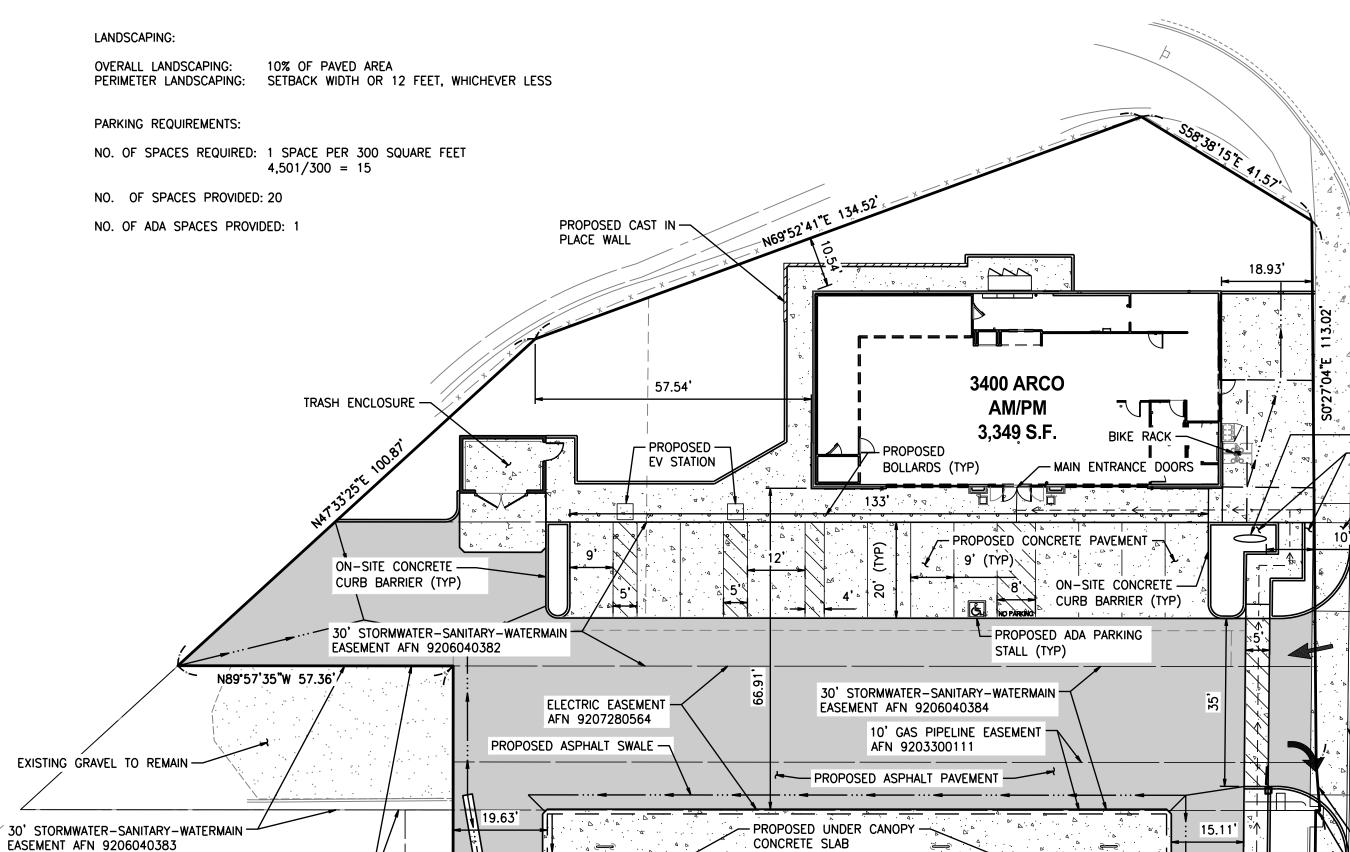
AIR/WATER UNIT -

AFN 9207280563

BUILDING SETBACKS: FRONT YARD SETBACK: SIDE STREET SETBACK:

SIDE YARD SETBACK:

REAR YARD SETBACK:



- PROPOSED FUEL CANOPY

CURB BARRIER (TYP)

PROPOSED —

LANDSCAPE

(TYP)

VACUUM UNIT

70.84

PROPOSED CONCRETE PAVEMENT -

- PROPOSED ASPHALT -

PAVEMENT

INGRESS/EGRESS AND UTILITIES EASEMENT

- 20' INGRESS/EGRESS EASEMENT

DIRECTIONAL ARROWS (TYP) -

AFN 2741876

(TITLE PARCEL A2) AFN 2792268

PROPOSED UNDERGROUND STORAGE -

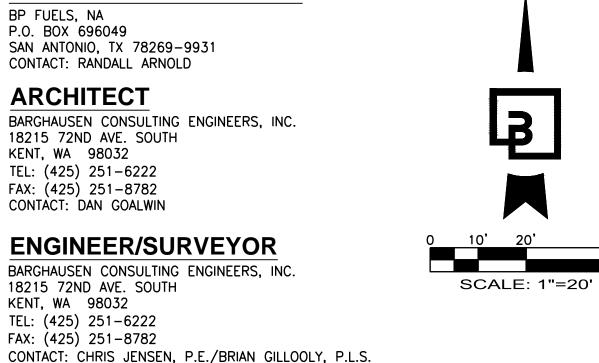
TANKS 25K & 22K SPLIT

- PROPOSED ASPHALT PAVEMENT -

PROPOSED PARKING -

19.62

ARCO ampm PUYALLUP SEC. 33, TWN. 20 N, RGE. 4 E, W.M. CITY OF PUYALLUP, PIERCE COUNTY



ENGINEER/SURVEYOR

BARGHAUSEN CONSULTING ENGINEERS, INC. 18215 72ND AVE. SOUTH KENT, WA 98032 TEL: (425) 251-6222 FAX: (425) 251-8782

APPLICANT/DEVELOPER

LANDSCAPE ARCHITECT

BARGHAUSEN CONSULTING ENGINEERS, INC. 18215 72ND AVE. SOUTH KENT, WA 98032 TEL: (425) 251-6222 FAX: (425) 251-8782 CONTACT: JEFF VARLEY, R.L.A.

INDEX OF SHEETS:

PROPOSED

LANDSCAPE (TYP)

- PROPOSED CURB RAMP PER

CITY OF PUYALLUP STANDARDS

→ PROPOSED DRIVEWAY PER CITY

OF PUYALLUP STANDARDS

- PROPOSED CURB RAMP PER

- STREET IMPROVEMENTS

EASEMENT AFN 87061003!

CITY OF PUYALLUP STANDARDS

N89'57'35"W 0.85'

10' ELECTRIC EASEMENT

AFN 2667305

PLACE WALL

ON-SITE CONCRETE

CURB BARRIER (TYP)

REFACE EXISTING SIGN

WITH ARCO AMPM

PROPOSED CURB RAMP PER

CITY OF PUYALLUP STANDARDS

- PROPOSED DRIVEWAY PER CITY

[⊥]PROPOSED CURB RAMP PER

EXISTING CURB & GUTTER

- PROPOSED SIDEWALK, CURB, & GUTTER PER CITY OF PUYALLUP

CONDITIONS (TYP)

CITY OF PUYALLUP STANDARDS

PROPOSED CURB & GUTTER TO TRANSITION SMOOTHLY TO THE

OF PUYALLUP STANDARDS

| | |14.81'

PROPOSED ADA AND

PEDESTRIAN

PATH OF TRAVEL

- PROPOSED

LANDSCAPE

PAVEMENT

O' ELECTRIC EASEMENT

AFN 2792268

PROPOSED CONCRETE

(TYP)

- FUEL DISPENSERS (TYP)

HOOP BOLLARDS (TYP)

(TYP)

- $\stackrel{\longleftarrow}{-}$ $\stackrel{\longleftarrow}{-}$ $\stackrel{\longleftarrow}{-}$ $\stackrel{\longleftarrow}{-}$ $\stackrel{\longleftarrow}{-}$ $\stackrel{\longleftarrow}{-}$ $\stackrel{\longleftarrow}{-}$ $\stackrel{\longleftarrow}{-}$ $\stackrel{\longleftarrow}{-}$ $\stackrel{\longleftarrow}{-}$

24'x48'

CAR WASH

∠ NEW VEHICULAR

N89*58'15"W 178.19'

COMMON ACCESS TRACT "A"

(TITLE PARCEL A1) SP NO.

C1.0 - PRELIMINARY SITE PLAN C2.0 - ALTA-NSPS LAND TITLE SURVEY

C2.1 - ALTA-NSPS LAND TITLE SURVEY C3.0 - PRELIMINARY DRAINAGE AND GRADING PLAN

C4.0 - PRELIMINARY UTILITY PLAN

L-1 - PRELIMINARY LANDSCAPE PLAN

L-2 - PRELIMINARY LANDSCAPE NOTES AND PLANT SCHEDULE

L-3 - PRELIMINARY LANDSCAPE DETAILS

L-4 - IRRIGATION PLAN

L-5 - IRRIGATION DETAILS

L-6 - IRRIGATION DETAILS

SURVEY INFORMATION:

THE ON/OFF RAMP TO SR 512.

HORIZONTAL DATUM - BASIS OF BEARINGS: NAD 83/2011 WASHINGTON STATE COORDINATE SYSTEM, SOUTH ZONE, ESTABLISHED BY GPS OBSERVATION UTILIZING THE WASHINGTON STATE REFERENCE NETWORK. THE BASIS OF BEARINGS IS N 00°33'46" E BETWEEN THE FOUND 2" BRASS DISK AT THE INTERSECTION OF S. MERIDIAN ST. & 15TH AVE SW AND THE FOUND 2" IRON PIPE W/TACK IN MONUMENT CASE AT THE INTERSECTION OS S. MERIDIAN ST. &

VERTICAL DATUM FOR THIS SURVEY IS NAVD88 ESTABLISHED FROM WSDOT MONUMENT ID NO. 247. ELEVATION = 80.449' (NAVD88)

52,078± SF (1.20± AC)

1402 S. MERIDIAN, PUYALLUP, WA 98371

773000-028-1 & 773000-028-8: TITLE PARCEL A

773000-003-1 & 773000-002-1: TITLE PARCEL B

REFERENCE SURVEYS: PIERCE COUNTY SHORT PLAT OF MERIDIAN CENTER - AFN 77-315 (1977) PLAT OF SOURWINE'S ACRE LOTS - VOL 8 PLATS, PAGE 10 (1905)

PIERCE COUNTY SHORT PLAT - AFN 8706010381 (1987) WSDOT SR 512 96TH ST TO JCT. SR 167, DATED MAY 23, 1968

THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON MARCH 22, 2022. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN MARCH OF 2022.

FLOOD INFORMATION:

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INFORMATION: FIRM (FLOOD INSURANCE RATE MAP) MAP NO. 53053C0341E PANEL 341 OF 1375, DATED MARCH 7. 2017. THE SUBJECT PROPERTY IS IN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

(A ZONING REPORT WAS NOT FURNISHED FOR THIS SITE)

(PER ABOVE REFERENCED TITLE REPORT)

PARCEL A: (773000-028-1 & 773000-028-8) LOT 1 AND THE NORTH 15 FEET OF THE EAST 178.33 FEET OF "COMMON ACCESS TRACT A", OF PIERCE COUNTY SHORT PLAT RECORDED UNDER RECORDING NO. 77-315, RECORDS OF PIERCE COUNTY WASHINGTON, FORMERLY BEING DESCRIBED AS THE NORTH 161.5 FEET OF THE WEST 178.33 FEET OF THE EAST 188.33 FEET OF LOT 20, SOURWINE'S ACRE LOTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 10, RECORDS OF PIERCE COUNTY, WASHINGTON; TOGETHER WITH THAT PORTION OF 14TH AVENUE SW, VACATED BY ORDINANCE NO. 2304 ABUTTING THEREON AND ATTACHED THERETO, RECORDED UNDER RECORDING

RIGHTS TO USE THAT PORTION OF THE WITHIN DESCRIBED PROPERTY LYING WITHIN COMMON ACCESS TRACT "A" OF SIDE SHORT PLAT, FOR INGRESS, EGRESS, AND INSTALLATION AND MAINTENANCE OF UTILITIES, AS SET FORTH AND DELINEATED ON PIERCE COUNTY SHORT PLAT NO. 77-315; EXCEPT ANY PORTION LYING WITHIN PARCEL A ABOVE

AN EASEMENT FOR INGRESS AND EGRESS AS SET FORTH IN DOCUMENTS ENTITLED "STATUTORY WARRANTY DEED" AS RECORDED UNDER RECORDING NUMBERS 2741876

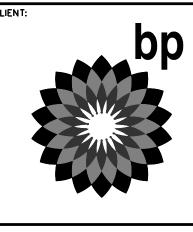
PARCEL B: (773000-003-1 & 773000-002-1) LOT 2, SOURWINE'S ACRE LOTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 10, RECORDS OF PIERCE COUNTY, WASHINGTON; EXCEPT THAT PORTION LYING WITHIN STATE HIGHWAY NO. SR-512, 96TH STREET TO TOGETHER WITH THAT PORTION OF 14TH AVENUE SW, VACATED BY ORDINANCE NO. 2304 ABUTTING THEREON AND ATTACHED THERETO, RECORDED UNDER RECORDING

SITUATE IN THE COUNTY OF PIERCE, STATE OF WASHINGTON.

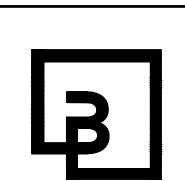
Preliminary Not For Construction



Know what's **below**. Call before you dig.





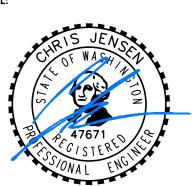


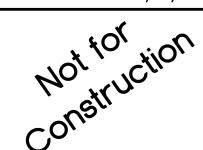
BP WEST COAST PRODUCTS, LLC

Consulting Engineers, Inc.

18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com

NO.	DATE	REVISION DESCRIPTION
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ARCO NTI

3400 am/pm FUEL CANOPY w/8 MPD's

SITE ADDRESS: SWC S MERIDIAN @ HIGHWAY 512

PUYALLUP, WASHINGTON FACILITY #TBD

ADW LLIANCE PM: 21730

PRELIMINARY SITE PLAN

SURVEY INFORMATION:

HORIZONTAL DATUM - BASIS OF BEARINGS:

NAD 83/2011 WASHINGTON STATE COORDINATE SYSTEM, SOUTH ZONE, ESTABLISHED BY GPS OBSERVATION UTILIZING THE WASHINGTON STATE REFERENCE NETWORK. THE BASIS OF BEARINGS IS N 00°33'46" E BETWEEN THE FOUND 2" BRASS DISK AT THE INTERSECTION OF S. MERIDIAN ST. & 15TH AVE SW AND THE FOUND 2" IRON PIPE W/TACK IN MONUMENT CASE AT THE INTERSECTION OS S. MERIDIAN ST. & THE ON/OFF RAMP TO SR 512.

VERTICAL DATUM VERTICAL DATUM FOR THIS SURVEY IS NAVD88 ESTABLISHED FROM WSDOT MONUMENT ID NO. 247. ELEVATION = 80.449' (NAVD88)

LOT AREA

52,078± SF (1.20± AC)

1402 S. MERIDIAN, PUYALLUP, WA 98371

773000-028-1 & 773000-028-8: TITLE PARCEL A 773000-003-1 & 773000-002-1: TITLE PARCEL B

REFERENCE SURVEYS:

PIERCE COUNTY SHORT PLAT OF MERIDIAN CENTER - AFN 77-315 (1977) PLAT OF SOURWINE'S ACRE LOTS - VOL 8 PLATS, PAGE 10 (1905) PIERCE COUNTY SHORT PLAT - AFN 8706010381 (1987) WSDOT SR 512 96TH ST TO JCT. SR 167, DATED MAY 23, 1968

THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON MARCH 22, 2022. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN MARCH OF 2022.

FLOOD INFORMATION:

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INFORMATION: FIRM (FLOOD INSURANCE RATE MAP) MAP NO. 53053C0341E PANEL 341 OF 1375, DATED MARCH 7, 2017. THE SUBJECT PROPERTY IS IN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

ZONING INFORMATION: (A ZONING REPORT WAS NOT FURNISHED FOR THIS SITE)

SURVEYOR'S NOTES:

- ALL DISTANCES SHOWN HEREON ARE GROUND MEASUREMENTS IN U.S. SURVEY FEET.
- THE BOUNDARY CORNERS AND LINES DEPICTED ON THIS MAP REPRESENT DEED LINES. ONLY, AND DON'T PURPORT TO SHOW OWNERSHIP LINES THAT MAY OTHERWISE BE DETERMINED BY A COURT OF LAW. NO GUARANTEE OF OWNERSHIP IS EXPRESSED OR
- UNDERGROUND UTILITIES AND FEATURES DEPICTED HEREON ARE BASED ON FIELD OBSERVATION, MARKINGS, DEVELOPMENT PLANS, AND/OR AVAILABLE RECORD DOCUMENTS ONLY. THE TRUE LOCATION, NATURE AND/OR EXISTENCE OF BELOW GROUND FEATURES, DETECTED OR UNDETECTED, SHOULD BE VERIFIED.
- THE LEGAL DESCRIPTION AND SPECIAL EXCEPTIONS SHOWN HEREON ARE PER THE ABOVE REFERENCED TITLE REPORT UNLESS OTHERWISE NOTED.
- THIS SURVEY HAS DEPICTED ALL VISIBLE OCCUPATIONAL INDICATORS (IE. FENCE LINES, BUILDINGS, WALLS, ETC. - SEE MAP FOR PARTICULARS) PER W.A.C. 332-130. LINES OF OCCUPATION, AS DEPICTED, MAY INDICATE AREAS OF POTENTIAL CLAIMS OF UNWRITTEN OWNERSHIP. THIS SURVEY HAS ONLY DEPICTED THE RELATIONSHIP BETWEEN LINES OF OCCUPATION AND DEEDED LINES OF RECORD. NO RESOLUTION OF OWNERSHIP BASED ON UNWRITTEN RIGHTS HAS BEEN MADE BY THIS SURVEY OR BY ANY PERSONNEL OF BARGHAUSEN CONSULTING ENGINEERS, INC.
- THIS IS A FIELD TRAVERSE SURVEY. TOPCON GT AND TOPCON HYPER HR GPS AND DELL TABLET DATA COLLECTOR WERE USED TO MEASURE THE ANGULAR AND DISTANCE RELATIONSHIPS BETWEEN THE CONTROLLING MONUMENTATION AS SHOWN. CLOSURE RATIOS OF THE TRAVERSE MET OR EXCEEDED THOSE SPECIFIED IN W.A.C. 332-130-090. ALL INSTRUMENTS AND EQUIPMENT HAVE BEEN MAINTAINED IN ADJUSTMENT ACCORDING TO MANUFACTURERS' SPECIFICATIONS AND USED BY APPROPRIATELY TRAINED PERSONNEL.
- THIS SURVEY MEETS OR EXCEEDS THE "RELATIVE POSITIONAL PRECISION" REQUIREMENTS SET FORTH IN THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS IN SECTION 3(E).
- THE RECORD DESCRIPTION FOR THE SUBJECT PROPERTY MATHEMATICALLY CLOSES.
- ELEMENTS AND FEATURES DEPICTED HEREON SATISFY THE REQUIREMENTS STATED WITHIN W.A.C. 332-130-145 FOR TOPOGRAPHIC MAPS, INCLUDING THE FOLLOWING: THE SOURCE OF THE CONTOURS SHOWN HEREON ARE BASED UPON DIRECT FIELD OBSERVATIONS. THE CONTOUR ACCURACY IS PER NATIONAL MAPPING STANDARDS, ONE HALF OF THE CONTOUR INTERVAL (1'). THE PURPOSE OF THIS SURVEY IS TO MAP THE CURRENT CONDITIONS FOR ENGINEERING DESIGN.
- BARGHAUSEN CONSULTING ENGINEERS, INC. SURVEY CREWS DETECTED NO OBSERVABLE EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING
- BARGHAUSEN CONSULTING ENGINEERS, INC. SURVEY CREWS DETECTED NO OBSERVABLE EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.
- THERE IS NO VISIBLE EVIDENCE OF ANY CEMETERIES OR BURIAL GROUNDS.
- THERE IS EVIDENCE OF PHYSICAL ACCESS TO PUBLIC RIGHT-OF-WAY.

TITLE INFORMATION:

ALL TITLE INFORMATION SHOWN ON THIS MAP HAS BEEN EXTRACTED FROM STEWART TITLE GUARANTY COMPANY COMMITMENT NO. 21000200719, DATED JULY 29, 2021 AT 8:00 AM. INCLUDED ARE APPURTENANT EASEMENTS AND ADJOINING DEEDS FOR UNPLATTED LOTS, IF ANY. IN PREPARING THIS MAP, BARGHAUSEN CONSULTING ENGINEERS, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS BARGHAUSEN CONSULTING ENGINEERS, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY SAID COMMITMENT. BARGHAUSEN CONSULTING ENGINEERS, INC. HAS RELIED WHOLLY ON SAID TITLE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND THEREFORE BARGHAUSEN CONSULTING ENGINEERS, INC. QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.

(PER ABOVE REFERENCED TITLE REPORT) PARCEL A: (773000-028-1 & 773000-028-8) LOT 1 AND THE NORTH 15 FEET OF THE EAST 178.33 FEET OF "COMMON ACCESS" TRACT A", OF PIERCE COUNTY SHORT PLAT RECORDED UNDER RECORDING NO. 77-315, RECORDS OF PIERCE COUNTY WASHINGTON, FORMERLY BEING DESCRIBED AS THE NORTH 161.5 FEET OF THE WEST 178.33 FEET OF THE EAST 188.33 FEET OF LOT 20, SOURWINE'S ACRE LOTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 10, RECORDS OF PIERCE COUNTY, WASHINGTON; TOGFTHER WITH THAT PORTION OF 14TH AVENUE SW, VACATED BY ORDINANCE NO. 2304 ABUTTING THEREON AND ATTACHED THERETO, RECORDED UNDER RECORDING NO. 9206040385.

RIGHTS TO USE THAT PORTION OF THE WITHIN DESCRIBED PROPERTY LYING WITHIN COMMON ACCESS TRACT "A" OF SIDE SHORT PLAT, FOR INGRESS, EGRESS, AND INSTALLATION AND MAINTENANCE OF UTILITIES, AS SET FORTH AND DELINEATED ON PIFRCE COUNTY SHORT PLAT NO. 77-315; EXCEPT ANY PORTION LYING WITHIN PARCÉL A ABOVE.

AN EASEMENT FOR INGRESS AND EGRESS AS SET FORTH IN DOCUMENTS ENTITLED "STATUTORY WARRANTY DEED" AS RECORDED UNDER RECORDING NUMBERS 2741876 AND

2792268. PARCEL B: (773000-003-1 & 773000-002-1) LOT 2, SOURWINE'S ACRE LOTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 10, RECORDS OF PIERCE COUNTY, WASHINGTON; EXCEPT THAT PORTION LYING WITHIN STATE HIGHWAY NO. SR-512, 96TH STREET TO TOGETHER WITH THAT PORTION OF 14TH AVENUE SW, VACATED BY ORDINANCE NO. 2304 ABUTTING THEREON AND ATTACHED THERETO, RECORDED UNDER RECORDING NO.

SITUATE IN THE COUNTY OF PIERCE, STATE OF WASHINGTON.

SPECIAL EXCEPTIONS: (PER ABOVE REFERENCED TITLE REPORT)

ITEMS 1 THOUGH 18 ARE NOT SURVEY RELATED.

19. TEMPORARY RIGHT, PERMIT, LICENSE AND EASEMENT TO USE AND OCCUPY A PORTION OF SAID LOT 20 FOR THE PURPOSE OF CONSTRUCTING HIGHWAY SLOPES AND OPERATING ALL NECESSARY MACHINERY AND EQUIPMENT THEREON AT ANY AND ALL TIMES UNTIL COMPLETION OF CONSTRUCTION FOR STATE RAD NO. 512 AS APPROPRIATED BY THE STATE OF WASHINGTON IN PIERCE COUNTY SUPERIOR COURT CAUSE NO. 198127. AFTER COMPLETION OF CONSTRUCTION, ALL RIGHTS OF EASEMENT SHALL BE EXTINGUISHED.

PARCEL A (BLANKET IN NATURE)(POTENTIALLY EXTINGUISHED)

20. RELINQUISHMENT OF ACCESS TO STATE HIGHWAY AND OF LIGHT, VIEW AND AIR BY DEED TO THE STATE OF WASHINGTON: NOVEMBER 19, 1966 RECORDING NO .: 2321816

AFFFCTS: PARCFI A (APPLIES TO OFFSITE ADJACENT PROPERTY)

21. RELINQUISHMENT OF ACCESS TO STATE HIGHWAY AND OF LIGHT, VIEW AND AIR BY DEED TO THE STATE OF WASHINGTON: OCTOBER 20, 1975 2632004 RECORDING NO.:

PARCEL B

2667305

AFFECTS: (BLANKET IN NATURE)

22. EASEMENT AND THE TERMS AND CONDITIONS THEREOF: PUGET SOUND POWER AND LIGHT COMPANY PURPOSE: ELECTRIC TRANSMISSION AND/OR DISTRIBUTION SYSTEM AFFECTS EAST 10 FEET OF PARCEL A AND INCLUDES OTHER PROPERTY RECORDED: MAY 26, 1976

(PLOTTED HEREON)

23. EASEMENT AND THE TERMS AND CONDITIONS THEREOF: GRANTEE: PUGET SOUND POWER AND LIGHT COMPANY ELECTRIC TRANSMISSION AND/OR DISTRIBUTION SYSTEM PURPOSE: PORTION OF PARCEL A AND INCLUDES OTHER PROPERTY RECORDED: MAY 26, 1976 RECORDING NO.:

(BLANKET IN NATURE)

RECORDING NO.:

24. COVENANTS, CONDITIONS AND RESTRICTIONS AND EASEMENTS CONTAINED IN SHORT RECORDED: MAY 25, 1977 RECORDING NO.: 77-315

(PLOTTED HEREON)(COMMON ACCESS TRACT "A")

25. EASEMENT AND THE TERMS AND CONDITIONS THEREOF: INGRESS, EGRESS AND UTILITIES PORTION OF TRACT A LYING WITHIN PARCEL A RECORDED: JANUARY 16, 1958 RECORDING NO.: 2792268

(PLOTTED HEREON)

26. EASEMENT AND THE TERMS AND CONDITIONS THEREOF: PURPOSE: INGRESS AND EGRESS TRACT A OF SHORT PLAT 77-315 RECORDED: 2741876

RECORDING NO.: (PLOTTED HEREON)

27. EASEMENT AND THE TERMS AND CONDITIONS THEREOF: GRANTEE: CITY OF PUYALLUP

CONSTRUCTING, INSTALLING, REPAIRING AND MAINTAINING STREET IMPROVEMENTS ACCORDING TO THE PLAN ENTITLED "SOUTH MERIDIAN STREET IMPROVEMENTS"

RECORDED: 8706100397 RECORDING NO.: (PLOTTED HEREON)

28. MUTUAL MAINTENANCE AGREEMENT AND THE TERMS AND CONDITIONS THEREOF: RECORDED: MAY 17, 1991

RECORDING NO .: 9105170239

(NOT SURVEY RELATED) 29. EASEMENT AND THE TERMS AND CONDITIONS THEREOF: GRANTFF WASHINGTON NATURAL GAS PURPOSE GAS PIPELINE OR PIPELINES NORTHERLY PORTION OF PARCEL A RECORDED MARCH 30, 1992

9203300111

RECORDING NO.: (PLOTTED HEREON)

30. EASEMENT AND THE TERMS AND CONDITIONS THEREOF:

STORMWATER, SANITARY AND WATERMAIN PIPE LINE AND PURPOSE: APPURTFNANCES SOUTH 30 FEET OF PARCEL B

RECORDED RECORDING NO .: 9206040382 (PLOTTED HEREON)

31. EASEMENT AND THE TERMS AND CONDITIONS THEREOF:

CITY OF PUYALLUP GRANTFF STORMWATER, SANITARY AND WATERMAIN PIPE LINE AND PURPOSE: **APPURTENANCES** NORTH 30 FEET OF PARCEL A

JUNE 4, 1992 RECORDED RECORDING NO.: 9206040383

(PLOTTED HEREON)(OFFSITE ADJACENT EASEMENT)

32. EASEMENT AND THE TERMS AND CONDITIONS THEREOF: GRANTEE: STORMWATER, SANITARY AND WATERMAIN PIPE LINE AND

APPURTFNANCES NORTH 30 FEET OF PARCEL A RECORDED: 9206040384

RECORDING NO.: (PLOTTED HEREON)

AFFECTS:

(PLOTTED HEREON)

33. EASEMENT AND THE TERMS AND CONDITIONS THEREOF: PUGET SOUND POWER AND LIGHT COMPANY GRANTEE: ELECTRIC TRANSMISSION AND/OR DISTRIBUTION SYSTEM PORTION OF PARCEL B

RECORDED JULY 28, 1992 RECORDING NO.: 9207280563 (PLOTTED HEREON)(OFFSITE ADJACENT EASEMENT)

34. EASEMENT AND THE TERMS AND CONDITIONS THEREOF: GRANTEE: PUGET SOUND POWER AND LIGHT COMPANY ELECTRIC TRANSMISSION AND/OR DISTRIBUTION SYSTEM PURPOSE: PORTION OF PARCEL A

RECORDED: JULY 28, 1992 RECORDING NO.: 9207280564

SURVEYOR'S CERTIFICATION:

TO: BP PRODUCTS NORTH AMERICA INC., A MARYLAND CORPORATION AND STEWART TITLE GUARANTY COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS AND INCLUDES ITEMS 2, 3, 4, 7(a), 7(b)(1), 7(c), 8, 9, 11, 13, 14, 16, 17, 18, AND 19 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON MARCH 22, 2022.

DATE OF PLAT OR MAP: APRIL 19, 2022.

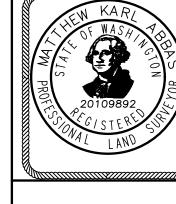
MATTHEW K. ABBAS, PLS WASHINGTON REGISTRATION NO. 20109892 MABBAS@BARGHAUSEN.COM

SURVI OF SEC

= =

A/NSPS L
THE SE1/4,
VP. 20 N
PUYA!

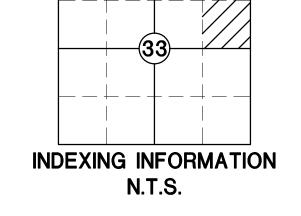




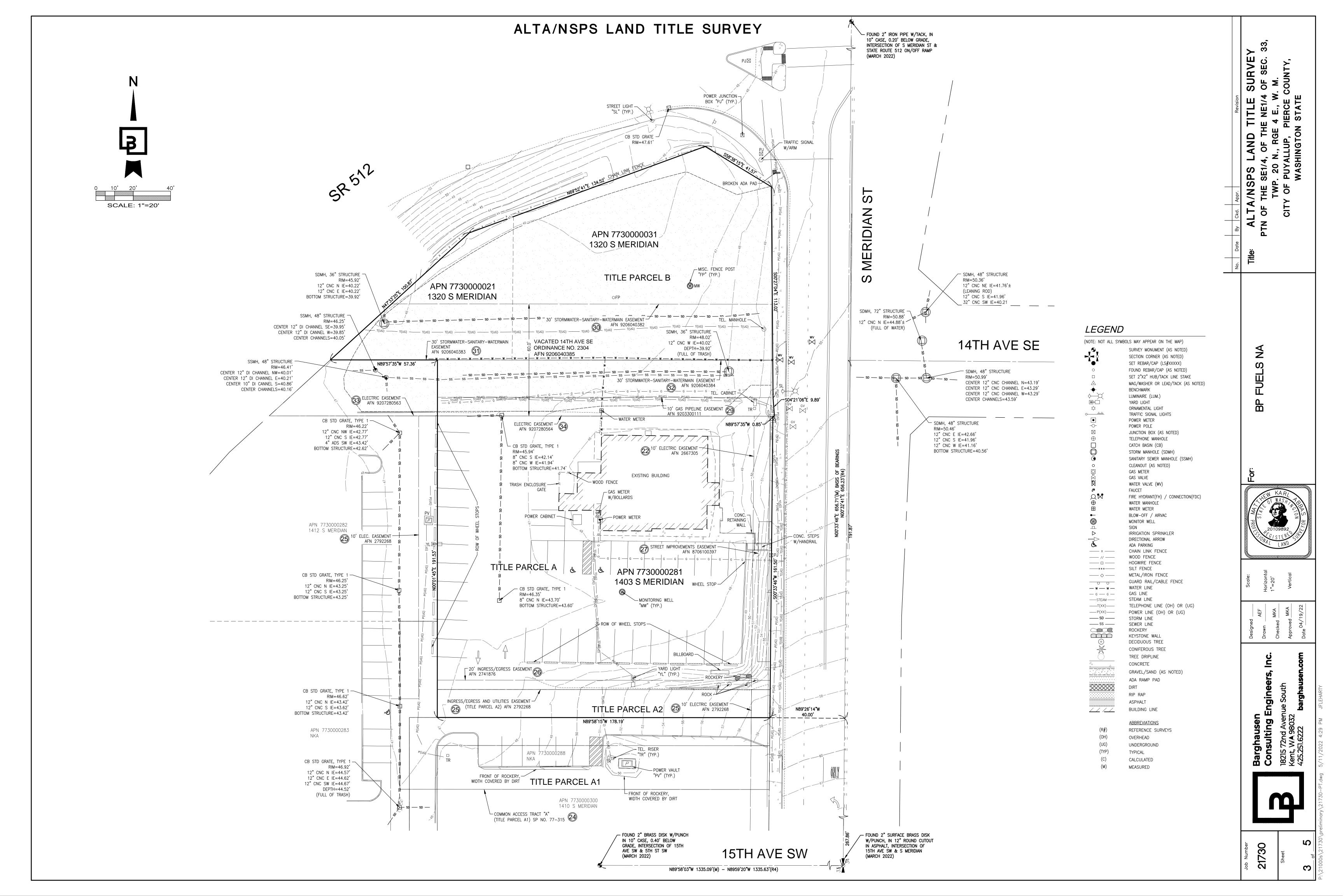




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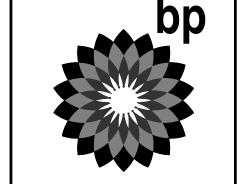


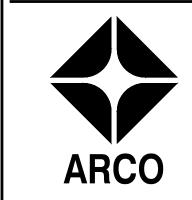
TWP. 20N R.4E



PRELIMINARY DRAINAGE AND GRADING PLAN **GRADING LEGEND:**

ARCO ampm PUYALLUP SEC. 33, TWN. 20 N, RGE. 4 E, W.M. CITY OF PUYALLUP, PIERCE COUNTY







BP WEST COAST PRODUCTS, LLC

Consulting Engineers, Inc.

18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com

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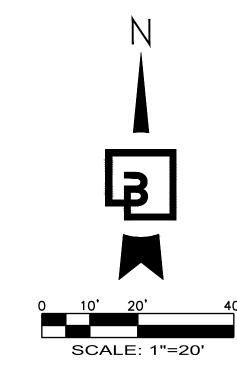
3400 am/pm FUEL CANOPY w/ 8 MPD's

> **SWC S MERIDIAN** @ HIGHWAY 512 PUYALLUP, WASHINGTON

FACILITY #TBD

21730

PRELIMINARY DRAINAGE AND GRADING PLAN



GRADING NOTES:

PROPOSED CONTOUR

PROPOSED GRADE BREAK

PROPOSED GRADING SLOPE

MATCH EXISTING ELEVATION

TOP OF PAVEMENT/TOP OF CURB

FLOW/GUTTER LINE/TOP OF CURB

PROPOSED RIDGE LINE

EXISTING CONTOUR

SWALE FLOWLINE

SPOT ELEVATION FLUSH ELEVATION

1. ALL SPOT ELEVATIONS SHOWN ARE TO FINISH SURFACE (TOP OF ASPHALT OR TOP OF CONCRETE PAVEMENT, NOT TOP OF CURB/SIDEWALK) UNLESS OTHERWISE NOTED. (TP = TOP OF PAVEMENT, TC = TOP OF CONCRETE SIDEWALK/CURB, ME = MATCH EXISTING ELEVATIONS, FC = FLUSH CURB, FL = FLOW LINE, GB = GRADE BREAK, TPI = TOP OF ISLAND, FS = FINISH SURFACE)

----- 30 -----

1.00%

30.01 FC

30.01 TP 30.51 TC

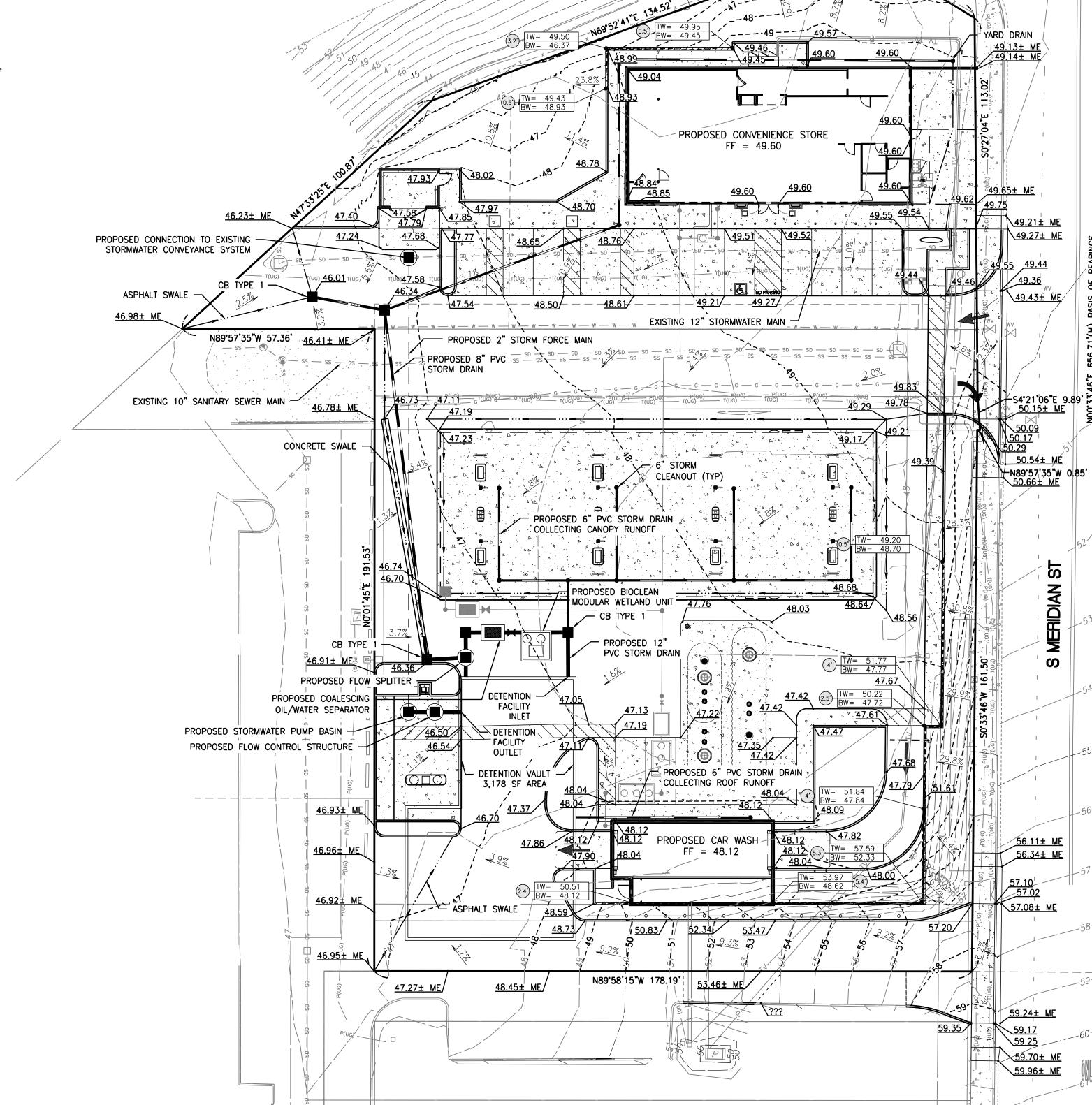
30.01± ME

- 2. FILL MATERIAL AND COMPACTION SHALL CONFORM TO THE GEOTECHNICAL REPORT AND CITY OF
- 3. CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND CITY
- RAISE AND ADJUST PROPOSED SANITARY SEWER CLEANOUTS LIDS TO FINAL GRADE AS NECESSARY. CLEANOUTS WITHIN ADA ACCESSIBLE PATHS SHALL BE ADJUSTED TO FINAL ELEVATIONS IN COMPLIANCE WITH CURRENT ADA REQUIREMENTS.
- RAISE AND ADJUST ALL EXISTING AND PROPOSED CATCH BASIN RIMS TO FINAL GRADE AS NECESSARY. CATCH BASINS WITHIN ADA ACCESSIBLE PATHS SHALL BE ADJUSTED TO FINAL ELEVATIONS IN COMPLIANCE WITH CURRENT ADA STANDARDS.

WALL CALL NOTE:

WALL ELEVATIONS TW=TOP OF WALL EXPOSED WALL HEIGHT BW=BOTTOM OF WALL AT EXPOSED FACE (NOT TOP OF FOOTING)

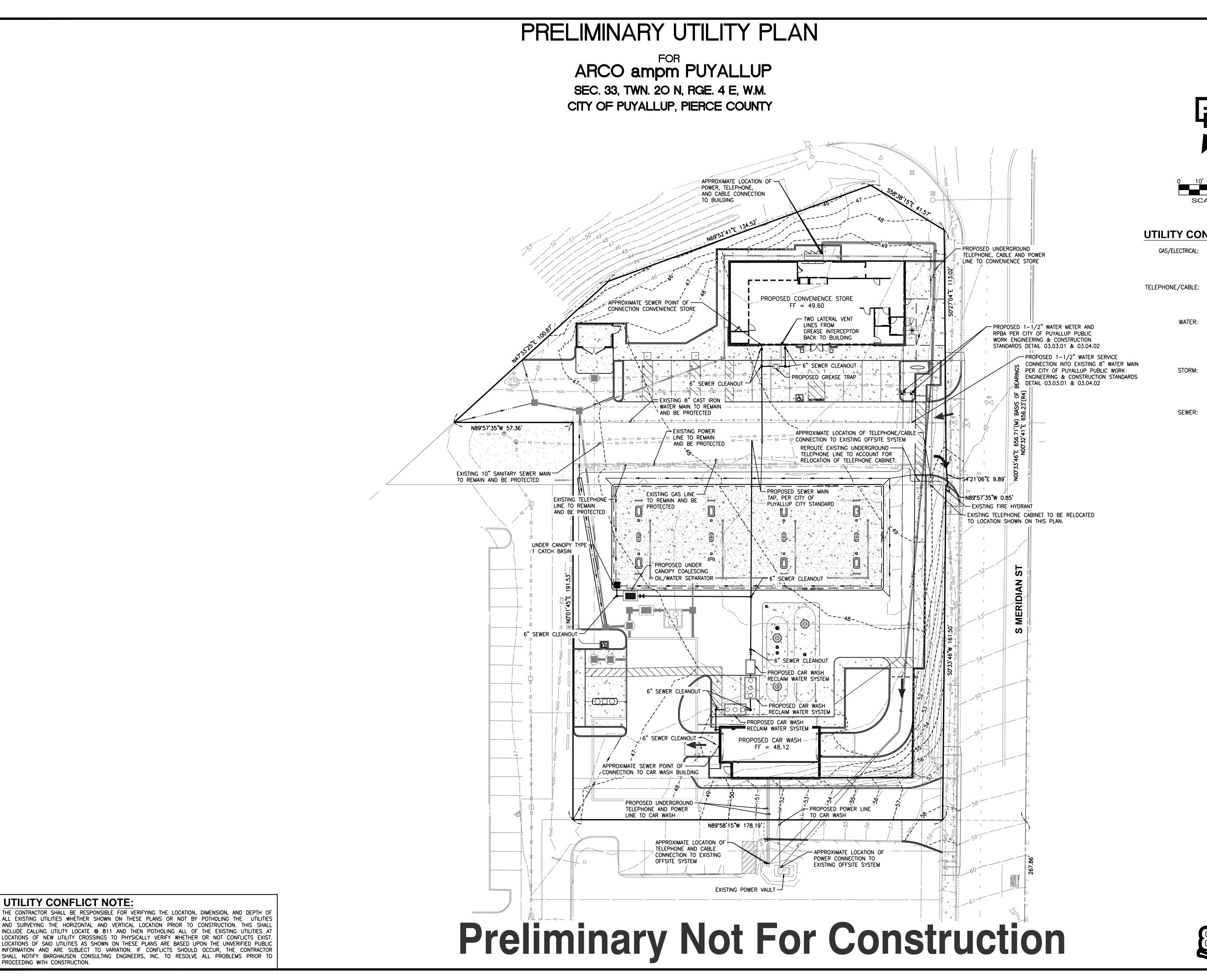
- ELEVATIONS SHOWN OF THE TOP AND BOTTOM OF WALL ARE AT THE EXPOSED FACE OF THE WALL, AND DO NOT INCLUDE HEIGHT OF THE WALL FOUNDATION.
- CONTRACTOR TO VERIFY WALL ELEVATIONS INSTALLED BY

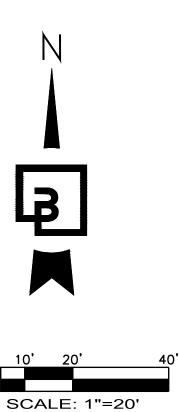


ACCESSIBLE PATH OF TRAVEL NOTE:

WALKWAYS AND SIDEWALKS ALONG ACCESSIBLE ROUTES OF TRAVEL (1) SHALL BE CONTINUOUSLY ACCESSIBLE, (2) ARE MINIMUM 44" IN WIDTH, (3) HAVE A MAXIMUM 1.5% CROSS SLOPE, AND (4) WHERE NECESSARY TO CHANGE ELEVATION AT A SLOPE EXCEEDING 5% LONGITUDINALLY (i.e., 1:20) SHALL HAVE RAMPS COMPLYING WITH ADA STANDARDS. SECTION 405. WHERE A WALK CROSSES OR ADJOINS A VEHICULAR WAY, AND THE WALKING SURFACES ARE NOT SEPARATED BY CURBS, RAILINGS OR OTHER ELEMENTS BETWEEN PEDESTRIAN AREAS AND VEHICULAR AREAS SHALL BE DEFINED BY A CONTINUOUS DETECTABLE WARNING; COMPLYING WITH ADA STANDARDS, SECTION 406.8.







UTILITY CONTACT INFORMATION

PUGET SOUND ENERGY 5807 MILWAUKEE AVENUE EAST PUYALLUP. WA 98371 PHONE: 888-225-5773

PHONE: (887) 824-2288

CITY OF PUYALLUP 1100 39TH AVENUE SOUTHEAST PUYALLUP, WA 98371 CONTACT: CRAIG HALE PHONE: (253) 8411-5505 EMAIL: CRAIG@CI.PUYALLUP.WA.US

CITY OF PUYALLUP 1100 39TH AVE SOUTHEAST PUYALLUP, WA, 98374

CONTACT: JONATHAN WIKANDER PHONE: (253) 841-5505 CITY OF PUYALLUP

1100 39TH AVE SOUTHEAST PUYALLUP, WA, 98374 CONTACT: JONATHAN WIKANDER PHONE: (253) 841-5505







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ARCO NTI

3400 am/pm FUEL CANOPY w/ 8 MPD's

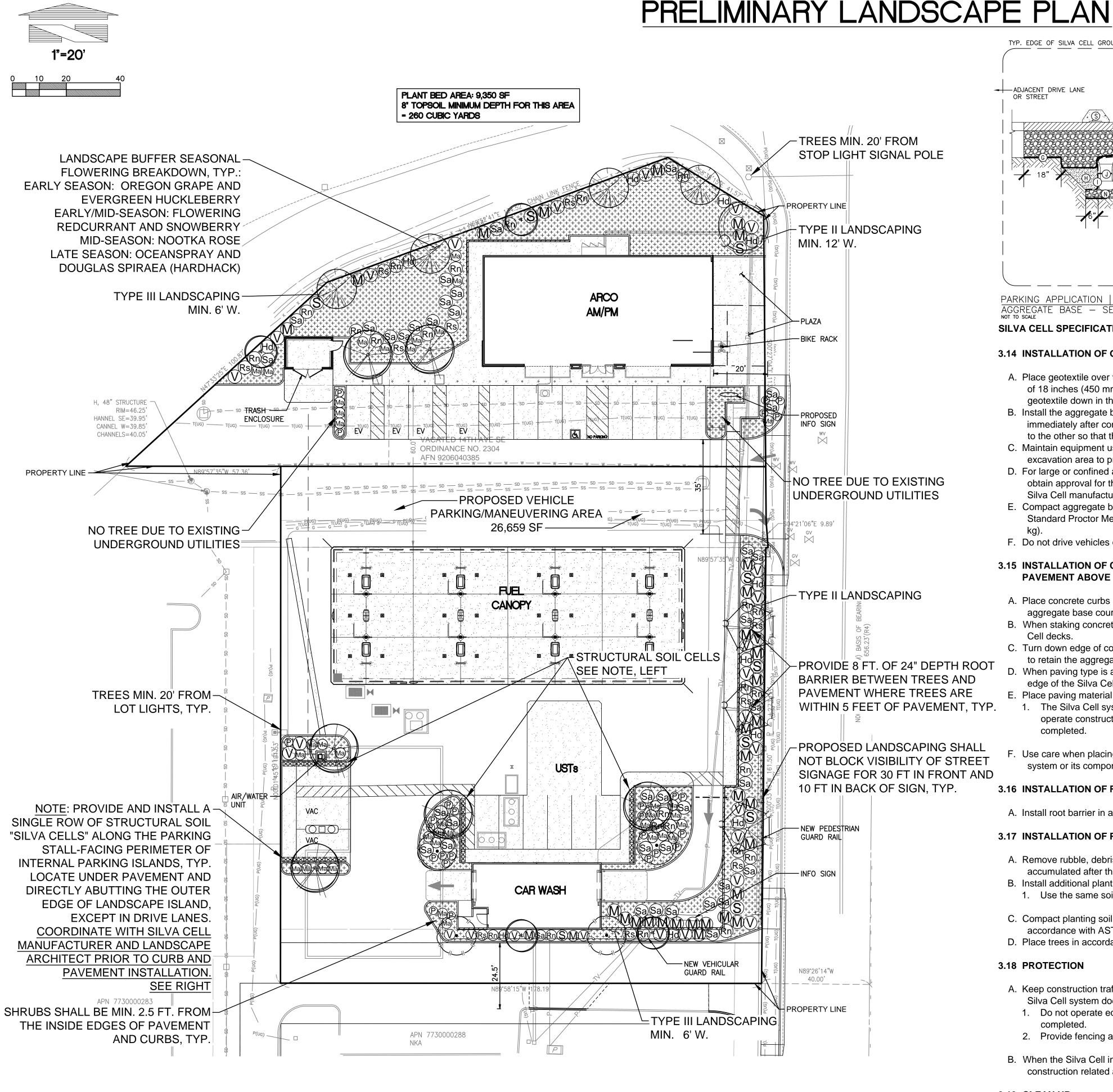
SWC S MERIDIAN @ HIGHWAY 512 PUYALLUP, WASHINGTON

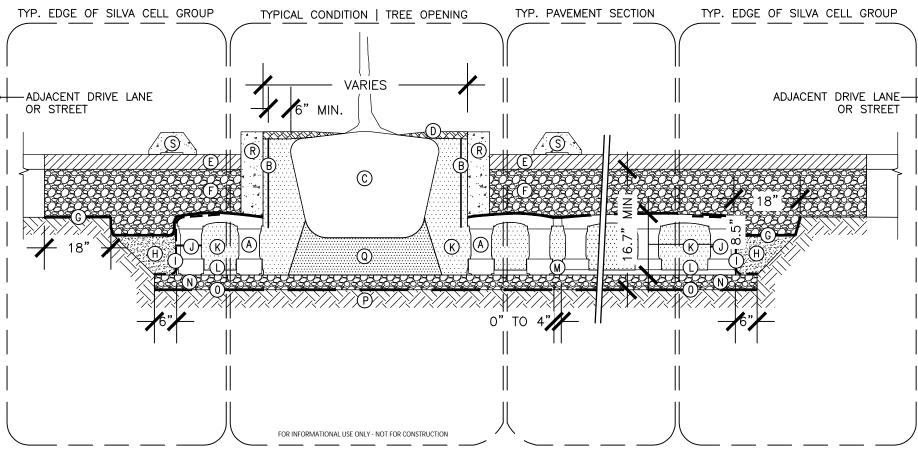
FACILITY #TBD

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PRELIMINARY UTILITY PLAN

Know what's **below. Call before you dig.**





PARKING APPLICATION | FLEXIBLE.1x | 1x SILVA CELL SYSTEM FOR PAVERS OR ASPHALT PAVING ON AGGREGATE BASE - SECTION

SILVA CELL SPECIFICATIONS, ADDTIONAL

3.14 INSTALLATION OF GEOTEXTILE AND AGGREGATE BASE COURSE OVER THE DECK

- A. Place geotextile over the top of the deck and extend to the edge of the excavation. Overlap joints a minimum of 18 inches (450 mm). Leave enough slack in the geotextile for the aggregate base course to push the geotextile down in the gaps in between the decks.
- B. Install the aggregate base course (including aggregate setting bed if installing unit pavers) over the geotextile immediately after completing the installation of the fabrics. Work the aggregate from one side of the layout to the other so that the fabric and aggregate conform to the Silva Cell deck contours.
- C. Maintain equipment used to place aggregate base course completely outside the limits of the Silva Cell excavation area to prevent damage to the installed system.
- D. For large or confined areas, where aggregate cannot easily be placed from the edges of the excavated area, obtain approval for the installation procedure and types of equipment to be used in the installation from the
- E. Compact aggregate base course(s) to 95 percent of maximum dry density in accordance with ASTM D698, Standard Proctor Method. Utilize a vibration or plate compactor with a maximum weight of 800 lbs (362.87
- F. Do not drive vehicles or operate equipment over the completed aggregate base course.

3.15 INSTALLATION OF CONCRETE CURBS AT TREE OPENINGS, AGGREGATE SUBBASE AND PAVEMENT ABOVE THE SILVA CELL SYSTEM

- A. Place concrete curbs along planting areas and tree openings as shown on the Drawings to retain the aggregate base course from migrating into the planting soil.
- B. When staking concrete forms (e.g. curbs around the tree openings), prevent stakes from penetrating the Silva
- C. Turn down edge of concrete paving to the Silva Cell deck along the edges of tree openings or planting areas to retain the aggregate base course material.
- D. When paving type is a unit paver or other flexible material, provide a concrete curb under the paving at the edge of the Silva Cell deck to retain the aggregate base course material at the tree opening. E. Place paving material over Silva Cell system in accordance with the Drawings.
- 1. The Silva Cell system does not fully meet loading strength until the final paving is installed. Do not operate construction equipment on top of the Silva Cell system until paving installation has been completed.
- F. Use care when placing paving or other backfill on top of Silva Cell system to prevent damage to the Silva Cell system or its components.

3.16 INSTALLATION OF ROOT BARRIERS

A. Install root barrier in accordance with manufacturer's installation instructions.

3.17 INSTALLATION OF PLANTING SOIL WITHIN THE TREE PLANTING AREA

- A. Remove rubble, debris, dust and silt from the top of the planting soil within the tree opening that may have accumulated after the initial installation of the planting soil within the Silva Cells.
- B. Install additional planting soil within the tree openings, to the depths indicated on the Drawings. 1. Use the same soil used within the Silva Cells for planting soil within the tree openings.
- C. Compact planting soil under the tree root ball to between 85 and 90 percent of maximum dry density in accordance with ASTM D698, Standard Proctor Method, to prevent settlement of the root ball.
- D. Place trees in accordance with the Drawings.

3.18 PROTECTION

- A. Keep construction traffic away from the limits of the Silva Cells until the final pavement profile is in place. The Silva Cell system does not fully meet loading strength until the final paving is installed.
- 1. Do not operate equipment directly on top of the Silva Cell system until paving installation has been
- 2. Provide fencing and other barriers to prevent vehicles from entering into the Silva Cell area.
- B. When the Silva Cell installation is completed and the permanent pavement is in place, limit traffic and construction related activities to only loads less than the design loads.

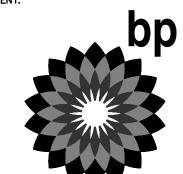
3.19 CLEAN UP

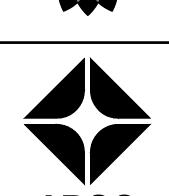
- A. Perform clean up during installation and upon completion of the Work. Maintain the site free of soil, sediment, trash and debris. Remove excess soil materials, debris, and equipment from the site following completion of
- B. Repair damage to adjacent materials and surfaces resulting from installation of this Work using mechanics Preliminary Not For Construction type and trades affected.

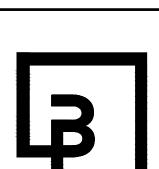
 Preliminary Not For Construction type and trades affected.

- (A) SILVA CELL SYSTEM (DECK, BASE, AND POSTS)
- (B) DEEPROOT UB24-2 ROOT BARRIER. INSTALL DIRECTLY ADJACENT TO CONCRETE EDGE RESTRAINT (C) TREE ROOT PACKAGE,
- D1-2" MULCH, PLACED IN TREE OPENING
- (E)PAVERS OR ASPHALT, PER PROJECT
- F)12" MIN. AGGREGATE BASE COURSE
- (G) GEOTEXTILE TO EDGE OF EXCAVATION
- (H)BACKFILL, TO WITHIN 4-6" BELOW TOP OF SILVA CELL DECKS. INSTALL IN 8" LIFTS, EACH COMPACTED TO 95% PROCTOR.
- (I) GEOGRID TO LINE PERIMETER OF SYSTEM WITH 6" TOE (OUTWARD FROM BASE) AND 12" EXCESS (OVER TOP OF DECK)
- (J)3/16"x14" ZIP TIES, SECURING GEOGRID TO SILVA CELLS
- K PLANTING SOIL. INSTALL IN 12" LIFTS, EACH COMPACTED TO 70-80% PROCTOR
- (L) SILVA CELL BASE SLOPE, 5% MAX
- M)0" to 4" SPACING BETWEEN SILVA
- (N)4" MIN. AGGREGATE SUB BASE, COMPACTED
- ① GEOTEXTILE FABRIC, PLACED BELOW AGGREGATE SUB BASE
- (P)SUBGRADE, COMPACTED TO
- 95% PROCTOR ()PLANTING SOIL BELOW TREE ROOT PACKAGE.
- COMPACTED TO 85-90% PROCTOR (R)CONCRETE EDGE RESTRAINT BETWEEN AGGREGATE BASE COURSE AND TREE OPENING
- (S)OPTIONAL WHEEL STOP, PER PROJECT. PROTECT SILVA CELLS FROM DAMAGE WHEN ANCHORING TO PAVEMENT
- 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH
- MANUFACTURER'S SPECIFICATIONS DO NOT SCALE DRAWINGS
 PROVIDE SUPPLEMENTAL IRRIGATION FOR SEASONAL DROUGH

NOTE: SILVA CELL OR APPROVED EQUAL STRUCTURAL SOIL PRODUCT. **ALTERNATIVE** MANUFACTURER PRODUCT INFORMATION TO BE SUBMITTED TO LANDSCAPE ARCHITECT WITH OTHER REQUIRED SUBMITTALS







BP WEST COAST PRODUCTS, LLC

Consulting Engineers, Inc.

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DEVELOPMENT INFORMATION: ARCO NTI

3400 am/pm FUEL CANOPY w/ 8 MPD's

SITE ADDRESS: **SWC S MERIDIAN**

@ HIGHWAY 512 PUYALLUP, WASHINGTON

FACILITY #TBD

21730 **PRELIMINARY** LANDSCAPE

PRELIMINARY LANDSCAPE NOTES AND PLANT SCHEDULE

QUANTITY NATIVE SHRUBS AND GROUNDCOVERS: QUANTITY NON-NATIVE SHRUBS AND GROUNDCOVERS: 1% TOTAL SHRUBS AND GROUNDCOVERS:

PLANT SCHEDULE

+ + + + + + + +

	-							
TREES	BOTANICAL / COMMON NAME	CONT.	SIZE	WATER USE	ORIGIN	FOLIAGE		QTY
#	ACER CIRCINATUM / VINE MAPLE 2" TOTAL CAL. IF MULTI-STEM. NURSERY GROWN. STAKE AND GUY ONE GROWING SEASON.	B & B	1" CAL	LOW	NATIVE	DECIDUOUS		4
	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' / SKYLINE HONEY LOCUST NURSERY GROWN FOR STREET TREE USE; BRANCHING AT 5'; STAKE AND GUY ONE GROWING SEASON	В&В	1" CAL	LOW	ADAPTIVE	DECIDUOUS		6
	PINUS CONTORTA VAR. CONTORTA / SHORE PINE FULL TO BASE; SINGLE, STRAIGHT UN-CUT LEADER; STAKE AND GUY ONE GROWING SEASON	В&В	5`-6` MIN. HT.	LOW	NATIVE	EVERGREEN		4
	THUJA PLICATA `EXCELSA` / EXCELSA CEDAR FULL TO BASE; SINGLE, STRAIGHT UN-CUT LEADER; STAKE AND GUY ONE GROWING SEASON	B & B	5`-6` MIN. HT.	LOW	NATIVE	EVERGREEN		4
STREET TREES	BOTANICAL / COMMON NAME	CONT.	SIZE	WATER USE	ORIGIN	<u>FOLIAGE</u>		QTY
	TILIA CORDATA 'PNI 6025' / LITTLELEAF LINDEN SYN. TILIA 'GREENSPIRE'. MEDIUM STREET TREE. NURSERY GROWN FOR STREET TREE USE; BRANCHED AT FIVE (5) FEET; STAKE AND GUY ONE GROWING SEASON	B & B	1" CAL	LOW	ADAPTIVE	DECIDUOUS		3
	ZELKOVA SERRATA 'VILLAGE GREEN' / SAWLEAF ZELKOVA MEDIUM STREET TREE. NURSERY GROWN FOR STREET TREE USE; BRANCHED AT FIVE (5) FEET; STAKE AND GUY ONE GROWING SEASON	В&В	1" CAL	LOW	ADAPTIVE	DECIDUOUS		2
SHRUBS	BOTANICAL / COMMON NAME	CONT.	WATER USE	ORIGIN	<u>FOLIAGE</u>			
(Hd)	HOLODISCUS DISCOLOR / OCEAN-SPRAY	#2	LOW	NATIVE	DECIDUOUS			11
	MAHONIA AQUIFOLIUM / OREGON GRAPE	#2	LOW	NATIVE	EVERGREEN			34
Ma	MAHONIA AQUIFOLIUM 'COMPACTA' / COMPACT OREGON GRAPE FULL AND BUSHY	#2	LOW	NATIVE	EVERGREEN			39
Rs	RIBES SANGUINEUM / RED FLOWERING CURRANT	#2	LOW	NATIVE	DECIDUOUS			11
(Rn)	ROSA NUTKANA / NOOTKA ROSE FULL AND BUSHY	#2	MEDIUM	NATIVE	DECIDUOUS			26
S	SPIRAEA DOUGLASII / HARDHACK FULL AND BUSHY	#2	MEDIUM	NATIVE	DECIDUOUS			9
Sa	SYMPHORICARPOS ALBUS / SNOWBERRY FULL AND BUSHY	#2	LOW	NATIVE	DECIDUOUS			42
V	VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY FULL AND BUSHY	#2	LOW	NATIVE	EVERGREEN			29
FERNS AND GRASSES	BOTANICAL / COMMON NAME	CONT.	WATER USE	ORIGIN	FOLIAGE			
P	POLYSTICHUM MUNITUM / WESTERN SWORD FERN	#2	LOW	NATIVE	EVERGREEN			34
GROUND COVERS	BOTANICAL / COMMON NAME	CONT.	WATER USE	ORIGIN	<u>FOLIAGE</u>		SPACING	
+++++++++ +++++++++ ++++++++++ ++++++++	ARCTOSTAPHYLOS UVA-URSI / KINNIKINNICK	#1	LOW	NATIVE	EVERGREEN		24" o.c.	1,247

SEE SHEET L1 FOR ADDITIONAL PLANTING SPECIFICATIONS. CONFORM TO THE SPECIFICATIONS AND DRAWINGS IN THESE LANDSCAPE PLANS AND THE REQUIREMENTS OF CITY OF PUYALLUP VEGETATION MANAGEMENT STANDARDS (VMS). WHERE THERE IS A CONFLICT CONFORM TO THE MORE STRINGENT REQUIREMENTS.

CITY OF PUYALLUP MINIMUM

SOIL REQUIREMENTS:

SOIL PREPARATION IN ALL DISTURBED AREAS WITH NEW LANDSCAPING SHALL CONFORM TO SPECIFICATIONS PROVIDED IN

BMP T5.13 - THE "STORM WATER

MANAGEMENT MANUAL OF WESTERN WASHINGTON".

DEPARTMENT OF ECOLOGY,

DATED AUGUST 2012, OR AS SUBSEQUENTLY AMENDED.

COMPACTION OF LANDSCAPED AREAS FROM VEHICLES AND

HEAVY EQUIPMENT SHALL BE

AVOIDED AFTER TILLING

SOIL AMENDMENT NOTES

ALL SOILS IN ALL LANDSCAPE INSTALLATIONS SHALL CONFORM TO THE FOLLOWING SOIL DEPTH AND QUALITY REQUIREMENTS. PLEASE REFER TO APPENDIX 20.9 FOR FURTHER INSTALLATION GUIDANCE:

5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A pH FROM 6.0 TO 8.0 OR MATCHING THE pH OF THE RIGINAL UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES (8") EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THI CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 6 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE. INSTALLATION OF THE EIGHT INCHES (8") OF TOPSOIL, AS DESCRIBED ABOVE, SHALL GENERALLY BE ACHIEVED BY PLACING FIVE INCHES (5") OF IMPORTED SANDY-LOAM SOIL INTO PLANNED LANDSCAPE AREAS (SUB-BASE SCARIFIED FOUR INCHES (4") WITH A THREE INCH (3") LAYER OF COMPOST TILLED INTO THE ENTIRE DEPTH.

B. FOR STREET TREES IN THE RIGHT OF WAY PLANTER STRIP, THE FOLLOWING STANDARDS SHALL APPLY IN RELATION TO SOIL DEPTH. SOIL AMENDMENTS AND INSTALLATION OF NEW STREET TREES. THE FOLLOWING NOTES SHALL BE SHOWN ON THE FACE OF THE PRELIMINARY AND FINAL LANDSCAPE PLAN SHEETS: (1) FOR NEW CONSTRUCTION: IN AREAS WHERE A NEW PLANTER STRIP AND STREET TREE SHALL BE ESTABLISHED R RECONSTRUCTED DUE TO A STREET CONSTRUCTION PROJECT, THE PLANTER STRIP AREA SHALL BE

EXCAVATED TO A DEPTH OF 24" AND BACKFILLED FOLLOWING THE STANDARD ABOVE TO ACHIEVE A TOPSOIL MIX WITH 40 PERCENT COMPOST BY VOLUME. THE CONTRACTOR OR INSTALLER SHALL (1)1) REVIEW THE CITY STANDARD PLANTING DETAIL - ALL CONTRACTORS/INSTALLERS AREA REQUIRED TO FOLLOW CITY STANDARD #01.02.07 (STREET TREE PLANTING) AND #01.02.03 (ROOT BARRIER INSTALLATION). THE CONTRACTOR/INSTALLER SHALL REVIEW THE PLANTING STANDARD DETAIL PRIOR TO INSTALLATION TO UNDERSTAND THE CITY'S REQUIREMENTS. FAILURE TO FOLLOW THE STANDARD MAY RESULT IN REJECTION OF THE WORK BY THE INSPECTOR AND/OR PLANNING DEPARTMENT. (1)2) SCHEDULE A FIELD PRE-CONSTRUCTION MEETING - THE CONTRACTOR/INSTALLER SHALL CONTACT THE SITE

INSPECTOR AND PLANNING DEPARTMENT 48 HOURS IN ADVANCE OF THE INSTALLATION OF STREET TREE(S) FOR A FIFLD PRE-CONSTRUCTION MEETING ON-SITE TO REVIEW THE APPROVED PLAN SET AND CITY STANDARD DETAILS, IF STREET TREES ARE TO BE INSTALLED OVER A LONGER TIMELINE (SUCH AS A RESIDENTIAL PLAT WHERE TREES MAY BE INSTALLED OVER A MULTI-MONTH PERIOD OF TIME). THE CONTRACTOR/INSTALLER SHALL HOLD ONE CONSOLIDATED PRE-CON TO REVIEW PLANS. ALL STREET TREES SHALL BE INSPECTED AFTER PLANTING BY THE PLANNING DEPARTMENT.

GRAVEL, PIT RUN, CONSTRUCTION DEBRIS, ETC. FROM THE PLANTER STRIP AREA TO A DEPTH OF 24"

(1)3) EXCAVATE ALL CONSTRUCTION MATERIALS - EXCAVATE ALL CONSTRUCTION MATERIALS, REMNANT SOIL,

PRIOR TO PLANTING. DISCARD THIS MATERIAL AS THE PLACEMENT OF NEW COMPOST AMENDED TOP SOIL IS (1)4) PREPARE THE PLANTING STRIP - AFTER EXCAVATING ALL MATERIALS FROM THE PLANTER STRIP. SCARIFY AND RIP THE SUB-BASE WITH THE TEFTH OF A BACKHOE BUCKET (OR OTHER MECHANICAL MEANS OR HAND TOOLS) TO A DEPTH OF 6" WITH MULTIPLE PASSES, 90-DEGREES TO EACH OTHER, PRIOR TO PLANTING THE TREE. RE-COMPACT THE TREE BASE WHERE THE STREET TREE WILL BE PLANTED TO AVOID SETTING OF THE ROOT BALL. AT THIS STAGE, IF THE TREE IS TO BE PLANTED WHEN THE PLANTER STRIP BACKFILLED WITH AMENDED TOPSOIL, THE CONTRACTOR/INSTALLER SHOULD MEASURE THE DEPTH OF THE ROOT BALL TO DETERMINE WHEN TO PLACE THE TREE IN THE PIT DURING THE BACKFILLING PROCESS. IF THE ROOTBALL OR ROOT MASS (IN THE CASE OF BARE ROOT TREES) IS LESS THAN 24", THE STREET TREE SHALL BE PLANTED IN A MANNER IN WHICH THE ROOT FLARE IS LEVEL WITH OR AT LEAST 1" ABOVE

GRADE AT THE TIME OF FINISHED PLANTING. THE MAY REQUIRE THE ROOTBALL BE PLACED ON A COMPACTED SUB-BASE OF THE COMPOST AMENDED TOPSOIL AS BACKFILLING IS OCCURRING (1)5) INSTALL ROOT BARRIER PANELS - AT THIS STAGE THE CONTRACTOR/INSTALLER SHALL PLACE 24" DEEP ROOT BARRIER PANELS (UB-24) ALONG THE EDGE OF THE SIDEWALK AND CURB LINE FOR A TOTAL OF EIGHT FEET (8') OF LINEAL PROTECTION ALONG EITHER SIDE OF THE PLANTING AREA. THE PANELS SHALL BE INSTALLED PERPENDICULAR TO THE EDGE OF THE PLANTING AREA. THE PANELS SHALL BE INSTALLED PERPENDICULAR TO THE DGE OF PAVED SURFACE IN ACCORDANCE WITH THE MANUFACTURER'S STSANDARDS FOR A 'LINEAR' APPLICATION; THE ROOT BARRIER PANELS SHALL NOT BE INSTALLED IN THE PLANTING PIT AS A 'SURROUND' APPLICATION, UNLESS SPECIFIED ON THE FINAL LANDSCAPE PLANS. THE TOP OF THE ROOT BARRIER PANEL SHALL BE INSTALLED SUCH THAT 1/2" OF THE ROOT BARRIER IS ABOVE THE FINISHED

(1)6) COMPOST AMENDED TOP SOILS REQUIRED - TOPSOIL SOURCE SHALL BE REVIEWED AND APPROVED DURING THE PRE-CONSTRUCTION MEETING: ALL TOPSOIL SHALL BE A TOP QUALITY SANDY-LOAM MIX. OR EQUIVALENT AS APPROVED BY THE PLANNING DEPARTMENT. THE TOPSOIL SHALL BE AMENDED ON SITE DURING INSTALLATION WITH COMPOST TO ACHIEVE A 40 PERCENT BY VOLUME TOPSOIL MIX IN TH RIGHT-OF-WAY PLANTER STRIP. IMPORTED TOPSOIL MAY BE USED BY THE CONTRACTOR IF DATA 'CUT SHEETS' ARE AVAILABLE FROM THE SUPPLIER CERTIFYING COMPOST AMENDMENT EQUALING 40 PERCENT BY VOLUME USING ONE OF THE APPROVED COMPOST SOURCES BELOW. COMPOST SHALL ONLY BE SOURCED

> -CASCADE COMPOST (ALSO KNOWN AS PREP/LRI) (AVAILABLE THROUGH PIERCE COUNTY RECYCLING, COMPOSTING & DISPOSAL, 10308 SALES ROAD, TACOMA, WASHINGTON 98499, OR RETAIL/WHOLESALE LANDSCAPE MATERIAL SUPPLIERS) -TAGRO COMPOST MIX (AVAILABLE THROUGH CITY OF TACOMA, 2201 EAST PORTLAND AVENUE, GATE 6, TACOMA, WA 98421, OR RETAIL/WHOLESALE LANDSCAPE MATERIAL SUPPLIERS) -CEDAR GROVE COMPOST (AVAILABLE THROUGH CEDAR GROVE COMPOST, 17825

CEDAR GROVE ROAD SE, MAPLE VALLEY, 98038, OR RETAIL/WHOLESALE

(1)7) INSTALL AND AMEND TOPSOILS - TO AVOID STRATIFIED LAYERS, FIRST PLACE SEVEN INCHES (7") OF APPROVED TOPSOIL IN THE PREPARED/SCARIFIED PLANTING STRIP AREA AND MECHANICALLY TILL IN FIVE INCHES (5") OF APPROVED COMPOST; FOLLOW THIS PROCEDURE TWICE TO ACHIEVE THE TOTAL 24" TOPSOIL DEPTH. FINISHED GRADE OF TOPSOIL SHOULD BE \$\frac{1}{2}"\$ BELOW THE EDGE OF SIDEWALK TO ALLOW THE ROOT BARRIER PANEL TO BE PROPERLY INSTALLED ABÔVE FINISHED GRADE. (1)8) INSTALL TREE STAKES AND FINISH MULCH - PLACEMENT OF FOUR INCHES (4") OF WOOD CHIP MULCH, WATER BASIN RINGS, TREE STAKING AND TEMPORARY IRRIGATION BAGS (WHERE REQUIRED) SHALL FOLLOW

LANDSCAPE PLANTING NOTES AND MATERIALS

FURNISH ALL MATERIALS, LABOR, EQUIPMENT AND RELATED ITEMS NECESSARY TO ACCOMPLISH TOPSOIL, TREATMENT AND PREPARATION OF SOIL, FINISH GRADING, PLACEMENT OF SPECIFIED PLANT MATERIALS, FERTILIZER, STAKING, MULCH, CLEAN-UP, DEBRIS REMOVAL, AND 60-DAY MAINTENANCE.

LANDSCAPE CONTRACTOR TO BE SKILLED AND KNOWLEDGEABLE IN THE FIELD OF WORK AND HAVE A MINIMUM OF FIVE (5) YEAR'S EXPERIENCE INSTALLING SIMILAR WORK, CONTRACTOR TO BE LICENSED TO PERFORM THE WORK SPECIFIED WITHIN

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE SITE AND REPORT ANY DISCREPANCIES TO THE OWNER OR THE OWNER'S REPRESENTATIVES. ALL PLANT MATERIAL AND FINISH GRADES ARE SUBJECT TO APPROVAL BY THE OWNER.

SAVE AND PROTECT ALL EXISTING PLANTINGS SHOWN TO REMAIN AND ALL ON-SITE AND OFF-SITE TREES TO BE RETAINED. DO NOT PLANT UNTIL OTHER CONSTRUCTION OPERATIONS WHICH CONFLICT HAVE BEEN COMPLETED. IF AN IRRIGATION SYSTEM IS TO BE INSTALLED DO NOT PLANT UNTIL THE SYSTEM HAS BEEN INSTALLED, TESTED, AND APPROVED BY THE OWNER. HANDLE PLANTS WITH CARE - DO NOT DAMAGE OR BREAK ROOT SYSTEM, BARK, OR BRANCHES. REPAIR AND/OR REPLACE ITEMS DAMAGED AS A RESULT OF WORK, OR WORK NOT IN COMPLIANCE WITH PLANS AND SPECIFICATIONS, AS DIRECTED BY OWNER AT NO ADDITIONAL COST TO THE OWNER.

DURING THE COURSE OF WORK, REPAIR ALL EXISTING PLANTING AREAS BY PRUNING DEAD GROWTH, RE-ESTABLISHING FINISH GRADE AND RE-MULCHING TO SPECIFIED DEPTH.

DURING THE COURSE OF WORK, REPAIR ANY DAMAGE TO THE IRRIGATION SYSTEM TO MATCH CONDITIONS PRIOR TO THE

GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE JOB BY OWNER.

CONTRACTOR TO PROVIDE OWNER WITH A SCOPE OF WORK AT TIME OF INITIAL PROJECT BID TO PROVIDE LANDSCAPE AND IRRIGATION MAINTENANCE FOR 60 DAYS FOLLOWING OCCUPANCY. WORK TO INCLUDE MAINTENANCE AS DESCRIBED BELOW, IN PLANTING AND IRRIGATION MAINTENANCE.

SUBMIT THE FOLLOWING TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE START OF ANY WORK: A) DOCUMENTATION THAT ALL PLANT MATERIAL HAS BEEN ORDERED.

B) TOPSOIL ANALYSIS AND RECOMMENDED AMENDMENTS. C) TREE STAKING AND GUYING MATERIALS.

D) ONE (1) QUART SIZE OF TOPSOIL AND MULCH. E) PLANTING SCHEDULE INCLUDING DATES AND TIMES.

F) MAINTENANCE INSTRUCTIONS FOR ONE (1) FULL YEAR

MATERIALS:

PLANT MATERIALS TO BE GRADE NO. 1, SIZED IN ACCORDANCE WITH (AAN) AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z-60-2014). PRUNE PLANTS RECEIVED FROM THE NURSERY ONLY UPON AUTHORIZATION BY THE LANDSCAPE ARCHITECT. "B & B" INDICATES BALLED AND BURLAPPED; "CONT." INDICATES CONTAINER; "BR" INDICATES BARE ROOT; "CA INDICATES CALIPER AT 6" ABOVE SOIL LINE; "GAL" INDICATES GALLON. A) SPECIFIED PLANT CANOPY SIZE OR CALIPER IS THE MINIMUM ACCEPTABLE CONTAINER OR BALL SIZE AND ESTABLISHES MINIMUM PLANT CONDITION TO BE PROVIDED.

PLANT MATERIAL TO COMPLY WITH STATE AND FEDERAL LAWS FOR DISEASE INSPECTION, PLANTS TO BE FULLY LIVE, VIGOROUS, WELL FORMED, WITH WELL DEVELOPED FIBROUS ROOT SYSTEMS. ROOT BALLS OF PLANTS TO BE SOLID AND FIRMLY HELD TOGETHER, SECURELY CONTAINED AND PROTECTED FROM INJURY AND DESICCATION. PLANTS DETERMINED BY LANDSCAPE ARCHITECT TO HAVE BEEN DAMAGED; HAVE DEFORMITIES OF STEM, BRANCHES, OR ROOTS; LACK SYMMETRY, HAVE MULTIPLE LEADERS OR "Y" CROTCHES LESS THAN 30 DEGREES IN TREES, OR DO NOT MEET SIZE OR ANSI STANDARDS WILL BE REJECTED. PLANT MATERIAL TO BE FROM A SINGLE NURSERY SOURCE FOR EACH SPECIFIED SPECIES/HYBRID. NURSERY SOURCES TO BE THOSE LOCATED IN THE SAME REGION AS THE JOB SITE.

NO SUBSTITUTION OF PLANT MATERIAL. SPECIES OR VARIETY, WILL BE PERMITTED UNI ESS WRITTEN EVIDENCE IS SUBMITTED TO THE OWNER FROM TWO QUALIFIED PLANT BROKERAGE OFFICES. SUBSTITUTIONS WHICH ARE PERMITTED TO BE IN WRITING. FROM THE OWNER AND LANDSCAPE ARCHITECT. THE SPECIFIED SIZE, SPECIES AND NEAREST VARIETY AS APPROVED, TO BE FURNISHED, SUBSTITUTIONS MAY REQUIR SUBMITTAL TO REVISED LANDSCAPE PLAN TO CITY FOR APPROVAL.

D) LABEL AT LEAST ONE (1) TREE, SHRUB, AND GROUNDCOVER OF EACH VARIETY WITH A SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAMES. E) DELIVER PLANT MATERIAL AFTER PREPARATION OF PLANTING AREAS HAVE BEEN

COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX (6) HOURS AFTER DELIVERY, SET MATERIAL IN SHADE, PROTECT FOR WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOT BALLS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

TOPSOIL, AMENDMENT, AND BACKFILL, ARE GENERAL REQUIREMENTS FOR ALL LANDSCAPE AREAS, UNLESS NOTED OTHERWISE ON THE PLANS. FOR SOIL PREPARATION AND INSTALLATION REQUIREMENTS, SEE CITY OF PUYALLUP VEGETATION MANAGEMENT STANDARDS SECTION 8.2, SOIL QUANTITY AND QUALITY STANDARDS. SOIL AMENDMENTS AND FERTILIZER ARE TO BE USED FOR BID PRICE BASIS ONLY. SPECIFIC AMENDMENTS AND FERTILIZERS WILL BE MADE AFTER SOIL SAMPLES ARE LABORATORY TESTED BY THE CONTRACTOR. PROVIDE CHANGE ORDER FOR ADDITIONAL OR REDUCTION OF MATERIALS REQUIRED OR NOT REQUIRED BY THE SOILS REPORT.

SOIL FERTILITY AND AGRICULTURAL SUITABILITY ANALYSIS:

FROM LOCATIONS AS DIRECTED BY THE LANDSCAPE ARCHITECT, TO AN ACCREDITED SOIL TESTING LABORATORY FOR TESTING. SUBMIT RESULTS TO LANDSCAPE ARCHITECT FOR REVIEW. TESTS TO INCLUDE FERTILITY AND SUITABILITY ANALYSIS WITH WRITTEN RECOMMENDATIONS FOR SOIL AMENDMENT, FERTILIZER, CONDITIONERS, APPLICATION RATES, AND POST-CONSTRUCTION MAINTENANCE PROGRAM. TESTS TO BE CONTRACTED WITH AND PAID FOR BY THE CONTRACTOR.

ORGANIC MULCH (TOPDRESSING):

PER CITY OF PUYALLUP VEGETATION MANAGEMENT STANDARDS SECTION 8.3, MULCHING, ALL PLANTING AREAS SHALL BE MULCHED WITH A UNIFORM FOUR INCH (4") LAYER OF ORGANIC COMPOST MULCH MATERIAL OR WOOD CHIPS OVER A PROPERLY CLEANED, AMENDED AND GRADED SUBSURFACE, FOUR INCHES (4") OF MULCH IN PLANTING AREAS SHALL BE MAINTAINED. THROUGH THE LIFE OF THE PROJECT.

2-INCH DIAMETER BY 8-FOOT MINIMUM LODGEPOLE PINE STAKES.

1-INCH WIDE POLYETHYLENE CHAIN LOCK TYPE TIES; OR, 3/8" DIAMETER RUBBER. NO WIRE.

COMMERCIAL SEED OR SOD.

HERBICIDE IS NOT RECOMMENDED FOR THE FIRST YEAR AFTER INSTALLATION.

"WILT-PROOF." 48 HOURS PRIOR TO SHIPMENT TO SITE FROM JUNE 1 THROUGH SEPTEMBER THOROUGHLY ROOT WATER PLANTS PRIOR TO DELIVERY. PLANT MATERIAL DELIVERED TO SITE TO BE KEPT CONTINUALLY MOIST THROUGH INSTALLATION.

EXECUTION:

CONTAMINANTS: VERIFY THAT ALL SOIL CONTAMINANTS (E.G., PAINT, SEALANTS, SOLVENTS, OILS, GREASES, CONCRETE/ASPHALT SPOILS, ETC.) HAVE BEEN SATISFACTORY REMOVED FROM ALL PLANTING AREAS. DO NOT BEGIN WORK UNTIL UNSATISFACTORY CONDITIONS

FINE GRADE AND REMOVE ROCKS, DEBRIS, AND FOREIGN OBJECTS OVER 2 INCHES DIAMETER FROM TOP SURFACE OF PREPARED LANDSCAPE AREAS. FINISH ELEVATIONS TO BE DEFINED AS 3 INCHES BELOW CURBS, WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL PLANTING BED AREAS AND 1-INCH BELOW CURBS. WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL LAWN AREAS. FINISH GRADE REFER TO GRADES PRIOR TO INSTALLATION OF MULCH OR LAWN. ALL FINISH GRADES TO BE SMOOTH EVEN GRADES, LIGHTLY COMPACTED, AS SHOWN ON THE PLAN AND DETAILED. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND STRUCTURES. SITE CIVIL DRAWINGS IDENTIFY FINAL ELEVATIONS. MOISTEN PREPARED AREAS BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL.

ARRANGE TREES AND SHRUBS ON SITE IN PROPOSED LOCATIONS PER DRAWINGS. EXCAVATE PIT, PLANT AND STAKE OR GUY, AS CALLED OUT AND DETAILED. ALL TREES, SHRUBS, AND SUPPORTS TO STAND VERTICAL. BACKFILL SHALL BE PIT SPOILS. SETTLE BACKFILL USING WATER ONLY. NO MECHANICAL COMPACTION.

GROUNDCOVERS: EXCAVATE PITS TO A MINIMUM OF 3 INCHES BELOW, AND TWICE THE ROOT BALL DIAMETER. WATER THOROUGHLY AND TAKE CARE TO ENSURE THAT ROOT CROWN IS AT PROPER GRADE, AS DETAILED.

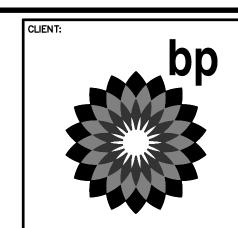
UTILITY CLEARANCES: FIELD ADJUST PLANT LOCATIONS FOR 5-FOOT SEPARATION OF TREES/SHRUBS AND 2-FOOT SEPARATION FOR GROUNDCOVER FROM FIRE HYDRANTS AND UTILITY VAULTS.

DURING LANDSCAPE WORK, KEEP ALL PAVEMENT CLEAN AND WORK AREAS IN AN ORDERLY CONDITION. PROTECT LANDSCAPE WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIOD. TREAT, REPAIR, OR REPLACE DAMAGE LANDSCAPE WORK AS DIRECTED BY THE

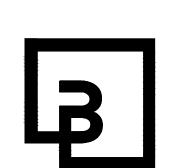
PLANTING MAINTENANCE:

PROVIDE FULL MAINTENANCE BY SKILLED EMPLOYEES OF LANDSCAPE INSTALLERS. CONTRACTOR TO MAINTAIN PLANTINGS THROUGH COMPLETED INSTALLATION, AND UNTIL ACCEPTANCE OF LANDSCAPE INSTALLATION. PLANTING MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATING, TIGHTENING AND REPAIRING OF TREE GUYS, RESETTING PLANTS TO PROPER GRADES OR POSITION, RE-ESTABLISHING SETTLED GRADES; AND MOWING LAWNS WEEKLY AFTER LAWN ESTABLISHMENT. HERBICIDE IS NOT RECOMMENDED FOR ONE YEAR FOLLOWING LANDSCAPE INSTALLATION. INCLUDED IS REPLACEMENT OF DEAD PLANTS AND PLANTS SHOWING LOSS OF 40 PERCENT OR MORE OF CANOPY.

THE IRRIGATION SYSTEM TO BE MAINTAINED INCLUDING ADJUSTMENTS FOR BALANCED WATER DISTRIBUTION AND PRECIPITATION. FAILED OR MALFUNCTIONING IRRIGATION EQUIPMENT SHALL BE REPLACED AND/OR CORRECTED. PLANTING AND IRRIGATION MAINTENANCE TO INCLUDE THOSE OPERATIONS NECESSARY TO THE PROPER GROWTH AND SURVIVAL OF ALL







Consulting Engineers, Inc.

18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com

NO.	DATE	REVISION DESCRIPTION
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EVELOPMENT INFORMATION: ARCO NTI

3400 am/pm FUEL CANOPY w/ 8 MPD's

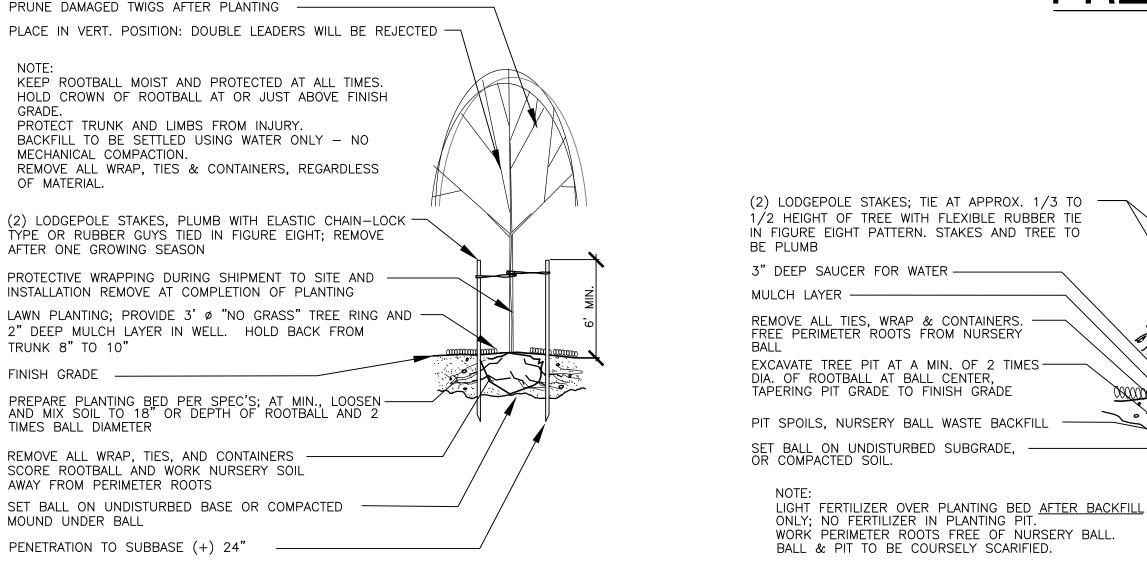
> SWC S MERIDIAN @ HIGHWAY 512

PUYALLUP, WASHINGTON FACILITY #TBD

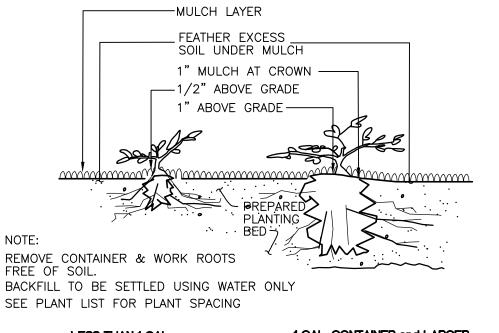
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> **PRELIMINARY** LANDSCAPE NOTES/SCHEDULE

PRELIMINARY LANDSCAPE DETAILS



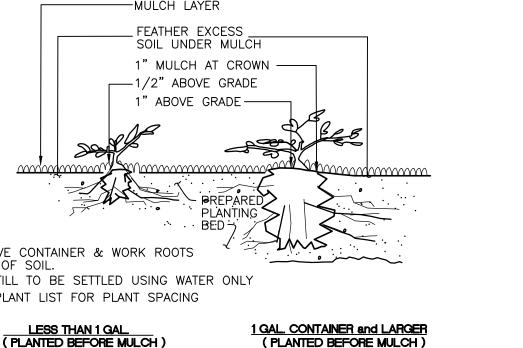
DECIDUOUS TREE PLANTING/STAKING DETAIL



GROUNDCOVER PLANTING DETAIL

FINISH GRADE AT -

4:1 SLOPE MAXIMUM 2% SLOPE MINIMUM



PLANT MATERIAL SPACING DETAIL

EVERGREEN TREE PLANTING/STAKING DETAIL

- MULCH LAYER

- TOPSOIL AS SPECIFIED

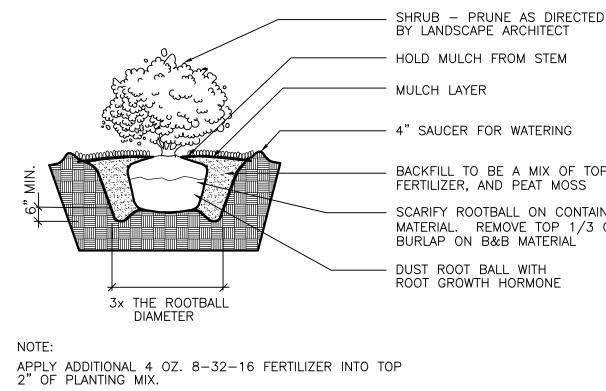
HOLD PLANTS FROM -

AS NOTED ON PLANT LIST:

EDGE OF PLANTER

BED LINE EDGE -

CURB/WALK



PLANT SHRUB HIGH ENOUGH TO ALLOW POSITIVE DRAINAGE AWAY FROM ROOTBALL. ROUGHEN ALL SURFACES OF PIT. CUT AND REMOVE BURLAP FROM ROOT BALL

SHRUB PLANTING DETAIL

SPACING AS CALLED OUT

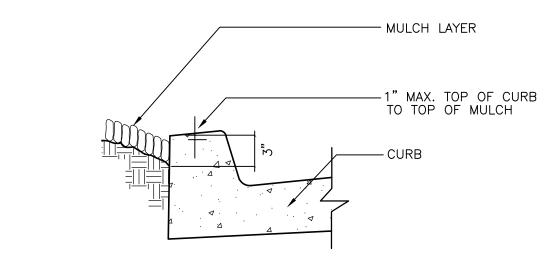
AS NOTED ON PLANT LIST

ON PLAN/PLANT LIST

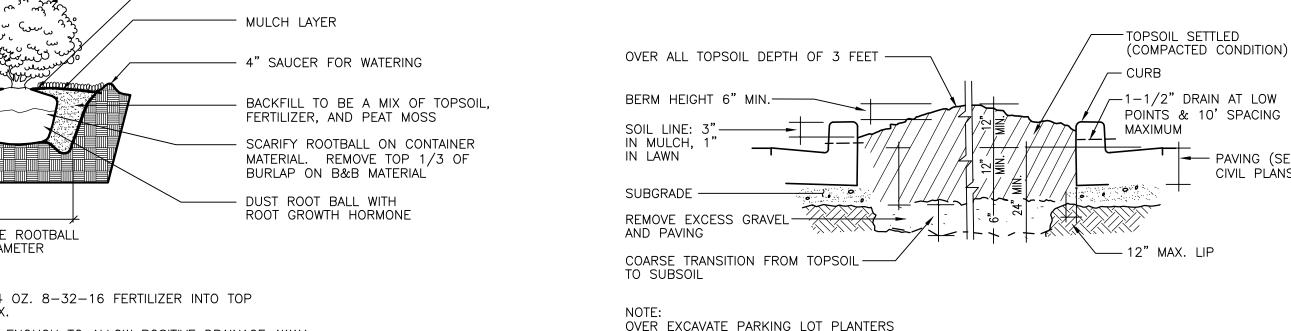
-HOLD PLANTS FROM EDGE OF PLANTER

THIS SPACING APPLIES TO GROUNDCOVER AND FORMAL

SHRUB ROW PLACEMENT.



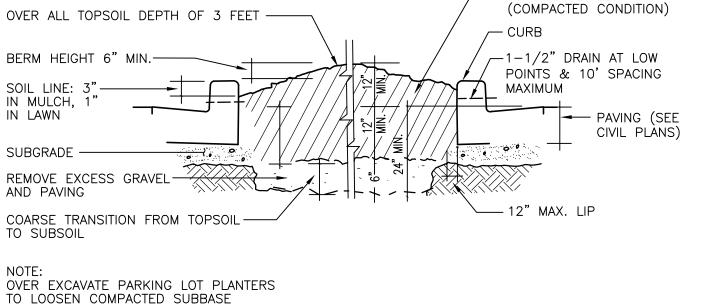
MULCH AT CURB DETAIL



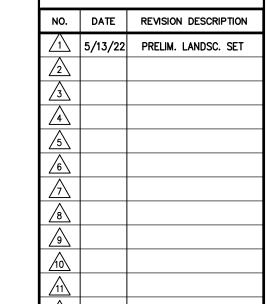
GRADING @ PARKING LOT PLANTERS DETAIL

NOT TO SCALE

DEDUCT ALT #1: IF LANDSCAPE CONTRACTOR CAN DEMONSTRATE THAT PLANTER ISLANDS ARE NOT FULL OF NON-SOIL MATERIALS (CONCRETE WASTE, LUMBER, ROAD BASE, GRAVEL), FULL EXCAVATION AND REPLACE WITH 18"-21" OF TOPSOIL CAN BE ELIMINATED AND IN ITS PLACE, 6" OF COMPOST CAN BE PLACED ON SUB-GRADE AND CULTIVATED INTO TOP 12" OF EXISTING SOIL. TOP OF FINISH GRADE AND DEPTH OF MULCH STILL APPLIES



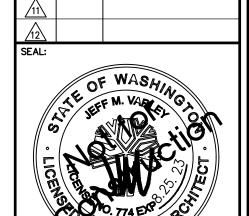
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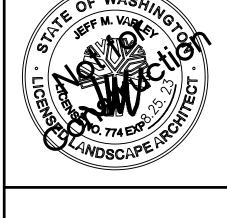


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BP WEST COAST PRODUCTS, LLC





DEVELOPMENT INFORMATION: ARCO NTI 3400 am/pm FUEL CANOPY w/ 8 MPD's

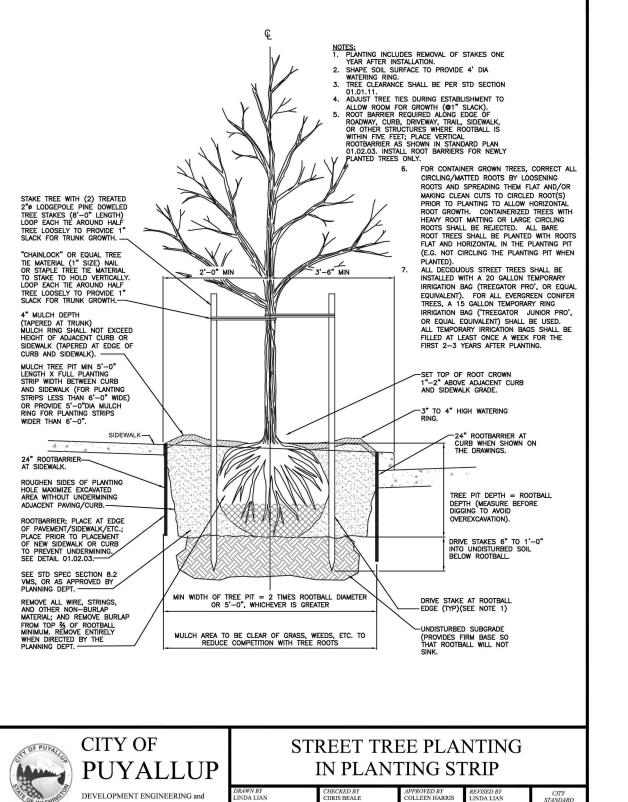
SITE ADDRESS:

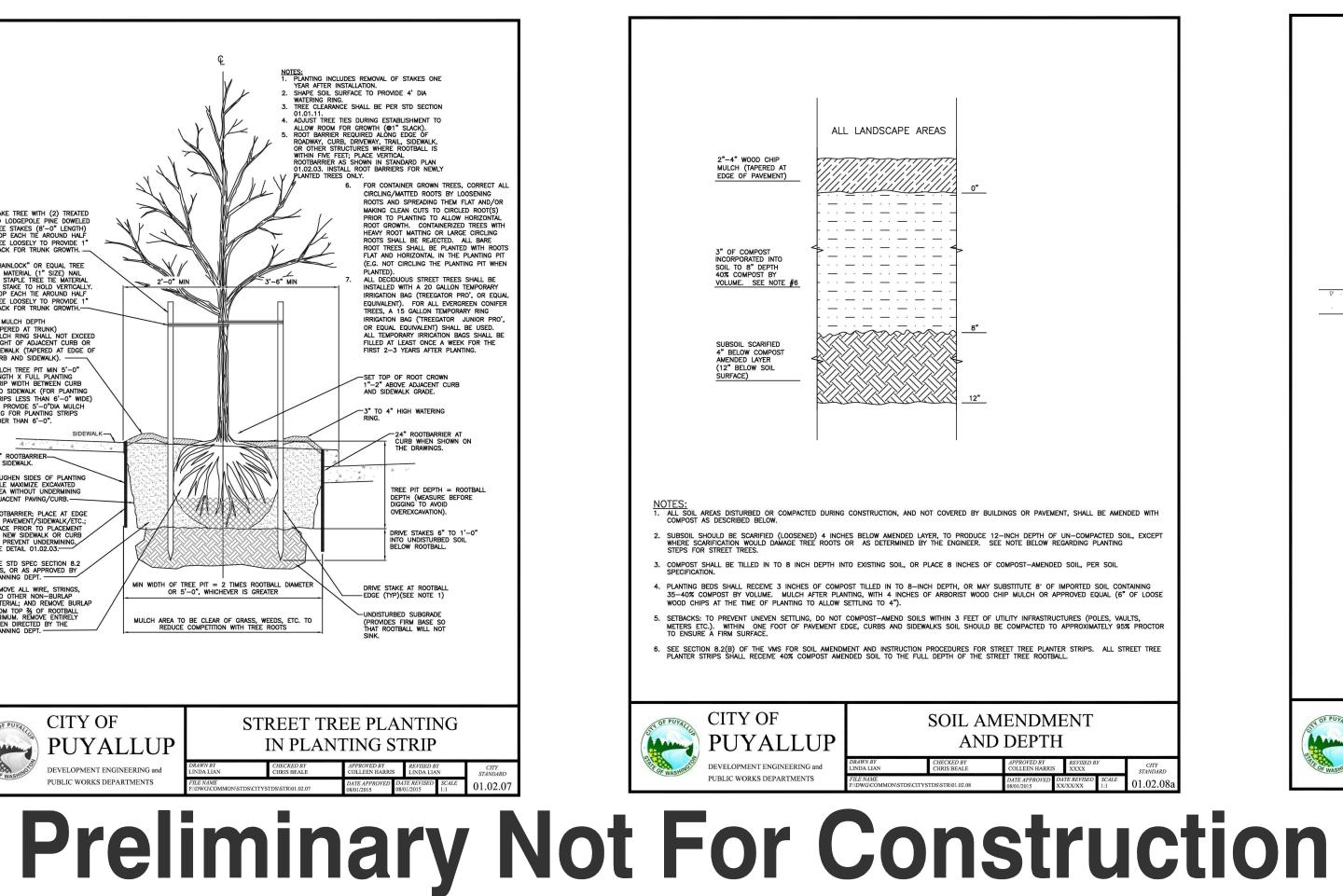
SWC S MERIDIAN @ HIGHWAY 512 PUYALLUP, WASHINGTON

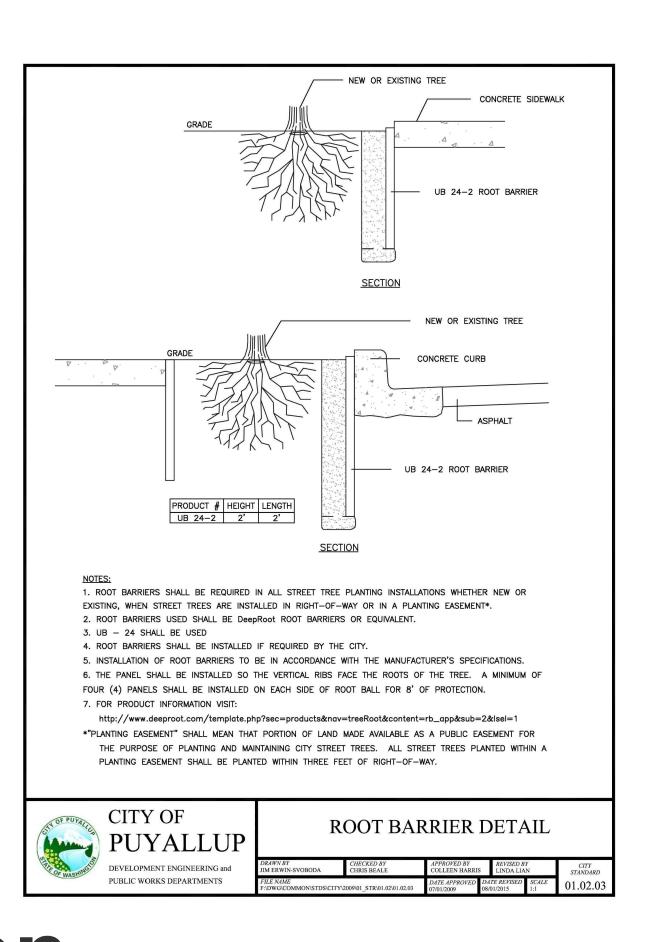
FACILITY #TBD ALLIANCE PM:

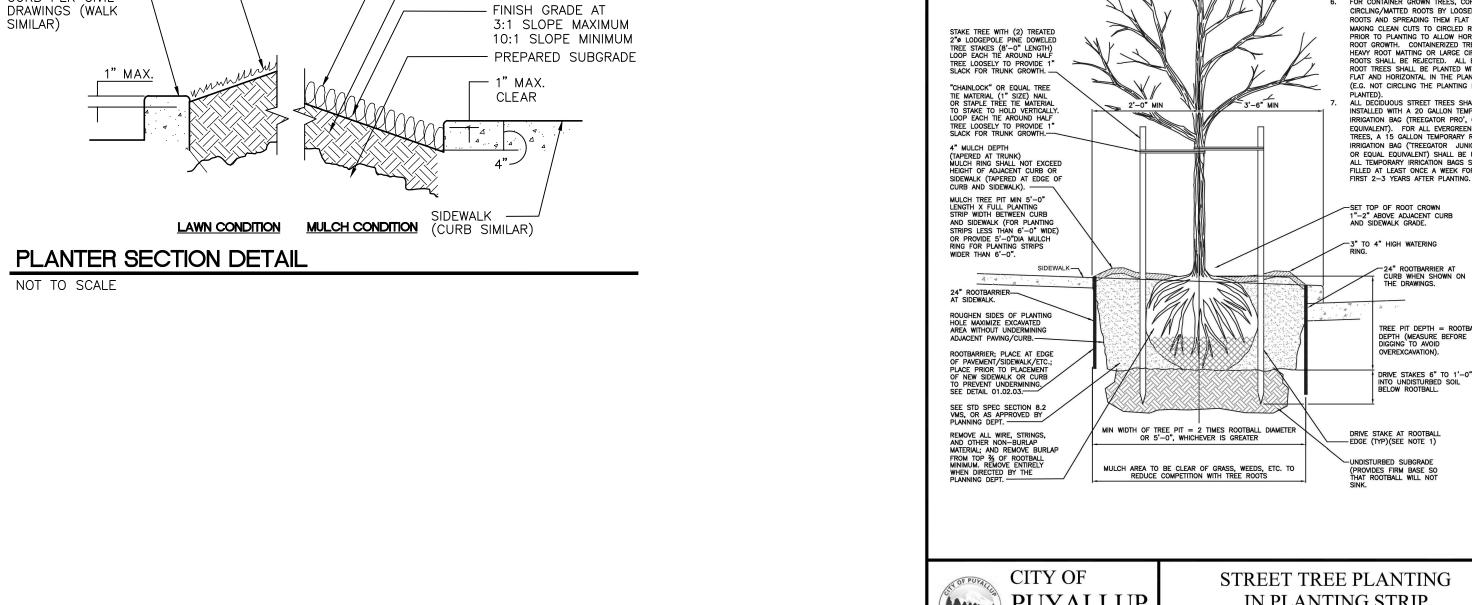
21730 **PRELIMINARY** LANDSCAPE

DETAILS

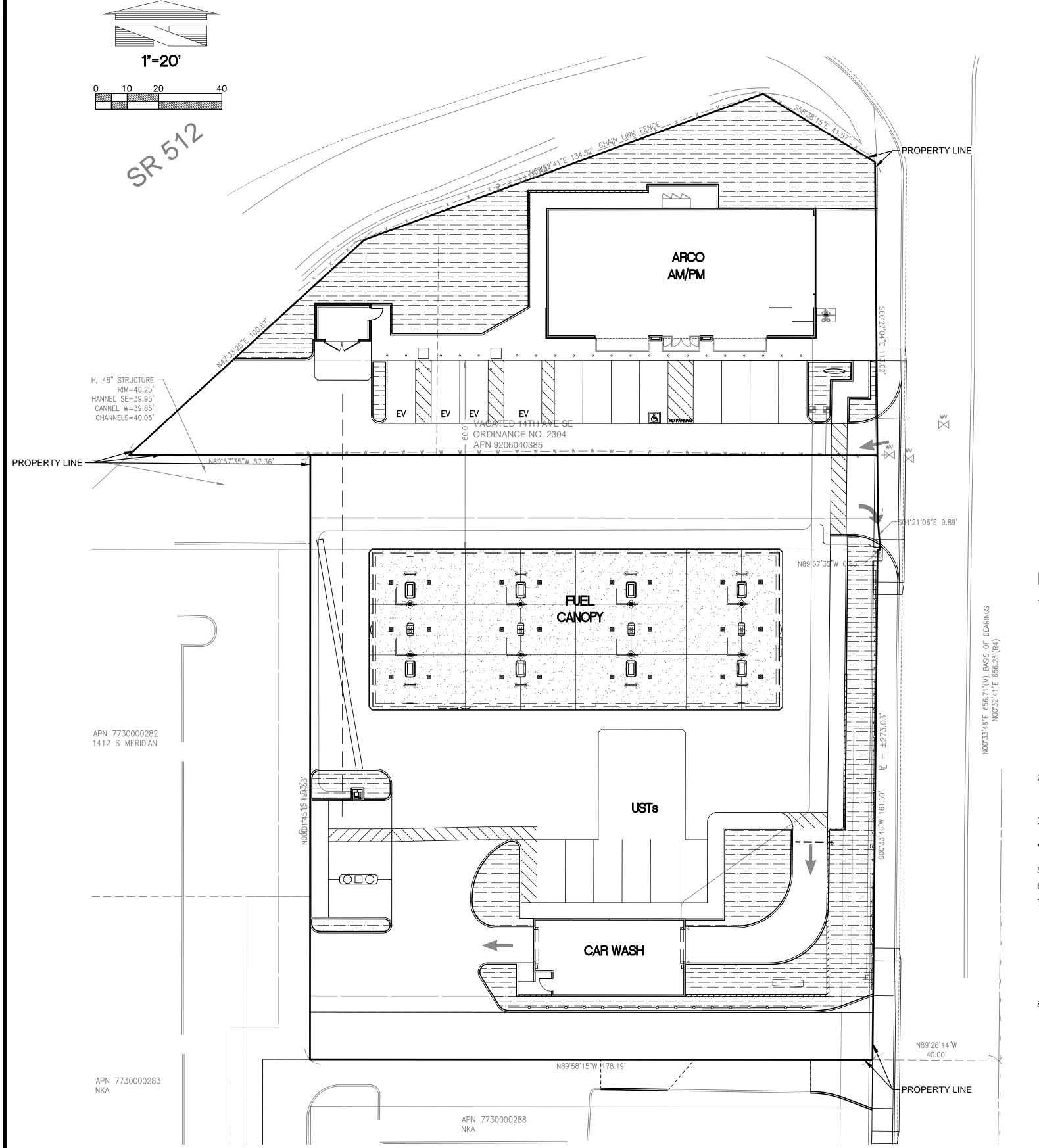








PRELIMINARY IRRIGATION PLAN



IRRIGATION LEGEND

DESCRIPTION DRIP IRRIGATION:

HUNTER LANDSCAPE DRIPLINE COMPONENTS

HDL-06-12-250-CV SUB-SURFACE DRIPLINE TUBING 0.6 GPH PRESSURE COMPENSATING EMITTERS WITH CHECK VALVE AT 12" ON-CENTER SPACING — ALL TUBING SHALL BE INSTALLED ON GRADE W/ 9" WIRE STAKES FOUR (4) FEET ON-CENTER; VERIFY THE LAYOUT AND 18" ON-CENTER SPACING IN THE FIELD PRIOR TO STARTING WORK. INSTALL ALL COMPONENTS PER MANUF. SPECIFICATIONS.

USE HUNTER PLD-LOC FITTINGS FOR CONNECTION BETWEEN PVC LATERAL LINES AND INLINE DRIP TUBING

- DRIP IRRIGATION: ICZ-101/151-XL REMOTE CONTROL DRIP ZONE KIT WITH FILTER AND PRESSURE REGULATOR MAXIMUM 2 VALVES PER BOX
- HUNTER SOLAR SYNC WIRE RAIN SENSOR COMBO

PLASTIC BALL VALVE, MATCH LINE SIZE, IN VALVE BOX

HUNTER PRO-C CONTROLLER 3 TO 15 STATIONS, (HARDWIRE CONNECTION); PROVIDE GROUND AND BATTERIES PER

WILKINS 950 XLT- 1" DOUBLE CHECK VALVE (STATE APPROVED); TEST AND CERTIFICATION BY LICENSED

WILKINS 850 - BALL VALVE, SIZE TO MATCH PIPE CARSON INDUSTRIES #1730 (TWO AT P.O.C.) GRADE LEVEL VAULT WITH BOLT LOCK LID

- HUNTER HQ-33DLRC 3/4" QUICK COUPLING VALVE, IN VALVE BOX, PROVIDE TWO KEYS AND SWIVELS

LATERAL - SCH 40 PVC (12" COVER); SIZE PER PLAN, 3/4" SIZE MINIMUM

- - - MAINLINE - SCH 40 PVC (18" COVER); SIZE PER PLAN, 1-1/2" SIZE MINIMUM

======== SLEEVE - SCH 40 PVC; 24" MINIMUM COVER AT VEHICLE CROSSINGS AND 18" MINIMUM COVER IN LANDSCAPE AREAS, 6" SIZE WHERE IRRIGATION MAINLINE TRAVELS THROUGH PIPE. 4" SIZE WHERE ONLY LATERALS TRAVEL THROUGH PIPE

> IRRIGATION SHOWN DIAGRAMATICALLY FOR PLAN CLARITY. COMMON TRENCH AND PLACE EQUIPMENT IN LANDSCAPE; MANIFOLD GROUPED VALVES IN ADJACENT SHRUB AREAS WHERE FEASIBLE.

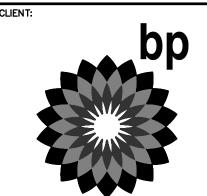
SCH 40 PIPE SIZING CHART

_								
	PIPE SIZE	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	
	FLOW							
- 1	GPM	1-8	8.1-13	13 1-23	23 1-32	32 1-53	53 1-74	GPM (MAX)

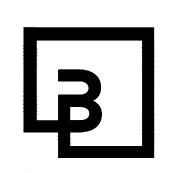
LANDSCAPE IRRIGATION NOTES

- 1. GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR TO COORDINATE:
- INSTALLATION OF 110V ELECTRICAL SERVICE FROM ELECTRICAL SOURCE TO AUTOMATIC CONTROLLER, INCLUDING WIRE HOOK-UP INTO MOUNTED CONTROLLER. IRRIGATION CONTRACTOR WILL MOUNT CONTROLLER PER DESIGN AND COORDINATE WITH GENERAL CONTRACTOR.
- CONNECTION, PER UTILITY PLAN(S). PROVIDE STANDARD THREADED STUB-OUT WITH THREADED CAP ON DISCHARGE SIDE OF METER. STUB-OUT TO BE INSTALLED APPROXIMATELY 18 INCHES BELOW
- C) VERIFICATION OF STATIC WATER PRESSURE AT POINT—OF—CONNECTION (P.O.C.) CONTRACTOR SHALL NOTIFY OWNER AND BARGHAUSEN CONSULTING ENGINEERS, INC., OF ANY VARIATION IN STATIC PRESSURE OVER 5 PSI GREATER/LESS THAN DESIGN PRESSURE.
- D) INSTALLATION OF SLEEVING.
- PROVIDE ALL LABOR, MATERIALS, TRANSPORTATION, AND SERVICES NECESSARY TO FURNISH AND INSTALL A COMPLETE IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS AND/OR NOTES. PROVIDE A ONE (1) YEAR WARRANTY/GUARANTEE FROM FINAL ACCEPTANCE AGAINST ALL DEFECTS IN MATERIALS, EQUIPMENT, AND WORKMANSHIP.
- COORDINATE IRRIGATION INSTALLATION WITH GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR, LANDSCAPE CONTRACTOR, OWNER, ARCHITECT, AND LANDSCAPE ARCHITECT.
- LANDSCAPE CONTRACTOR TO TEST AVAILABLE WATER PRESSURE PRIOR TO BEGINNING ANY WORK. PROVIDE LANDSCAPE ARCHITECT WITH WRITTEN PSI RESULTS.
- ALL WORK PER LOCAL CODE. INSTALLATION PER MANUFACTURER'S WRITTEN SPECIFICATIONS.
- CONTRACTOR TO OBTAIN AND PAY FOR ALL PERMITS, FEES, AND REQUIRED CITY INSPECTIONS.
- 7. SUBMITTALS:
 - A) SUBMIT EACH ITEM LISTED BELOW FOR LANDSCAPE ARCHITECT'S REVIEW AND APPROVAL,
 - B) PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED,
 - C) CONTROL WIRING PATH DIAGRAM.
 - D) "AS-BUILT" DRAWINGS.
 - E) OPERATION AND MAINTENANCE MANUALS.
- PROVIDE AND KEEP UP TO DATE A COMPLETE "AS-BUILT" RECORD SET OF PRINTS WHICH ARE TO BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND NOTES AND EXACT "AS-BUILT" LOCATIONS, SIZES AND KIND OF EQUIPMENT. THIS SET OF DRAWINGS. ARE TO BE KEPT ON SITE AND ARE TO BE USED ONLY AS THE RECORD SET. ALL WORK IS TO BE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING WORK AS ACTUALLY INSTALLED. DIMENSION FORM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, WALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF THE FOLLOWING:
- A) CONNECTION TO WATER LINES (P.O.C.),
- B) CONNECTIONS TO ELECTRICAL POWER,
- GATE VALVE, QUICK COUPLERS, AND REMOTE CONTROL VALVE,
- ROUTING OF MAINLINE (DIMENSION MAXIMUM 100' ALONG ROUTING),
- ROUTING OF CONTROL WIRING,
- F) OTHER RELATED EQUIPMENT AS DIRECTED BY THE LANDSCAPE ARCHITECT.

- 9. PREPARE AND PROVIDE PRIOR TO COMPLETION OF CONSTRUCTION, A THREE RING BINDER CONTAINING THE FOLLOWING INFORMATION:
- A) INDEX SHEET STATING CONTRACTOR'S ADDRESS, TELEPHONE NUMBER, FAX, E-MAIL AND A, LIST OF EQUIPMENT WITH NAME AND ADDRESS OF LOCAL MANUFACTURER'S REPRESENTATIVES,
- B) CATALOG AND PARTS SHEETS ON EVERY MATERIAL AND EQUIPMENT INSTALLED UNDER THIS, CONTRACT,
- C) GUARANTEE STATEMENT.
- D) COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS ON ALL MAJOR EQUIPMENT.
- E) CONSTRUCTION DETAILS FROM THE PROJECT,
- F) COMPLETE TROUBLE-SHOOTING GUIDE TO COMMON IRRIGATION PROBLEMS,
- WINTERIZATION AND SPRING START-UP PROCEDURES,
- CHART OF APPROXIMATE WATERING TIMES FOR SPRING, SUMMER, AND FALL,
- A COPY OF THE "AS-BUILT" DRAWINGS AND CONTROLLER CHART.
- 10. ALL VALVES TO BE PLACED IN "CARSON" GRADE LEVEL BOXES WITH BOLT-LOCK LIDS (OR APPROVED EQUIVALENT). SET BOXES 2 INCHES HIGHER THAN FINISH GRADE IN MULCH AREAS AND FLUSH WITH FINISH GRADE IN LAWN AREAS. JUMBO BOX FOR CHECK VALVE. 10" ROUND BOX FOR GATE/QUICK COUPLER/WIRE SPLICES, AND 12" STANDARD FOR CONTROL VALVES. PROVIDE BOX EXTENSIONS AS REQUIRED.
- MAINLINE PIPE TO BE BURIED 18 INCHES, LATERALS 12 INCHES, AND SLEEVES 24" INCHES BELOW FINISH GRADE. NO ROCK OR DEBRIS TO BE BACKFILLED OVER PIPE.
- 12. HEAD AND LINE POSITIONING IS DIAGRAMMATIC ON PLAN. ADJUST IN FIELD AS NECESSARY FOR 100 PERCENT COVERAGE. VALVES TO BE POSITIONED ADJACENT TO PAVEMENT/CURBS, IN SHRUB BEDS WHERE POSSIBLE.
- FAMILIARIZE OWNERS FACILITY OPERATOR WITH IRRIGATION SYSTEM FUNCTION, CONTROLLER PROGRAMMING, SYSTEM OPERATION AND MAINTENANCE REQUIREMENTS.
- 14. SPRINKLERS ON RISERS WILL NOT BE ALLOWED UNLESS NOTED ON PLANS.
- RADIUS REDUCTION TO BE MADE BY USE OF PRESSURE ADJUSTMENT, SCREENS, AND/OR ALTERNATE NOZZLES. IN-NOZZLE ADJUSTMENT IS LIMITED TO 10 PERCENT FOR SPRAY HEADS AND PER MANUFACTURER'S LIMITS FOR OTHER SPRINKLERS. SPRINKLER SPACING NOT EXCEED 60% OF THE DIAMETER OF THE PUBLISHED DATA.
- 16. ALL CONTROL WIRE SPLICES TO BE MADE AT VALVE BOXES WITH WATER TIGHT ELECTRICAL SPLICES, 3M, SCOTT'S LOCK SEAL TACK 3576-78, OR EQUIVALENT.
- 17. EACH VALVE BOX TO CONTAIN A MINIMUM OF TWO (2) SPARE ORANGE CONTROL WIRES FOR JACKETED WIRE. ROUTE SPARE WIRES FROM THE CONTROLLER TO THE LAST VALVE OF EACH MAINLINE BRANCH. COMMON WIRE TO BE WHITE. SINGLE STRAND WIRE TO BE A MINIMUM OF 14 GAUGE.
- 18. ALL ELECTRICAL EQUIPMENT TO BE U.L. TESTED AND APPROVED, AND BEAR THE U.L. LABEL.
- CROSS CONNECTION PROTECTION INSPECTION REQUIRED. THE BACKFLOW DEVICE TO BE TESTED UPON THE ORIGINAL INSTALLATION. THE TESTING TO BE PERFORMED BY A PERSON HOLDING A CURRENT CERTIFICATE AS A BACKFLOW TESTER. THE TEST REPORT TO BE SUBMITTED TO THE LOCAL WATER DISTRICT, OR PURVEYOR, AND OWNER WITH A COPY TO BARGHAUSEN CONSULTING ENGINEERS, INC. CONTRACTOR TO INCLUDE TESTING IN THE SCOPE OF WORK. OWNER IS RESPONSIBLE FOR ANNUAL INSPECTIONS AFTER THE INTIAL
- 20. CONTRACTOR TO PROVIDE SYSTEM WINTERIZATION/SPRING SERVICE WHEN INSTALLATION HAS BEEN COMPLETED WITHIN 90 DAYS OF NOVEMBER 1 FOR WINTERIZATION, OR MAY 15 FOR SPRING SERVICE. SERVICE TO BE PERFORMED AS NEAR AS PRACTICAL







Consulting Engineers, Inc.

18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com

NO.	DATE	REVISION DESCRIPTION
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DEVELOPMENT INFORMATION: ARCO NTI 3400 am/pm

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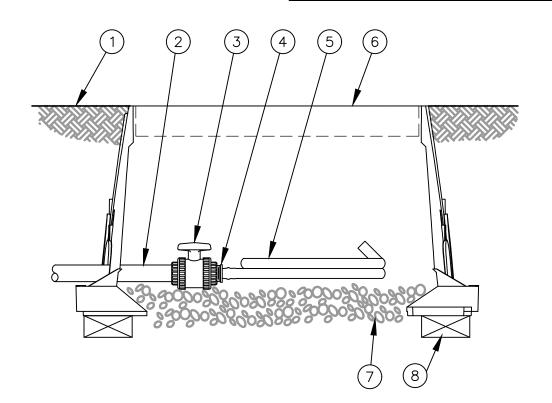
FUEL CANOPY w/ 8 MPD's

SWC S MERIDIAN @ HIGHWAY 512 PUYALLUP, WASHINGTON

FACILITY #TBD ALLIANCE PM: 21730

PRELIMINARY IRRIGATION PLAN

PRELIMINARY IRRIGATION DETAILS



1) FINISH GRADE

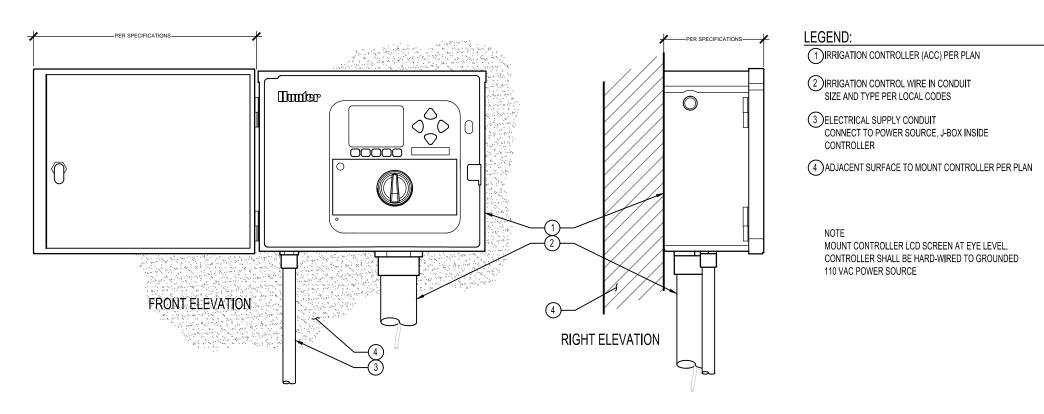
SLEEVE CONDITION

- (5) SUB-SURFACE DRIPLINE:
- 2) PVC DRIP MANIFOLD PIPE 3 PVC 1" X 3/4" TRUE UNION
 - 6 12-INCH VALVE BOX WITH BALL VALVE
- (4) EASY FIT MALE X BARB

(7) 3-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL (8) BRICK (1 OF 2)

FLUSH POINT WITH BALL VALVE

NOT TO SCALE



IRRIGATION CONTROLLER, WALL MOUNT

NOT TO SCALE

PER MANUFACTURER'S SPECIFICATIONS **BRACKET** SENSOR MOUNT ON WEATHER EXPOSED WALL 8' ABOVE GRADE SECURE PER MANUFACTURER'S SPECIFICATIONS

FINISH GRADE

PAVING SECTION -PER CIVIL PLANS

-COMPACT BACKFILL

(TOPSOIL BACKFILL)

-AT 90% DENSITY

AT 95% DENSITY

(STRUCTURAL)

PVC LATERAL

SLEEVING -

- PVC MAINLINE

/ALVE WIRING —

FREE OF ROCK

SLEEVING MATERIAL SHALL BE PVC CLASS 160(SDR-26).

ALL IRRIGATION SLEEVING TRENCH BACKFILL MATERIAL SHALL BE CLASS "B" OR BETTER (MAX. OF 10% PASSING NO.40 SCREEN) AND BE COMPACTED TO MIN. 95% OPTIMUM DENSITY PER ASTM D-1557-70

DIMENSIONS ARE MIN. CLEARANCES.

SLEEVE/TRENCHING DETAIL

PIPE BED MATERIAL

TO BE CLEAN AND

LARGER THAN 1/2"

ALT. WIRE SLEEVE-

RAIN SENSOR DETAIL

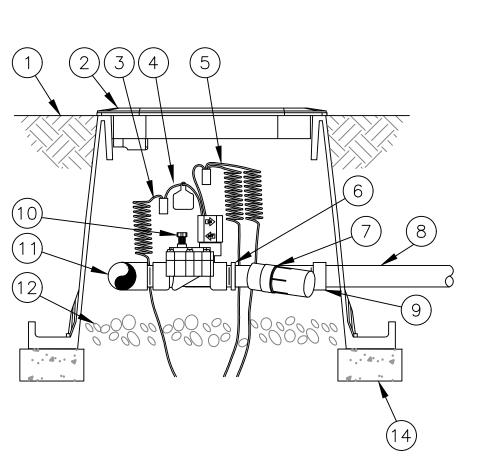
6" OFFSET

NOT TO SCALE

NOT TO SCALE SUPPORT STAKES AND FINISH GRADE – VALVE BOX QUICK COUPLING VALVE SUMP 1 C.F. 7/8" WASHED GRAVEL THREE (3) 4"x8" BRICKS MARLEX ELL - TYPICAL - SCH 80 P.V.C. NIPPLE — SCH 40 PVC SXSXT TEE

QUICK COUPLING VALVE DETAIL

NOT TO SCALE

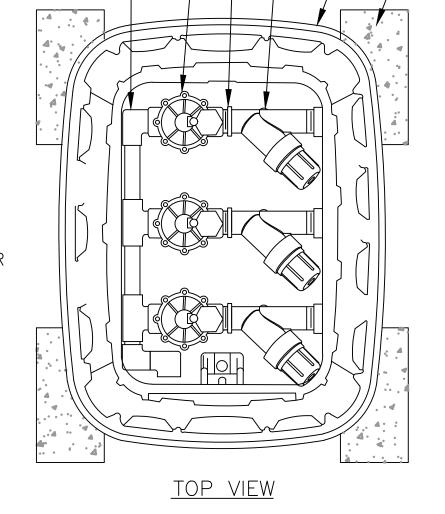


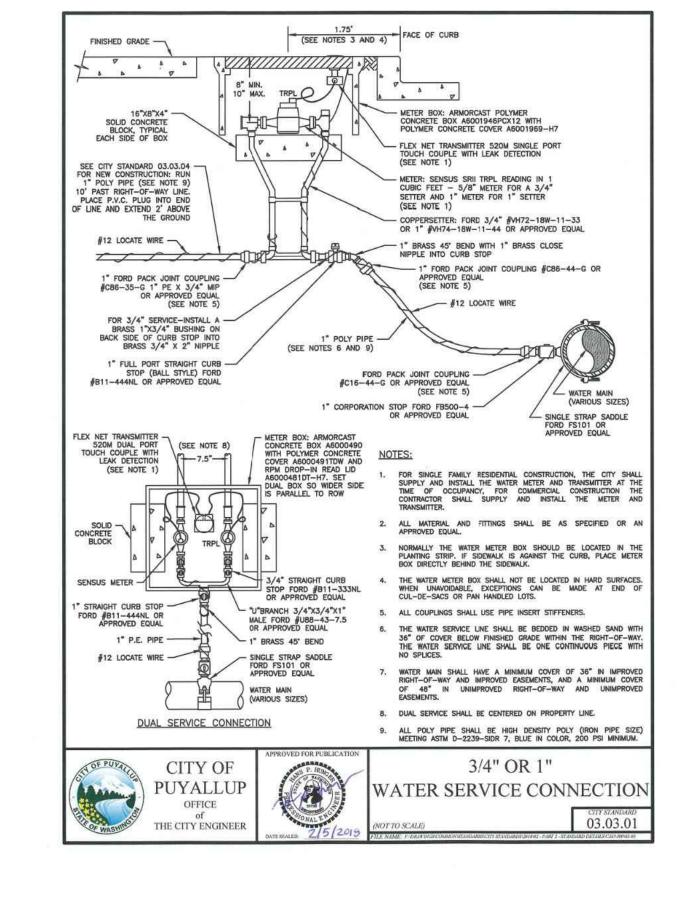
SIDE VIEW

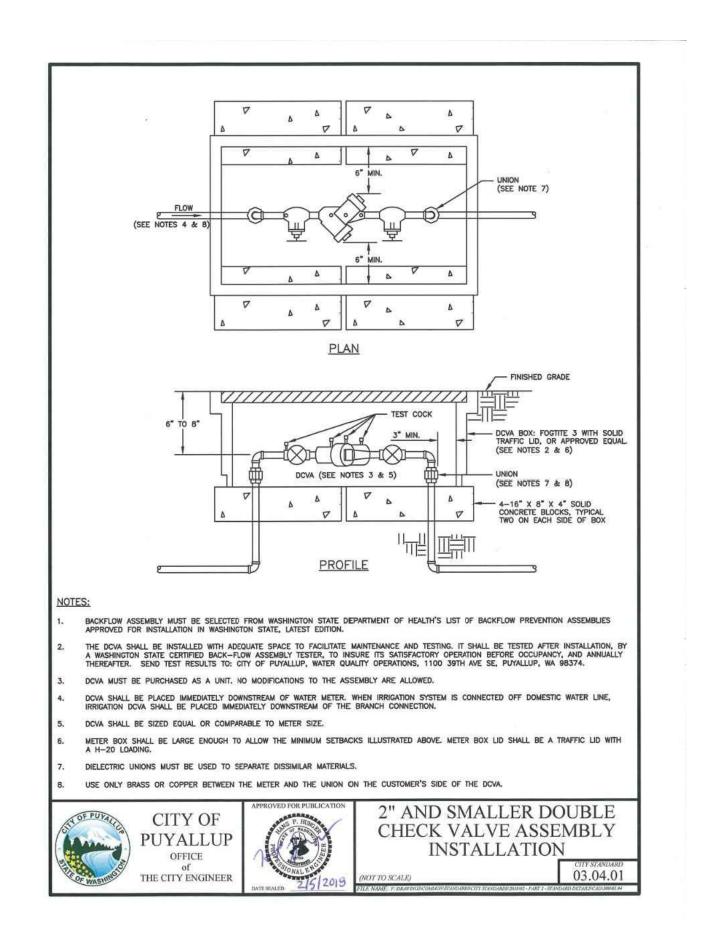
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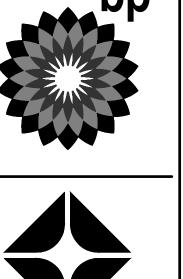
DRIP IRRIGATION VALVE

- (1) FINISH GRADE
- STANDARD VALVE BOX WITH COVER: RAIN BIRD VB-STD (3) WATERPROOF CONNECTION: RAIN BIRD DB SERIES (4) VALVE ID TAG
- (5) 30-INCH LINEAR LENGTH OF WIRE, COILED
- 'X 34" REDUCING COUPLING (INCLUDED IN XCZ-LF-100-PRF KIT) (7) PRESSURE REGULATING FILTER: RAIN BIRD PRF-100-RBY (INCLUDED IN XCZ-LF-100-PRF KIT) (8) LATERAL PIPE
- (9) PVC SCH 40 FEMALE ADAPTOR OR REDUCER
- (10) REMOTE CONTROL VALVE: RAIN BIRD LFV-100 (INCLUDED IN XCZ-LF-100-PRF KIT) (11) PVC SCH 40 TEE OR ELL TO MANIFOLD
- 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL (13) MANIFOLD PIPE AND FITTINGS
- (14) MINIMUM FOUR (4) 4"x8" BRICKS

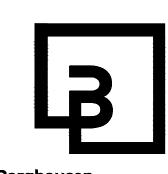












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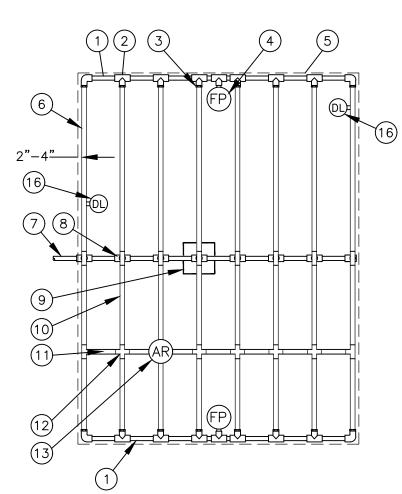
ARCO NTI 3400 am/pm FUEL CANOPY w/8 MPD's

SITE ADDRESS: **SWC S MERIDIAN** @ HIGHWAY 512 PUYALLUP, WASHINGTON

FACILITY #TBD 21730

PRELIMINARY IRRIGATION DETAILS

PRELIMINARY IRRIGATION DETAILS



(1) PVC EXHAUST HEADER (2)PVC SCH 40 TEE OR EL (TYPICAL)

(3) BARB X MALE FITTING

(4) FLUSH POINT (TYPICAL) (5) PERIMETER OF AREA

(1) EASY FIT COMPRESSION TEE

(2) SUB-SURFACE DRIPLINE

(3) INLINE DRIP EMITTER

(5) TURF/FINISH GRADE OR SHRUB BED

(4) TIE DOWN STAKE

DRIP MANIFOLD

BURIAL DEPTH

(6) PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA (7) PVC SUPPLY PIPE FROM CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND) (8) PVC SUPPLY MANIFOLD

(9) CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL) - SEE INSET A

10 SUB-SURFACE	DRIPLIN
11) BLANK TUBING	

(12) BARB X BARB INSERT TEE OR CROSS: (13) ½" AIR RELIEF VALVE

(14) BARB X FEMALE FITTING:

(15) 34" PVC NIPPLE, LENGTH AS NECESSARY (16) DRIPLINE INDICATOR. SEE DETAIL FOR ADDITIONAL INFORMATION

Dripline Maximum Lateral Lengths (Feet)							
Inlet Pressure	Nomin	pacing al Flow ph)	Nomin	pacing al Flow ph)	Nomin	pacing al Flow oh)	
рзі	0.6	0.9	0.6	0.9	0.6	0.9	
15	273	1 55	314	250	424	322	
20	318	169	353	294	508	368	
30	360	230	413	350	586	414	
40	395	255	465	402	652	474	
50	417	285	528	420	720	488	
60	460	290	596	455	780	514	

1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE IRRIGATION SCHEDULE FOR SPACING. 2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE

3. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA. 4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

DRIPLINE CENTER FEED LAYOUT

1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND

ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR

3. INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN

NOT TO SCALE

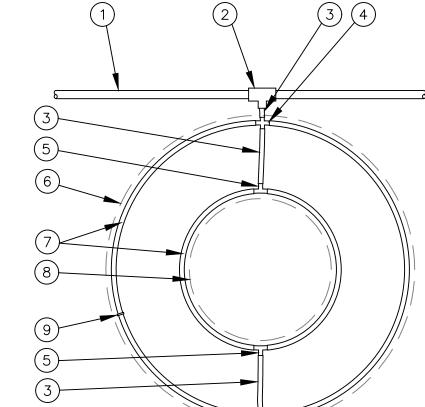
FIVE FEET IN CLAY.

DRIPLINE ODD CURVES LAYOUT

NOT TO SCALE

DRIPLINE BURIAL

NOT TO SCALE



(1) PVC DRIP MANIFOLD PIPE

(5) BARB TEE INSERT FITTING

(7) SUB-SURFACE DRIPLINE: SEE IRRIGATION SCHEDULE

(8) PLACE AS SHOWN (LENGTH AS REQUIRED) ROOT BALL

(9) TIE DOWN STAKE: QUANTITY AS REQUIRED, SEE NOTES 2-3

1. DISTANCE BETWEEN LATERAL RINGS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, AND TREE CANOPY. SEE MANUFACTURER DRIPLINE INSTALLATION GUIDE FOR SUGGESTED

2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE

DRIPLINE AROUND TREE

1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND

LATERAL FLOW DEMAND)

(2) PERIMETER OF AREA

(4) PVC SUPPLY MANIFOLD

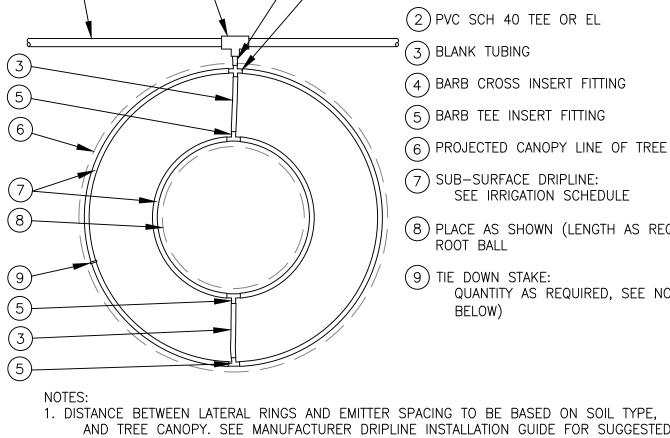
(6) BARB X MALE FITTING

(7) SUB-SURFACE DRIPLINE:

SEE IRRIGATION SCHEDULE

3. INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.

CLAMPS BE INSTALLED ON EACH FITTING.

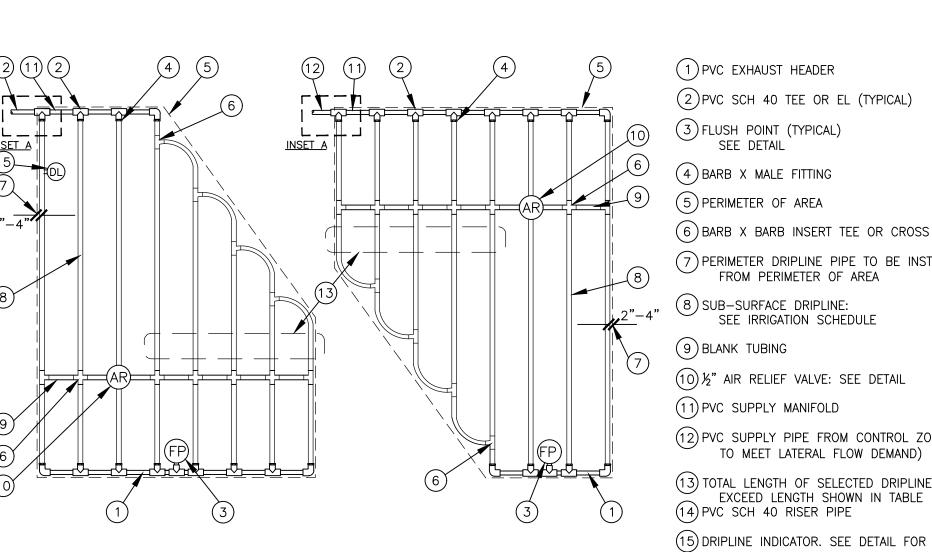




3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

NOT TO SCALE

CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS FOR SPACING 2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING 4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL (8) ARB X BARB INSERT TEE (1) PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET (9) TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED LENGTH SHOWN IN TABLE (10) PVC FLUSH HEADER 3 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA 11) FLUSH POINT SEE DETAIL (12) PVC RISER PIPE (5) PVC SCH 40 TEE OR EL (TYPICAL) (13) TURF OR MULCH (14) FINISH GRADE (15) 1/2" AIR RELIEF VALVE: SEE DETAIL (16) DRIPLINE INDICATOR. SEE DETAIL FOR ADDT'L INFO



DRIPLINE IRREGULAR SHAPED LAYOUT

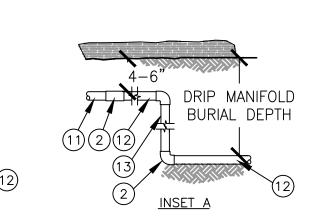
NOT TO SCALE

 DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE

DRIPLINE INSTALLATION GUIDE FOR SUGGESTED LENGTH OF LONGEST DRIPLINE LATERAL SHOULD

NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE. • AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.

 WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.



FROM PERIMETER OF AREA

EXCEED LENGTH SHOWN IN TABLE

(2) PVC SCH 40 TEE OR EL (TYPICAL) (3) BARB X MALE FITTING:

(4) FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL 'FLUSH POINT WITH BALL VALVE'

5 PERIMETER OF AREA

6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA

(7) SUB-SURFACE DRIPLINE

1) PVC EXHAUST HEADER

(8) BLANK TUBING

(9) BARB X BARB INSERT TEE OR CROSS:

(10)½" AIR RELIEF VALVE

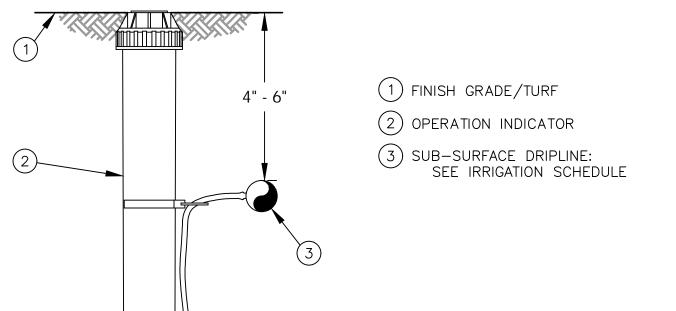
(11) PVC SUPPLY HEADER

(12) PVC DRIP MANIFOLD FROM CONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)

(13) PVC SCH 40 RISER PIPE

(14) DRIPLINE INDICATOR. SEE DETAIL FOR ADDT'L INFO

Dripline Maximum Lateral Lengths (Feet)						
Inlet Pressure ps	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)		Nominal Flow (gph)		Nominal Flow (gph	
	0.6	0.9	0.6	0.9	0.6	0.9
15	273	155	314	2 50	424	3 22
20	318	169	353	294	508	368
30	360	230	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

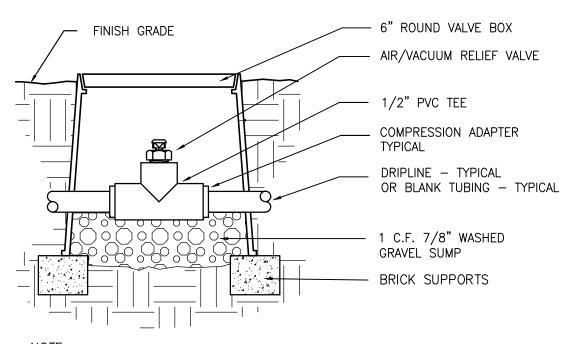


1. INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING. 2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO 1/4 PATTERN. THE FLOW FROM THE NOZZLE, 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

DRIP IRRIGATION DRIPLINE INDICATOR

DRIPLINE END FEED LAYOUT

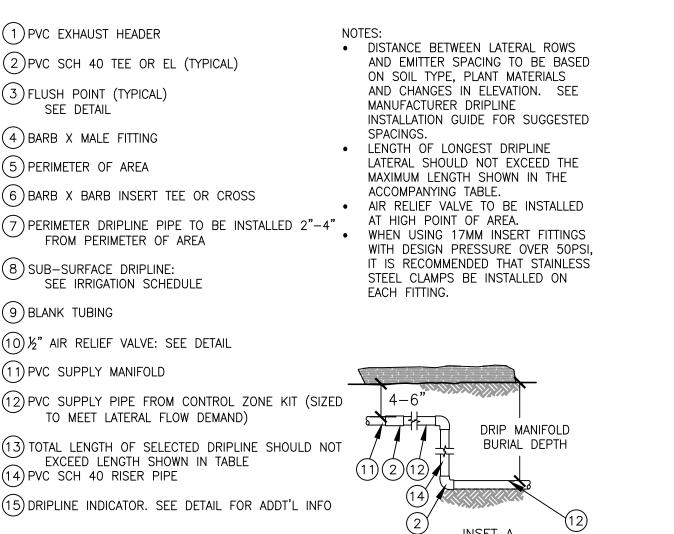
NOT TO SCALE



AIR/VACUUM RELIEF VALVE CANNOT BE CONNECTED LOWER THAN DRIPLINE LATERALS. FOR USE ON ZONES OF 7 GPM OR LESS ONLY (PLUMBED TO TUBING).

1/2" AIR/VACUUM RELIEF VALVE DETAIL

NOT TO SCALE



BP WEST COAST PRODUCTS, LLC

Consulting Engineers, Inc.

18215 72nd Avenue South

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DEVELOPMENT INFORMATION: ARCO NTI 3400 am/pm

FUEL CANOPY w/ 8 MPD's

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> **PRELIMINARY** IRRIGATION DETAILS

