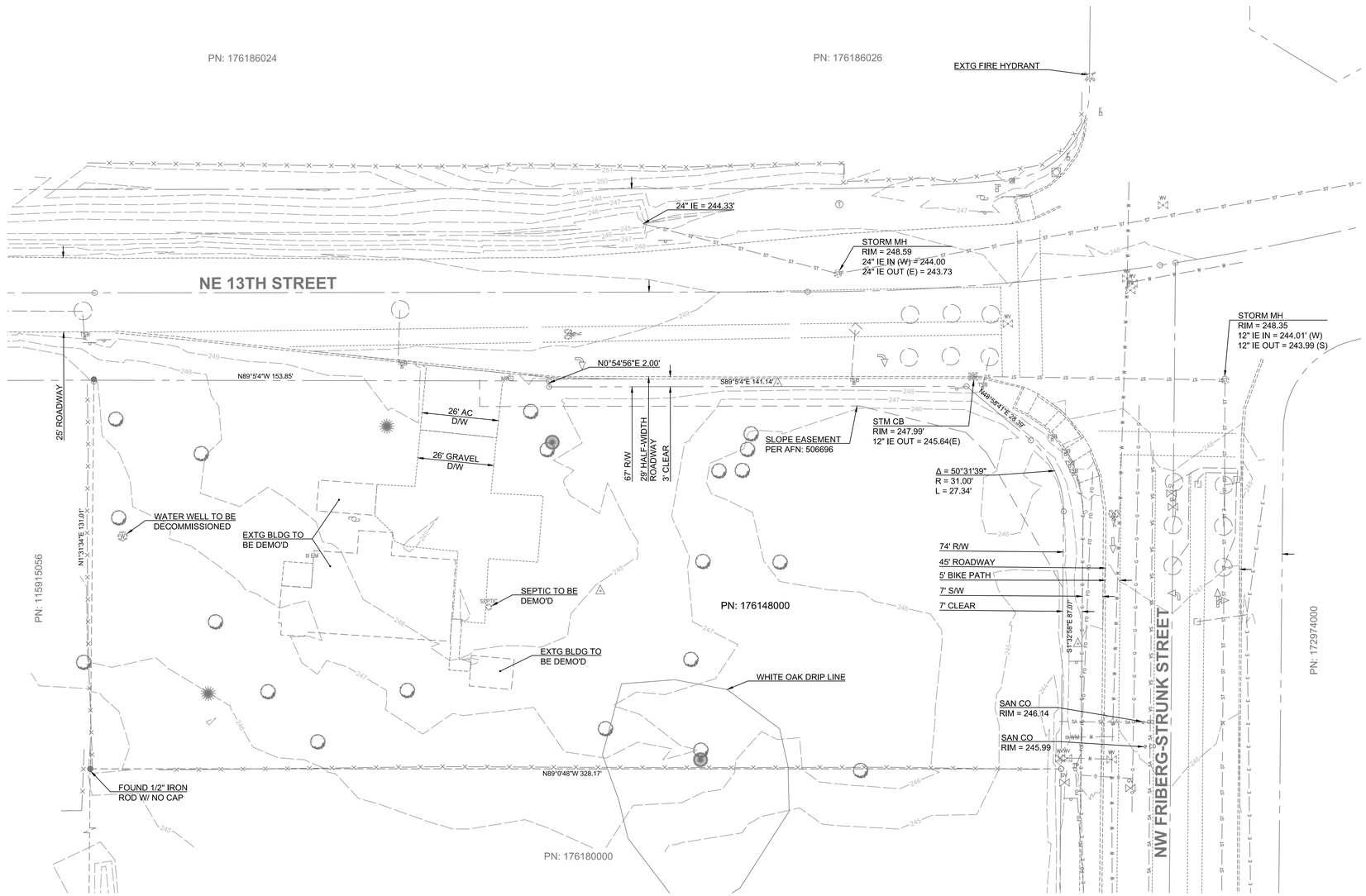
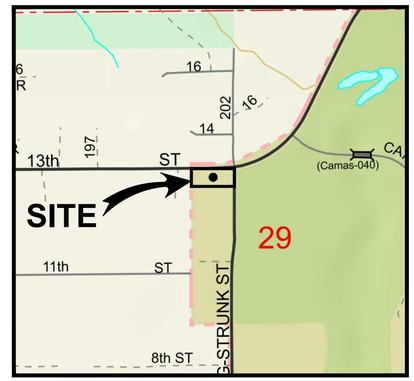
13th Street Site Plan

Located in the NW ¼ of Section 29, T2N, R3E, W.M.
City of Camas, Washington





VICINITY MAP
NOT TO SCALE

Sheet Index

1. Existing Conditions Plan
2. Preliminary Site Plan
3. Preliminary Utility Plan
4. Preliminary Grading Plan
5. Existing Tree Survey TP
6. Preliminary Landscape Plan L1
7. Final Landscape Details PD
8. Preliminary Irrigation Details ID

GENERAL NOTES

APPLICANT:
Taz Kahn
3993 NW Currawong Court
Camas, WA 98607
TKahnusa@gmail.com

OWNER:
Pak USA Camas LLC
20107 NE 13th Street
Camas, WA 98607

CIVIL ENGINEER:
PLS Engineering
Contact: Travis Johnson, PE
604 W Evergreen Blvd
Vancouver, WA 98660
PH: (360) 944-6519
pm@plsengineering.com

SITE ADDRESS:
Parcel # 176148-000
20101 NE 13TH ST
Camas, WA 98607

HORIZONTAL DATUM:
NAD 83 (2011) Washington State plane coordinate system, south zone, us survey feet. Based on real time kinematic corrections from the Washington State reference network.

VERTICAL DATUM:
NGVD 1929(47) based on real time kinematic corrections from the Washington State reference network.

Scale 1" = 20'

20 10 0 20

N

ENGINEERING
PLS

Existing Conditions Plan For:
13th Street Site Plan
A Subdivision Located In The City Of Camas, Washington
Engineering - Surveying - Planning

604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

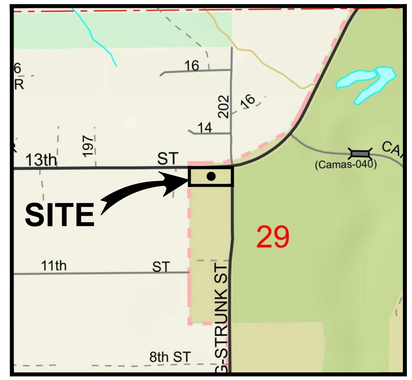
Revisions

1	2	3	4	5	6

SCOTT W. GILLILAND
STATE OF WASHINGTON
42773
REGISTERED PROFESSIONAL ENGINEER
8/21/23

Project No. 3632	
SCALE:	H: 1" = 20' V: N/A
DESIGNED BY:	SWG
DRAFTED BY:	JSV
REVIEWED BY:	TGJ

1
8

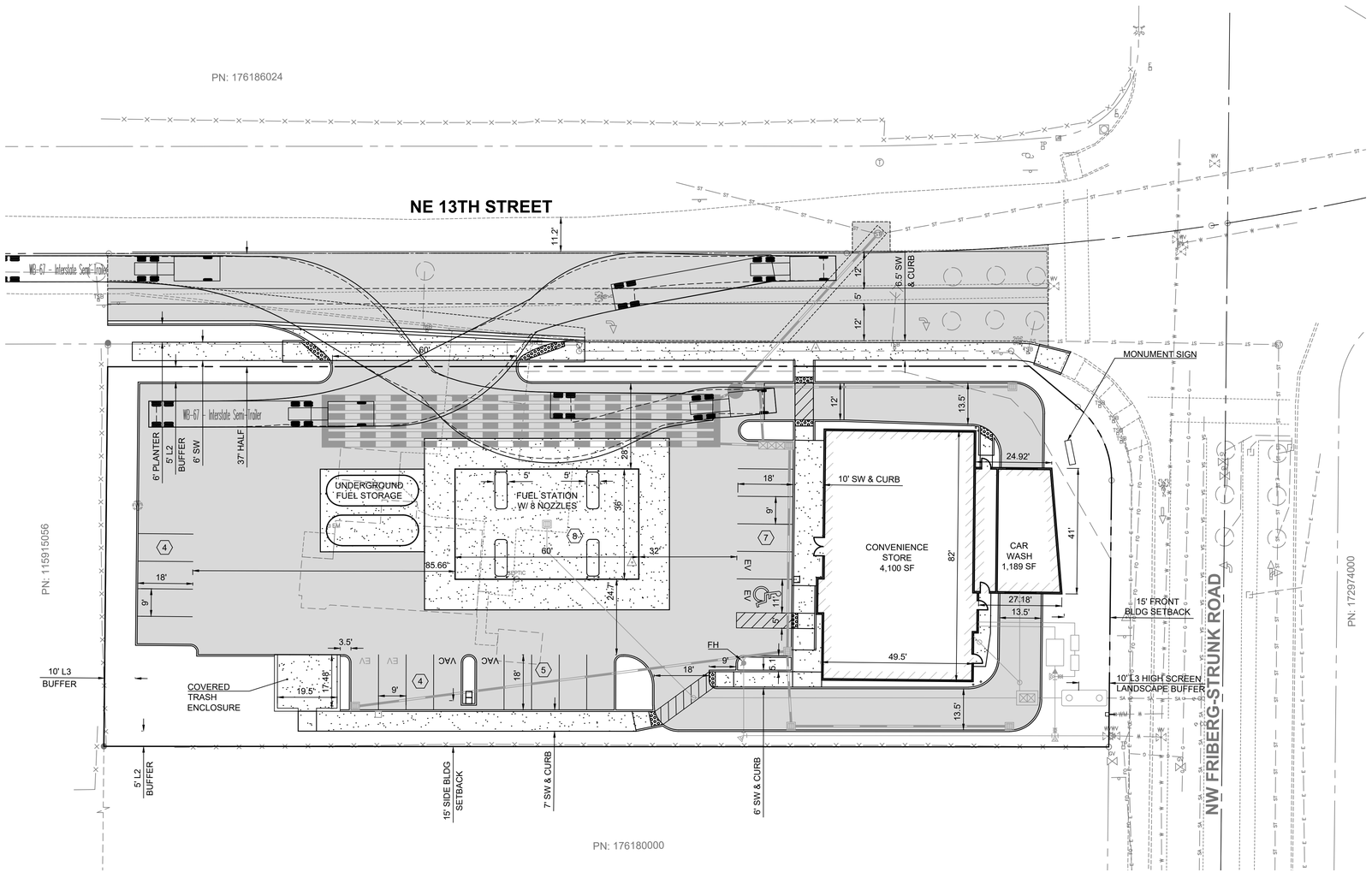


VICINITY MAP
NOT TO SCALE

Legend	
Proposed Asphalt Concrete	
Proposed Cement Concrete	

Scale 1" = 20'
20 10 0 20

N



GENERAL NOTES

APPLICANT:
Taz Kahn
3993 NW Currawong Court
Camas, WA 98607
TKahnusa@gmail.com

OWNER:
Pak USA Camas LLC
20107 NE 13th Street
Camas, WA 98607

CIVIL ENGINEER:
PLS Engineering
Contact: Travis Johnson, PE
604 W Evergreen Blvd
Vancouver, WA 98660
PH: (360) 944-6519
pm@plsengineering.com

SITE ADDRESS:
Parcel # 176148-000
20101 NE 13TH ST
Camas, WA 98607

CIRCULATION DISCUSSION:
This plan shows that a WB-67 truck can enter and exit the site for deliveries. Note that the turning path does not impact access to the gas pumps. This is the largest possible design vehicle. Since it can access the site, smaller delivery vehicles can as well.

ENGINEERING
PLS

604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Preliminary Circulation Plan For:

13th Street Site Plan

A Subdivision Located In The City Of Camas, Washington

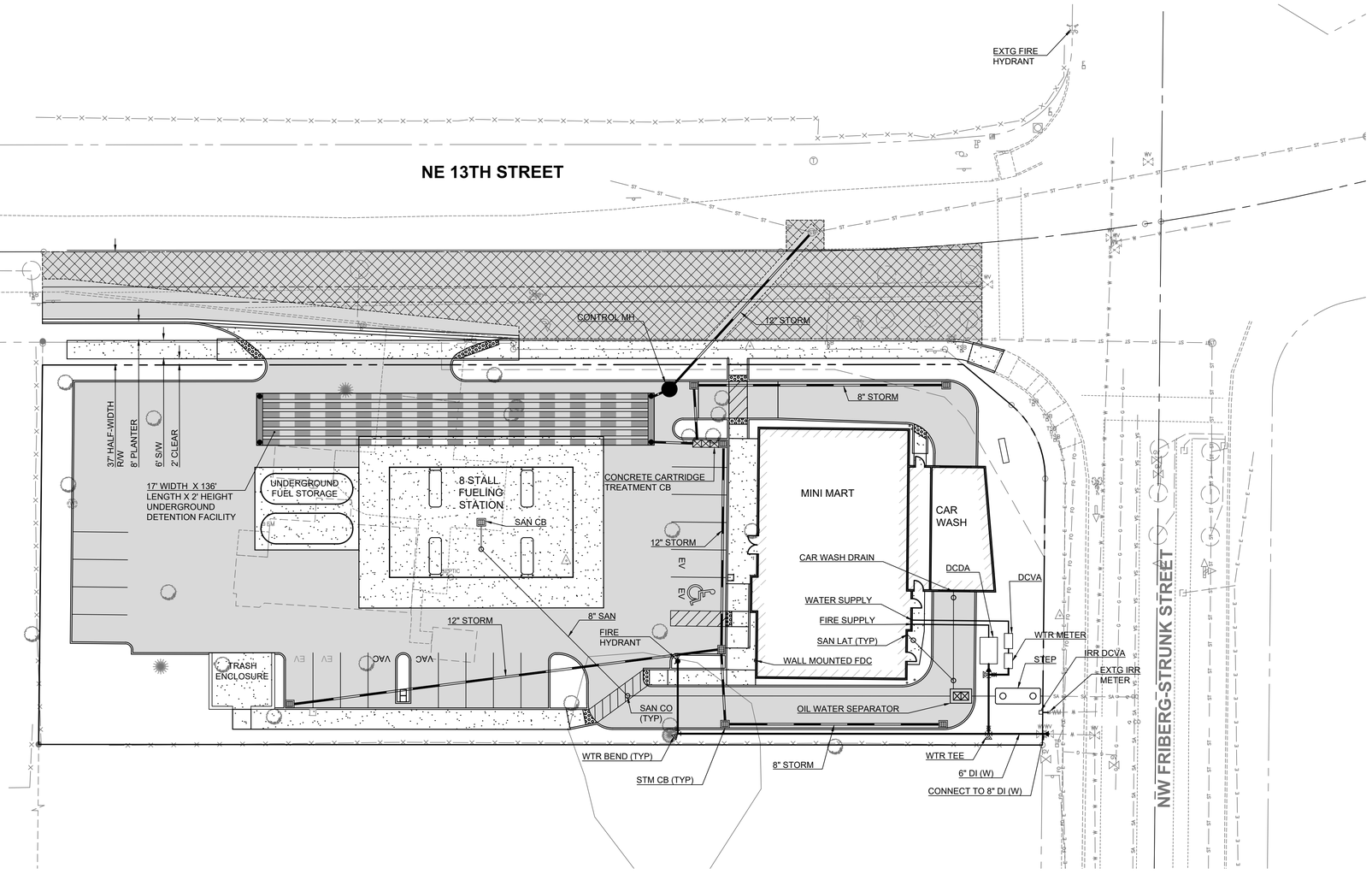
Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions						
1	2	3	4	5	6	

SCOTT W. GILLILAND
STATE OF WASHINGTON
62773
REGISTERED PROFESSIONAL ENGINEER
11/2023

Project No. 3632	
SCALE:	H: 1" = 20' V: N/A
DESIGNED BY:	SWG
DRAFTED BY:	JSV
REVIEWED BY:	TGJ

1
1



Legend	
Proposed Asphalt Concrete	
Proposed Cement Concrete	
Proposed Grind and Overlay	

Scale 1" = 20'

20 10 0 20

N

ENGINEERING | PLS

Preliminary Stormwater Plan For:

13th Street Site Plan

A Subdivision Located In The City Of Camas, Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

1	2	3	4	5	6

SCOTT W. GILLILAND — STATE OF WASHINGTON — 42773 — REGISTERED PROFESSIONAL ENGINEER

11/22/23

Project No. 3632	
SCALE:	H: 1" = 20' V: N/A
DESIGNED BY:	SWG
DRAFTED BY:	JSV
REVIEWED BY:	TGJ

1

1

13th Street Site Plan

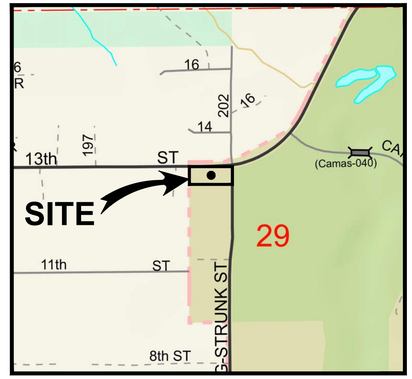
Located in the NW ¼ of Section 29, T2N, R3E, W.M.
City of Camas, Washington

PARCEL STATISTICS		
ZONE: Business Park BP		
Gross Site Area	42,208 SQ FT	0.97 AC
Critical Areas	0 SQ FT	0 AC
	REQUIRED	PROPOSED
Density	N/A	N/A
Maximum Lot Coverage	50%	20%
Setbacks		
North	15'	15'
South	15'	15'
East	15'	15'
West	50'	50'
Maximum Building Height	None	28'
Total Parking Spaces *	20	20
Standard Parking Spaces	70% Min of Total	20
Compact Spaces (C)	30% Max of Total	0
Gas Fill-up Stalls *	1 Per Nozzle (8)	8
ADA Spaces (ADA)	1 Per 25 of Total (1)	1
Spaces with Electric Vehicle Charging Infrastructure (E)	10% Now (2) + 10% Future (2)	2 Now + 2 Future

*Note: The Gas stalls are not actually parking stalls and do not count towards the required ADA and EV calculations.

REQUIRED PARKING CALCULATIONS:

4100 sf c-store @ 1/250 sf	= 17
8 nozzle gas station @ 1/nozzle	= 8
1 stall carwash w/ 2 employees @ 2/stall+1/2 employees	= 3
Total	= 28
Excluding Gas Fill-up Stalls	= 20

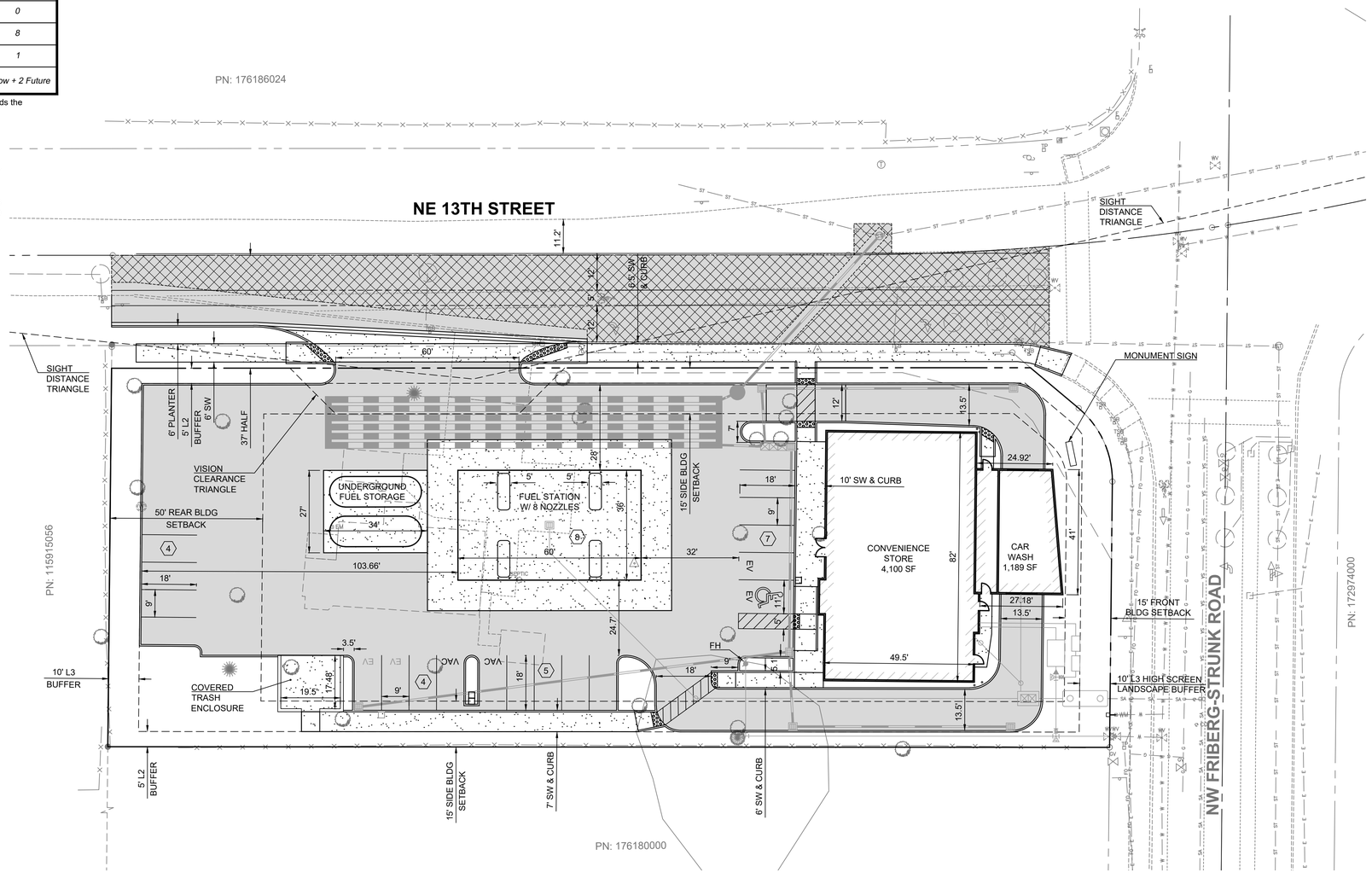


VICINITY MAP
NOT TO SCALE

Legend

Proposed Asphalt Concrete	
Proposed Cement Concrete	
Proposed Grind and Overlay	

Scale 1" = 20'
20 10 0 20



GENERAL NOTES

APPLICANT:
Taz Kahn
3993 NW Currawong Court
Camas, WA 98607
TKahnusa@gmail.com

OWNER:
Pak USA Camas LLC
20107 NE 13th Street
Camas, WA 98607

CIVIL ENGINEER:
PLS Engineering
Contact: Travis Johnson, PE
604 W Evergreen Blvd
Vancouver, WA 98660
PH: (360) 944-6519
pm@plsengineering.com

SITE ADDRESS:
Parcel # 176148-000
20101 NE 13TH ST
Camas, WA 98607

SITE STATISTICS:
Existing Site Area: 42,257 SF (0.97 Acre)
ROW Dedication: 1,832 SF (0.04 Acre)
Developed Site: 42,257 SF (0.93 Acre)

PLS ENGINEERING
Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Preliminary Site Plan For:
13th Street Site Plan
A Subdivision Located In The City Of Camas, Washington

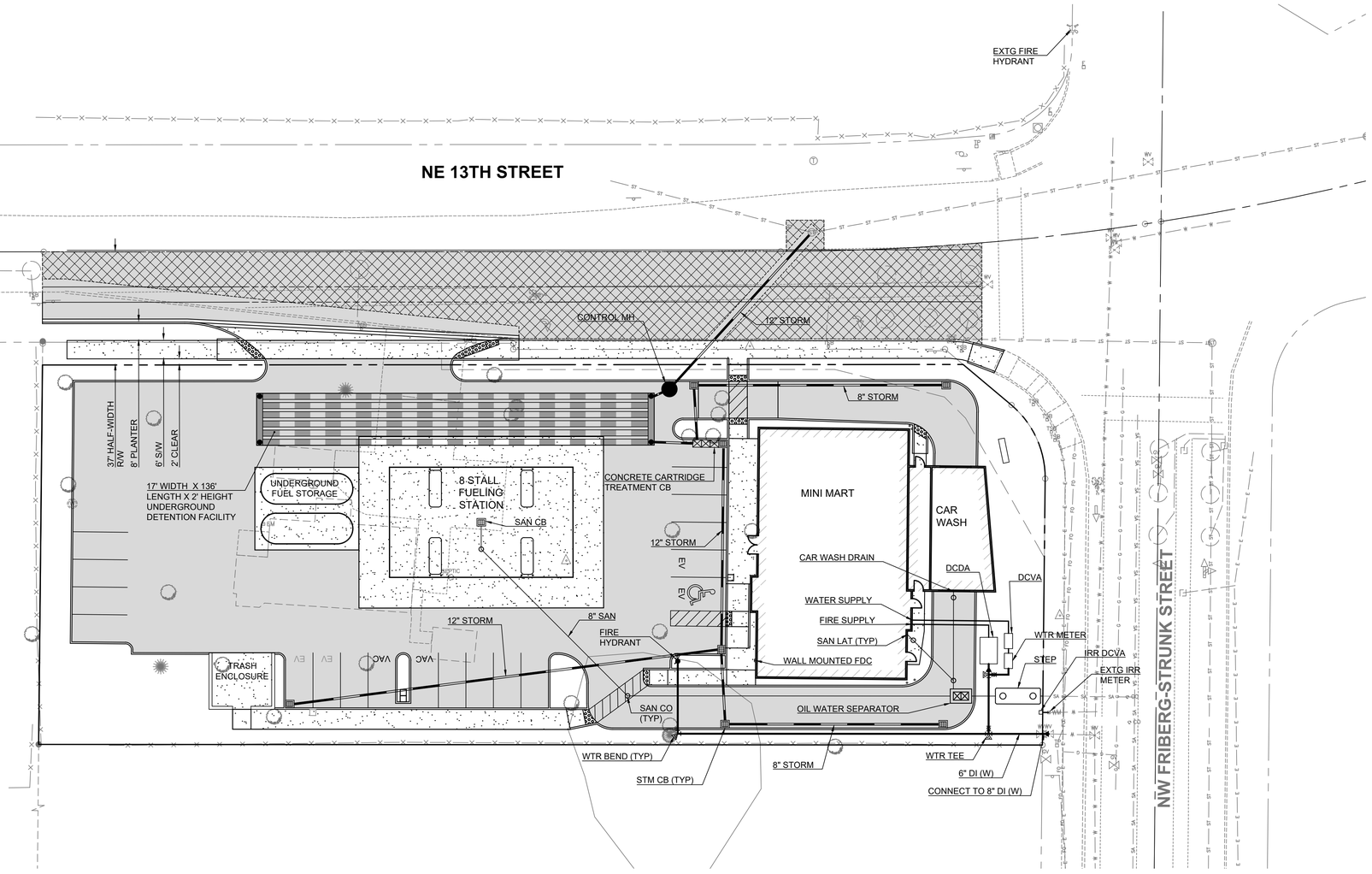
Revisions

1	2	3	4	5	6

SCOTT W. GILLILAND — STATE OF WASHINGTON — 42773 — REGISTERED PROFESSIONAL ENGINEER — 11/2023

Project No. 3632	
SCALE:	H: 1" = 20' V: N/A
DESIGNED BY:	SWG
DRAFTED BY:	JSV
REVIEWED BY:	TGJ

2
8



Legend	
Proposed Asphalt Concrete	
Proposed Cement Concrete	
Proposed Grind and Overlay	

Scale 1" = 20'

20 10 0 20

N

Preliminary Utility Plan For: 13th Street Site Plan

A Subdivision Located In The City Of Camas, Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

ENGINEERING
PLS

Revisions

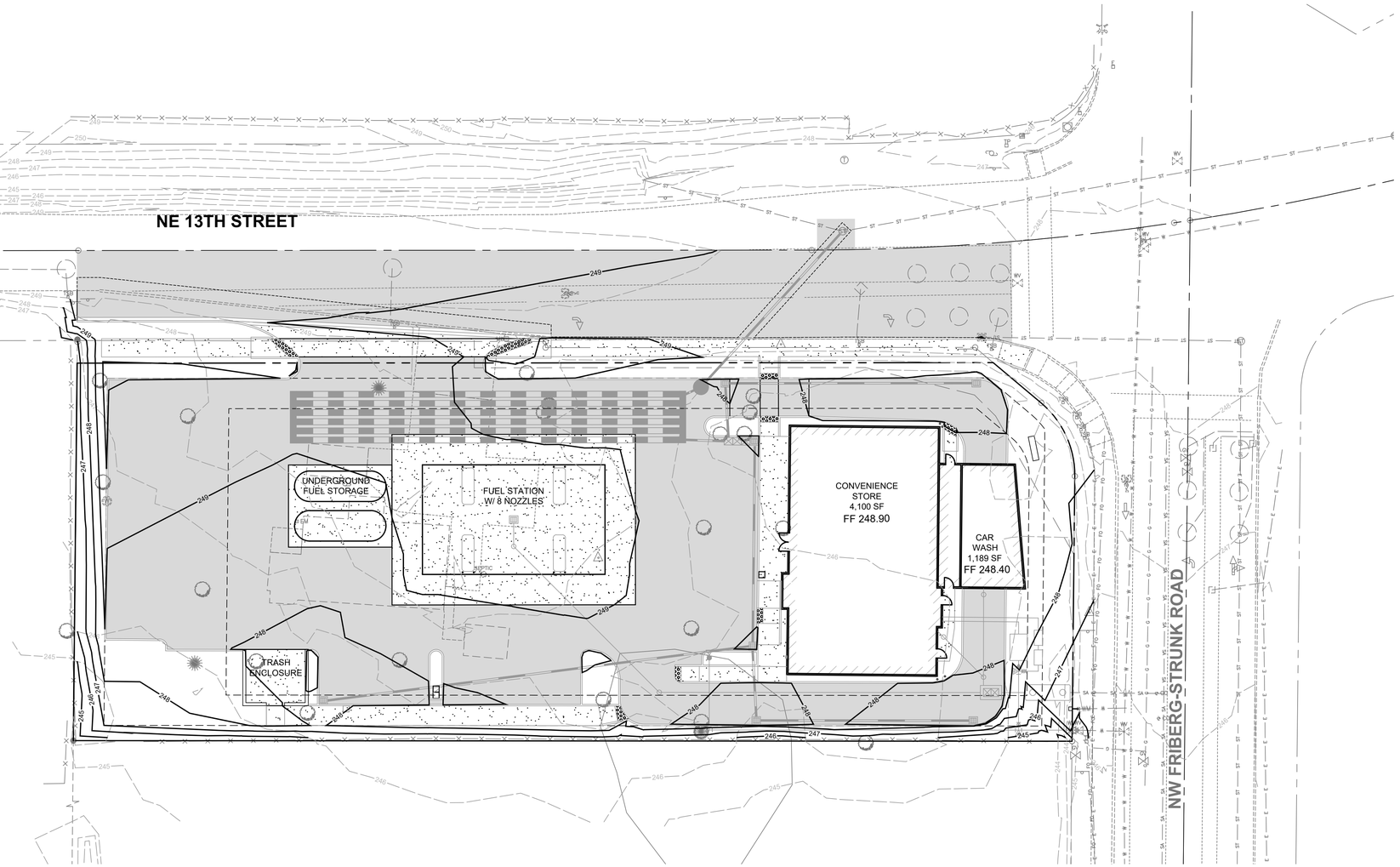
1	2	3	4	5	6

SCOTT W. GILLILAND — STATE OF WASHINGTON — 42773 — REGISTERED PROFESSIONAL ENGINEER — 11/22/23

Project No. 3632	
SCALE:	H: 1" = 20' V: N/A
DESIGNED BY:	SWG
DRAFTED BY:	JSV
REVIEWED BY:	TGJ

3

8



UNADJUSTED VOLUMES	
CUT	620 CY
FILL	1,730 CY

Legend	
Proposed Asphalt Concrete	
Proposed Cement Concrete	
Proposed Grind and Overlay	

Scale 1" = 20'

20 10 0 20

ENGINEERING | PLS

Preliminary Grading Plan For:

13th Street Site Plan

A Subdivision Located In The City Of Camas, Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

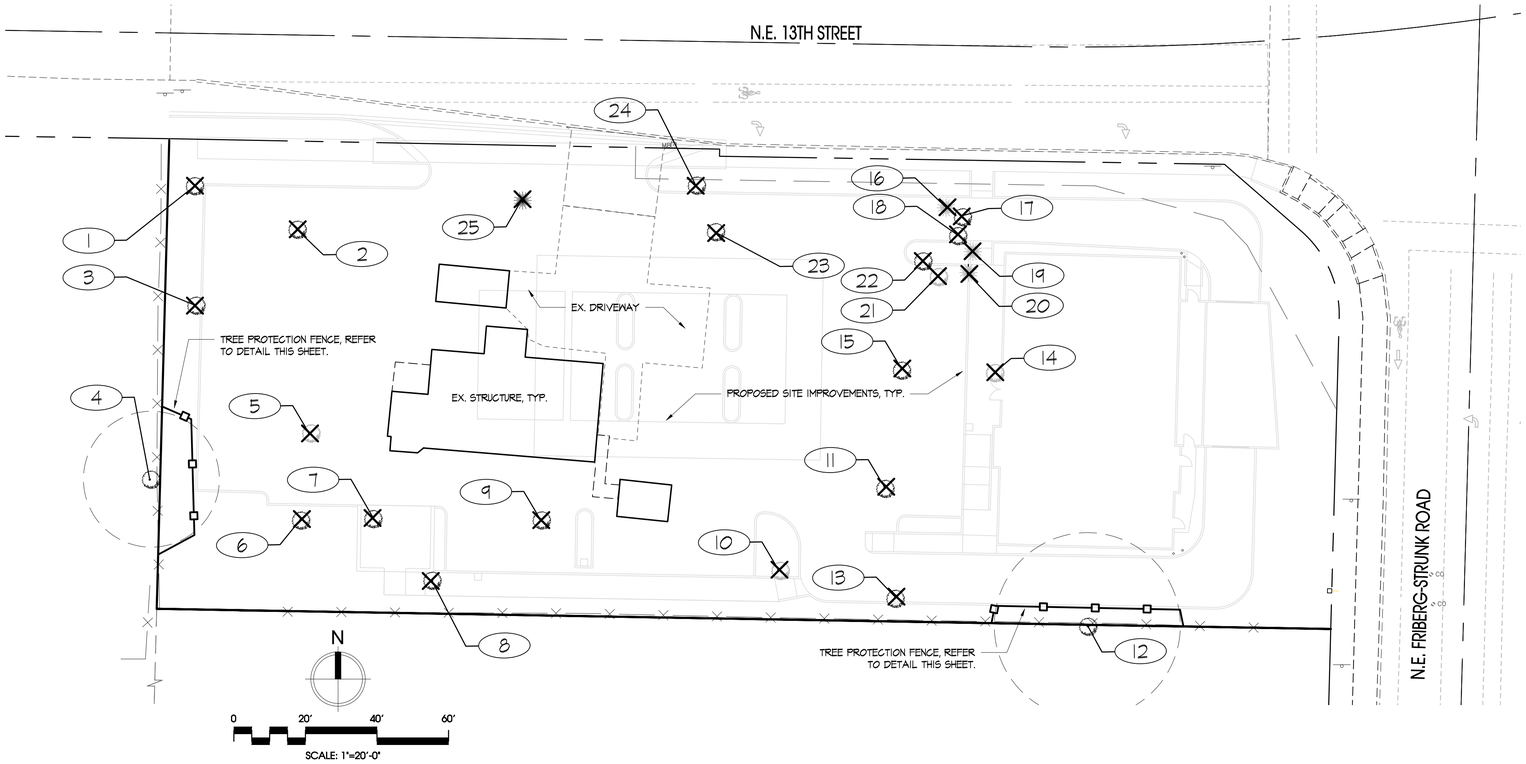
1	2	3	4	5	6

SCOTT W. GILLILAND
STATE OF WASHINGTON
42773
REGISTERED PROFESSIONAL ENGINEER
11/2023

Project No. 3632	
SCALE:	H: 1" = 20' V: N/A
DESIGNED BY:	SWG
DRAFTED BY:	JSV
REVIEWED BY:	TGJ

4

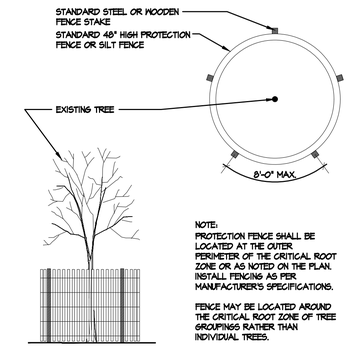
8



SITE STATISTICS	
93± AC	SITE AREA
19	TREE UNITS REQUIRED (20 / ACRE)
0	TREE UNITS RETAINED

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	EXISTING SIGNIFICANT DECIDUOUS TREE (12" CAL. OR GREATER)
	EXISTING SIGNIFICANT EVERGREEN TREE (8" CAL. OR GREATER)
	EXISTING DECIDUOUS (LESS THAN 12" CAL.)
	EXISTING EVERGREEN TREE (LESS THAN 8" CAL.)
	EXISTING SIGNIFICANT TREES TO BE REMOVED
	ROOT PROTECTION ZONE AREA (RPZ)
	TREE PROTECTION FENCE LOCATION (4' CHAIN LINK, ORANGE PVC FENCE OR SILT FENCE) (ALSO DENOTES AREA WHERE NO IMPACTS TO THE ROOT PROTECTION ZONE SHALL OCCUR). SEE DETAIL THIS SHEET.

CERTIFIED ARBORIST
ISA
Robert Phipps,
PN-8751A



NOTE:
PROTECTION FENCE SHALL BE LOCATED AT THE OUTER PERIMETER OF THE CRITICAL ROOT ZONE OR AS NOTED ON THE PLAN. INSTALL FENCING AS PER MANUFACTURER'S SPECIFICATIONS.

FENCE MAY BE LOCATED AROUND THE CRITICAL ROOT ZONE OF TREE GROUPINGS RATHER THAN INDIVIDUAL TREES.

A Tree Protection Fencing Detail
Not To Scale — SECTION / PLAN VIEW

TREE PROTECTION TIME LINE & NARRATIVE

EXISTING ON-SITE AND OFF-SITE TREE LOCATIONS AND SIZES HAVE BEEN OBTAINED VIA SURVEY INFORMATION AND SITE OBSERVATIONS.

NO EXISTING TREES WITHIN THE PROJECT BOUNDARIES ARE PROPOSED TO BE RETAINED.

TREE PROTECTION FENCING SHALL BE PLACED AS SHOWN TO PROTECT THE OFF-SITE TREE NEAR THE S.E. CORNER OF THE SITE.

TREE PROTECTION / EROSION CONTROL FENCING SHALL BE ESTABLISHED PRIOR TO EXCAVATION. IT IS RECOMMENDED TO BE INSTALLED AT THE SAME TIME EROSION CONTROL MEASURES ARE INSTALLED. WHERE TREE FENCE AND EROSION CONTROL FENCE ARE LOCATED AT THE SAME LOCATION, EROSION FENCE THEN SERVES AS TREE PROTECTION FENCE. SEE DETAIL THIS SHEET.

TREES DETERMINED TO BE A SAFETY HAZARD AT THE TIME OF CONSTRUCTION MAY BE REMOVED. THE SITE WILL MAINTAIN A MINIMUM TREE UNIT COUNT OF 20 TREES PER ACRE IN ACCORDANCE WITH CITY OF CAMAS MUNICIPAL CODE CC 18.13.051.

TREE PROTECTION NOTES

1) NO PERSON MAY CONDUCT ANY OF THE FOLLOWING ACTIVITIES WITHIN THE DRIP LINE OF THE TREES DESIGNATED TO REMAIN INCLUDING, BUT NOT LIMITED TO: PARKING EQUIPMENT, FUELING, SERVICING EQUIPMENT, PLACING SOLVENTS, STORING BUILDING MATERIAL AND SOIL DEPOSITS, DUMPING CONCRETE WASHOUT AND LOCATING BURN HOLES.
2) DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY OBJECT TO THE TREES DESIGNATED FOR PROTECTION.
3) THE CONTRACTOR SHALL FOLLOW THE GRADING PLAN PROVIDED BY THE PROJECT CIVIL ENGINEER. GRADING ACTIVITIES SHALL BE CONDUCTED IN A MANNER TO MINIMIZE THE IMPACTS TO THE TREES MARKED FOR PRESERVATION.
4) THE EXCAVATOR SHALL KEEP A SHARP PAIR OF LOPPERS AND A SHARP 12" PRUNING SAW ACCESSIBLE ON-SITE DURING GRADING OPERATIONS. ANY ROOTS LARGER THAN ½" SHALL BE PRUNED TO THE FACE OF THE CUT (USING A SHARP PAIR OF LOPPERS OR A SHARP 12" PRUNING SAW) AND SHALL NOT BE TORN FROM THE GROUND BY MECHANICAL EXCAVATION.
5) SPECIAL CARE SHALL BE EXERCISED IN WORKING NEAR THE TREES TO BE RETAINED. THIS INCLUDES HAND EXCAVATING THE ROOTS AT THE EDGE OF THE EXCAVATION AND CUTTING ROOTS WITH A LOPPER OR PRUNING SAW. PRUNING THE ROOTS AT THE EDGE OF EXCAVATION WILL MINIMIZE BREAKAGE OF HEALTHY ROOTS BEYOND THE EDGE OF THE PROPOSED EXCAVATION.
6) EXCEPT FOR THE PROPOSED IMPROVEMENTS SHOWN WITHIN THE DRIP LINES OF THE TREES NOTED TO BE RETAINED THE GRADE SHALL NOT BE ELEVATED OR REDUCED FROM EXISTING GRADE.
7) IF THE GRADE ADJACENT TO A PRESERVED TREE IS RAISED SUCH THAT IT COULD SLOUGH OR ERODE INTO THE TREE'S DRIP LINE, IT SHALL BE PERMANENTLY STABILIZED.
8) THE TREES NOTED TO RETAINED SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. CLEARING OPERATIONS SHALL BE CONDUCTED SO AS TO EXPOSE THE SMALLEST PRACTICAL AREA OF SOIL TO EROSION FOR THE LEAST POSSIBLE TIME. REFER TO THE PROJECT'S EROSION CONTROL PLAN FOR MORE INFORMATION.
9) THE PROJECT SHALL NOT INSTALL AN IMPERVIOUS SURFACE OTHER THAN THOSE SPECIFICALLY SHOWN ON THE PLANS WITHIN THE DRIP LINE OF THE TREES TO BE RETAINED.
10) UTILITY TRENCHES SHALL BE LOCATED OUTSIDE OF THE DRIP LINE OF THE TREES TO BE RETAINED.
11) ONGOING TREE MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE LAND OWNER. TREES SHALL BE MAINTAINED IN ACCORDANCE WITH ANSI AMERICAN NATIONAL STANDARDS INSTITUTE'S AS WELL AS OTHER APPLICABLE FEDERAL, STATE AND LOCAL STANDARDS PERTAINING TO TREE CARE OPERATIONS.

- ANSI Z133 ARBORICULTURAL OPERATIONS- SAFETY REQUIREMENTS
- ANSI A300 PART 1 PRUNING

Tree Data

Tree No.	Species	DBH	RPZ	Tree Condition	Condition Notes
1	Prunus spp. (Plum)	12"	12'	poor	Diseases or Conks, Visible Decay
2	Malus spp. (Apple)	19"	19'	fair	Diseases or Conks, Leaning
3	Malus spp. (Apple)	13"	13'	fair	Dieback 30% - 60%
4	Robinia pseudoacacia (Black Locust)	19"	19'	fair	Heavy Leaning (>60%)
5	Acer palmatum (Japanese maple)	9"	9'	poor	Dieback 30% - 60%, Visible Decay
6	Thuja plicata (Western Redcedar)	18"	18'	good	
7	Malus spp. (Apple)	18"	18'	poor	Branch Failures, Biotic Damage (Pests/Fungus), Dieback 60%-90%, Diseases or Conks, Visible Decay
8	Acer palmatum (Japanese maple)	12"	12'	good	
9	Malus spp. (Apple)	17"	17'	fair	Biotic Damage (Pests/Fungus), Dieback 30% - 60%, Leaning
10	Malus spp. (Apple)	11"	11'	poor	Included Bark, Dieback 30% - 60%, Leaning
11	Acer saccharum (Sugar Maple)	22"	22'	good	Dieback 30% - 60%
12	Aesculus californica (California Buckeye)	26"	26'	fair	Branch Failures, Dieback 30% - 60%, Leaning
13	Quercus garryana (OR White Oak)	43"	43'	fair	Leaning
14	Aesculus californica (California Buckeye)	10"	10'	fair	Dieback 30% - 60%
15	Robinia pseudoacacia (Black Locust)	25"	25'	fair	Branch Failures, Dieback 30% - 60%, Leaning
16	Picea pungens (Blue Spruce)	6"	6'	poor	Branch Failures, Branches Suppressed, Dieback 30% - 60%, Visible Decay
17	Acer saccharum (Sugar Maple)	18"	18'	poor	Branch Failures, Branches Suppressed, Dieback 30% - 60%, Visible Decay
18	Acer saccharum (Sugar Maple)	19"	19'	poor	Branch Failures, Branches Suppressed, Dieback 30% - 60%, Visible Decay
19	Picea pungens (Blue Spruce)	7"	7'	poor	Branch Failures, Branches Suppressed, Dieback 30% - 60%, Visible Decay
20	Thuja occidentalis (Aborvitae)	6"	6'	poor	Branch Failures, Branches Suppressed, Co-dominant, Dieback 30% - 60%, Visible Decay
21	Malus spp. (Apple)	6"	6'	poor	Branch Failures, Branches Suppressed, Dieback 30% - 60%, Visible Decay
22	Acer saccharum (Sugar Maple)	20"	20'	poor	Branch Failures, Branches Suppressed, Dieback 30% - 60%, Visible Decay
23	Acer palmatum (Japanese maple)	15"	15'	good	
24	Robinia pseudoacacia (Black Locust)	33"	33'	poor	Branch Failures, Dieback 30% - 60%, Leaning, Visible Decay
25	Thuja plicata (Western Redcedar)	44"	44'	fair	Leaning, Visible Decay

Planning Solutions, Inc
Creating Solution to Complex Issue
4400 NE 77th Avenue
Suite 275
VANCOUVER, WA 9866
VOICE: 360-750-9000 FAX: 360-713-61
www.planningsolutionsinc.co

PRELIMINARY
NOT FOR CONSTRUCTION
PBS ENGINEERING + ENVIRONMENTAL SURVEYING PBSUSA.COM

13TH STREET GAS STATION

20101 NE 13th Street
Camas, Washington

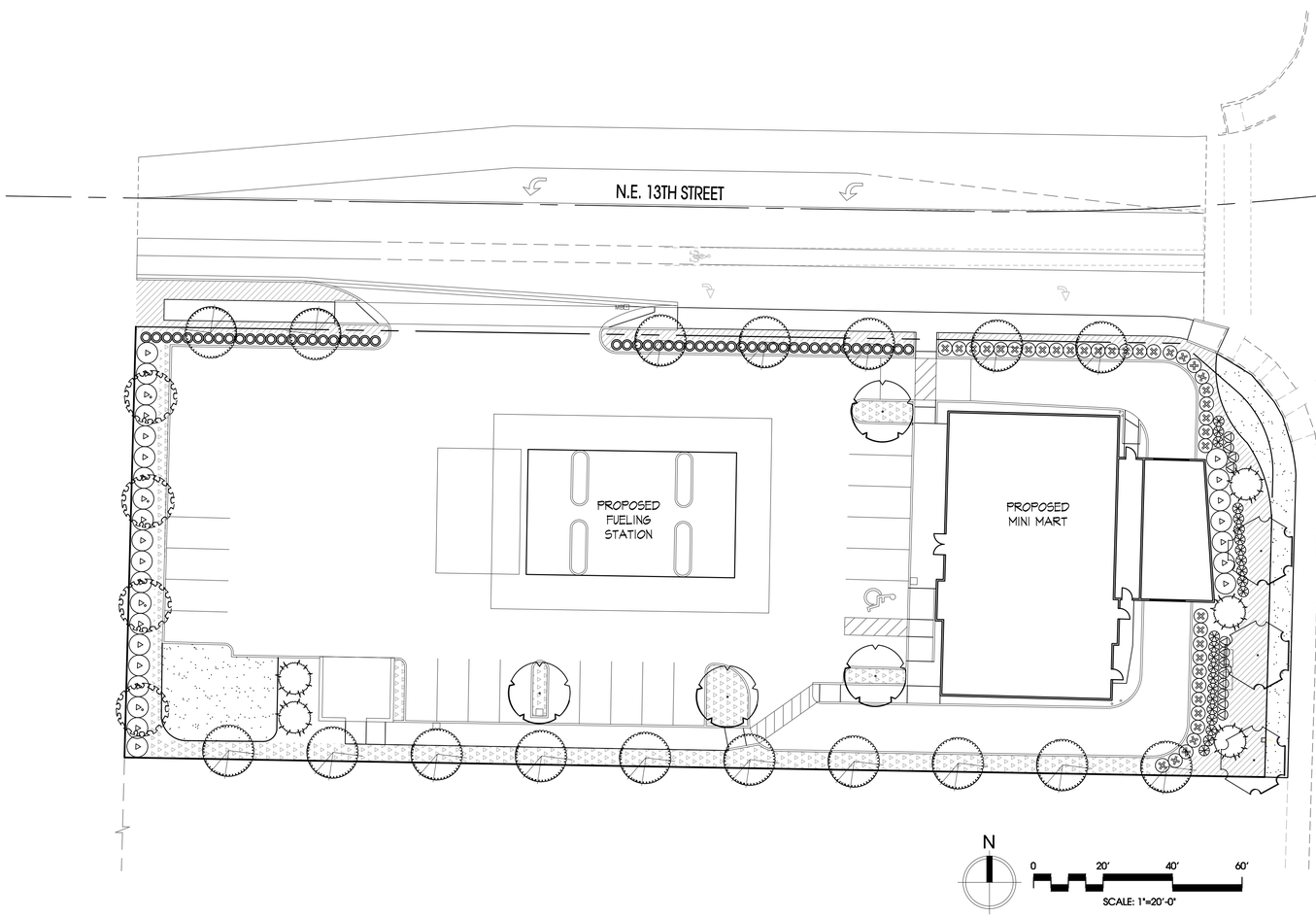
DRAWN: CB/RP	CHECKED: CB
SCALE: 1" = 20'-0"	DATE: 11.03.23
JOB #: 23-1837	
ISSUED FOR: PLR	
REVISIONS:	
1	
2	
3	
4	
5	
6	

SHEET NAME:
EXISTING TREE SURVEY

SHEET #:
TP
SHEET 5 OF 8

© COPYRIGHT 2023, PLANNING SOLUTIONS, INC. NO PART OF THIS DRAWING MAY BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION OF PLANNING SOLUTIONS, INC.

DISCLAIMER AND LIMITATIONS: ANY WORK CONTAINED HEREIN INCLUDING BUT NOT LIMITED TO PLANS AND DOCUMENTS ARE INSTRUMENTS OF SERVICE INTENDED FOR USE SOLELY WITH RESPECT TO THIS PROJECT. ALL WORK SHALL BE CONSIDERED CONCEPTUAL AND SUBJECT TO CHANGE. THESE INSTRUMENTS OF SERVICE SHALL BE CONSIDERED A WORK IN PROGRESS WHERE UNKNOWN FACTORS EXIST AND JURISDICTIONAL REQUIREMENTS HAVE NOT BEEN VERIFIED. DUE TO THE HIGH DEGREE OF UNCERTAINTY ASSOCIATED WITH A CONCEPTUAL DESIGN, THESE INSTRUMENTS OF SERVICE SHALL NOT BE USED AS THE BASIS FOR A FINANCIAL EVALUATION OR CONSTRUCTION COST ESTIMATING. NO ASSURANCES ARE OFFERED OR IMPLIED AS TO THE OVERALL FEASIBILITY OF THE PROJECT. ALL WORK SHALL BE SUBJECT TO REVIEW AND FINAL APPROVAL BY ALL APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES AND SHALL CONTAIN THE PROFESSIONAL SEAL AND SIGNATURE OF ALL REQUIRED DESIGN PROFESSIONALS PRIOR TO ANY USE OF THESE DOCUMENTS. PLANNING SOLUTIONS, INC. AND ITS CONSULTANTS SHALL BE DEEMED THE AUTHORS AND OWNERS OF THEIR RESPECTIVE INSTRUMENTS OF SERVICE AND SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS.



Trees and Shrubs in Sight Distance Triangles, Typ.
All shrubs within sight distance triangles shall be maintained so that foliage height above pavement does not exceed 2.5 feet. Street trees within sight distance triangles shall be limbed up to a height of 10 feet consistent with ANSI A300 standards to provide for sight distance visibility.

TREE LEGEND

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QUANTITY	TREE UNITS
TREES				
	ACER RUBRUM 'ARMSTRONG' ARMSTRONG MAPLE	2" cal. min.	17	17
	CARPINUS BETULUS 'FASTIGIATA' PYRAMIDAL EUROPEAN HORNBEAM	2" cal. min.	4	4
	LIRIODENDRON TULIPERA 'JFS-OZ' EMERALD CITY TULIP TREE	2" cal. min.	3	3
	THUJA PLICATA 'HOGAN' WESTERN RED CEDAR	6' HT min.	5	5
	TILIA CORDATA 'CORZAM' CORINTHIAN LINDEN	2" cal. min.	4	4
			TOTAL TREE UNITS	33
SHRUBS				
	LIGUSTRUM JAPONICUM 'TEXANUM' WAX PRIVET	5 GAL.	38	
	MAHONIA REPENS CREEPING OREGON GRAPE	2 GAL.	12	
	MYRICA CALIFORNICA PACIFIC WAX MYRTLE	5 GAL.	27	
	PRUNUS LAUROCERASUS 'OTTO LUYKEN' OTTO LUYKEN'S LAUREL	5 GAL.	52	
	VIBURNUM DAVIDII DAVID VIBURNUM	2 GAL.	24	
GROUNDCOVER				
	ARCTOSTAPHYLOS UVA URSI 'MASS.' MASSACHUSETTS KINNICKINNICK	1 GAL.	30" O.C.	
	RUBUS CALYCINOIDES CREEPING RASPBERRY	1 GAL.	30" O.C.	
	LAWN (SEED OR SOD) PER OWNER			

TREE UNIT SUMMARY

SITE AREA	.93± AC
REQUIRED TREE UNITS / ACRE	20
TOTAL REQUIRED TREE UNITS	19
EXISTING TREE UNITS RETAINED	0
TREE UNITS PROPOSED TO PLANT	33
TREE UNITS PROVIDED	33

PLANTING NOTES

1. ALL BOUNDARIES, EASEMENTS, UTILITIES AND LEGAL ENCUMBRANCES TO BE CONFIRMED WITH OWNER PRIOR TO BEGINNING WORK. PROPERTY LINES AND SURVEY INFORMATION PROVIDED BY **PLS ENGINEERING**
2. IN NO WAY IS THIS PLAN TO BE INTERPRETED TO EXCEED THE LEGAL BOUNDARIES OF THE OWNER'S REAL PROPERTY.
3. THE LANDSCAPE DESIGNER ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF BOUNDARIES, UTILITIES AND WETLANDS.
4. THIS PLAN SHALL BE INSTALLED TO MEET ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL CODES.
5. THIS PLAN SHALL BE CONSIDERED PRELIMINARY UNTIL APPROVED BY ALL GOVERNING AGENCIES. IMPLEMENTATION OF THIS PLAN SHALL NOT PROCEED UNTIL ISSUANCE OF ALL RELATED PERMITS.
6. PLANT QUANTITIES ARE FOR INFORMATION ONLY. IN CASE OF ANY DISCREPANCY, THE PLAN SHALL GOVERN.
7. ALL WORK IS TO BE PERFORMED BY LICENSED CONTRACTORS AND EXPERIENCED WORKERS.
8. THE CONTRACTOR IS TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO PERFORMING ANY EXCAVATION. CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR'S WORK, AT NO ADDITIONAL COST TO THE OWNER. CONTACT ALL UTILITY PROVIDERS SERVING THE SITE AREA 48 HOURS PRIOR TO ANY EXCAVATION.
9. ALL PLANT MATERIALS SHALL MATCH SPECIFICATIONS PER SPECIES AND SHALL COMPLY WITH ANSI Z60.1 'STANDARD FOR NURSERY STOCK'.
10. THE CONTRACTOR SHALL ADHERE TO THE WASHINGTON ASSOCIATION OF NURSERYMEN'S GUIDELINES FOR PLANTING PRACTICES.
11. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING ELEMENTS ON AND OFF SITE, RESULTING FROM THE CONTRACTOR'S WORK.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE VIABILITY OF ALL PLANT MATERIAL FOR 2 YEARS AFTER COMPLETION OF PLANTING. DISEASED, DYING, OR DEAD PLANT MATERIAL SHALL BE REPLACED BY THE CONTRACTOR DURING THE TWO YEAR PERIOD AND MAINTAINED FOR AN ADDITIONAL 2 YEAR PERIOD.
13. IMMEDIATELY UPON BID AWARD, CONTRACTOR SHALL SECURE THE PLANT MATERIALS AS SPECIFIED FROM AVAILABLE SOURCES. IN THE EVENT THAT PLANT MATERIALS ARE NOT AVAILABLE, CONTACT LANDSCAPE ARCHITECT FOR APPROVED SUBSTITUTIONS. NO SUBSTITUTION FOR PLANT MATERIAL WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
14. TOP DRESS ALL SHRUB AND GROUND COVER AREAS (NOT LAWN) WITH 3" OF FIR BARK MULCH. SUBMIT SAMPLE TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION.
15. TREE LOCATIONS MAY BE ADJUSTED IN THE FIELD TO SUIT SITE REQUIREMENTS AS DIRECTED BY THE LANDSCAPE ARCHITECT.
16. THE CONTRACTOR SHALL ENSURE THAT ALL EXCAVATED PLANTING PITS HAVE POSITIVE DRAINAGE. PLANT PITS FULLY FLOODED WITH WATER SHALL DRAIN WITHIN (12) HOURS OF FILLING.
17. FINISH GRADE SHALL BE SET TO ALLOW POSITIVE DRAINAGE
18. ROTOTILL 2" OF COMPOST INTO ALL PLANTED AREAS.
19. INCORPORATE PEAT INTO THE ROOT ZONE OF RHODODENDRONS, AZALEAS AND OTHER ACID LOVING PLANTS.
20. INCORPORATE 10-20-20 FERTILIZER INTO THE ROOT ZONE OF ALL NEW PLANTINGS.
21. RONSTAR, OR APPROVED EQUAL, PREEMERGENT HERBICIDE TO BE APPLIED TO ALL PLANTED AREAS PER MANUFACTURERS INSTRUCTIONS.
22. EXISTING VEGETATION TO BE SPRAYED WITH ROUNDUP, OR APPROVED EQUAL, PER MANUFACTURERS INSTRUCTIONS. SUFFICIENT TIME SHALL BE GIVEN TO ALLOW EXISTING MATERIAL TO DIE. REMOVE EXISTING 27. THE PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING TURF PLANTED WITHIN THE RIGHT OF WAY.
23. CROWN LAWN AREAS AND GRADE TO PROVIDE POSITIVE DRAINAGE.
24. ROLL LAWN AREA TO INSURE PROPER COMPACTION TO MINIMIZE SETTLING.
25. AMEND SOIL IN LAWN AREAS WITH 80 LBS. OF DOLOMITE LIME AND 40 LBS. OF 10-20-20 SLOW RELEASE FERTILIZER OR EQUIVALENT. PROVIDE A 3" LAYER OF SANDY LOAM TOPSOIL FOR LAWN AND BED AREA.
26. SEED LAWN AREAS WITH GRASS SEED MANUFACTURER'S RECOMMENDATIONS. COVER SEED WITH FINE MULCH APPLIED WITH ROLLER OR HYDROSEED.
27. THE PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING TURF PLANTED WITHIN THE RIGHT OF WAY.
28. PLANT MATERIAL SHALL BE PLANTED W/ ROOT CROWN 1" ABOVE FINISHED GRADE TO ALLOW POSITIVE DRAINAGE AWAY FROM CROWN.
29. STAKE ALL TREES OVER 6 FT. IN HEIGHT PER DETAILS ON THIS SHEET.
30. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
31. ALL PLANTINGS SHALL BE HAND WATERED OR IRRIGATED BY AN AUTOMATIC UNDERGROUND SPRINKLER SYSTEM.
32. ALL PLANT MATERIALS FURNISHED ARE TO BE HEALTHY, UNIFORMLY BRANCHED AND WITH WELL DEVELOPED FIBROUS ROOT SYSTEMS.
33. ALL PLANT MATERIALS FURNISHED ARE TO BE FREE FROM DEAD OR BROKEN BRANCHES, LICHENS, SCARS, BROKEN BARK OR WOUNDS. ALL PLANT MATERIALS WILL BE INSECT, WEED, AND DISEASE FREE ACCORDING TO THE REQUIREMENTS OF THE **WASHINGTON** STATE DEPARTMENT OF AGRICULTURE FOR NURSERY PLANT MATERIALS SOLD FOR WHOLESALE OR RETAIL. ALL PRUNING WOUNDS MUST BE WELL HEALED WITH NO EVIDENCE OF DECAY.
34. FIELD CONFIRM ALL SITE CONDITIONS, AREAS AND SIZES PRIOR TO BIDDING & CONSTRUCTION. DO NOT SCALE FROM PLANS.

IRRIGATION NOTE

ALL LANDSCAPE AREAS SHALL BE HAND WATERED OR IRRIGATED WITH AN AUTOMATIC DRIP AND/OR SPRAY IRRIGATION SYSTEM. REFER TO CIVIL ENGINEERING PLANS FOR WATER SOURCE.

REFER TO SHEET PD FOR LANDSCAPE DETAILS AND NOTES
REFER TO SHEET ID FOR IRRIGATION DETAILS AND NOTES.

Planning Solutions, Inc
Creating Solution to Complex Issue
4400 NE 77th Avenue
Suite 275
VANCOUVER, WA 9866
VOICE: 360-750-9000 FAX: 360-713-61
www.planningsolutionsinc.co

STATE OF WASHINGTON · CHRISTOPHER A. BALMER · EXP. · LICENSED LANDSCAPE ARCHITECT

PRELIMINARY NOT FOR CONSTRUCTION SUBJECT TO APPROVAL

13TH STREET GAS STATION

20101 NE 13th Street
Camas, Washington

DRAWN: CB	CHECKED: CB
SCALE: 1" = 20'-0"	DATE: 11.08.23
JOB #: 23-1887	
ISSUED FOR: PLR	
REVISIONS:	
1	
2	
3	
4	
5	
6	
SHEET NAME:	

SHEET #: L1
SHEET 6 OF 8

© COPYRIGHT 2023, PLANNING SOLUTIONS, INC. NO PART OF THIS DRAWING MAY BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION OF PLANNING SOLUTIONS, INC.

DISCLAIMER AND LIMITATIONS: ANY WORK CONTAINED HEREIN INCLUDING BUT NOT LIMITED TO PLANS AND DOCUMENTS ARE INSTRUMENTS OF SERVICE INTENDED FOR USE SOLELY WITH RESPECT TO THIS PROJECT. ALL WORK SHALL BE CONSIDERED CONCEPTUAL AND SUBJECT TO CHANGE. THESE INSTRUMENTS OF SERVICE SHALL BE CONSIDERED A WORK IN PROGRESS WHERE UNKNOWN FACTORS EXIST AND JURISDICTIONAL REQUIREMENTS HAVE NOT BEEN VERIFIED. DUE TO THE HIGH DEGREE OF UNCERTAINTY ASSOCIATED WITH A CONCEPTUAL DESIGN, THESE INSTRUMENTS OF SERVICE SHALL NOT BE USED AS THE BASIS FOR A FINANCIAL EVALUATION OR CONSTRUCTION COST ESTIMATING. NO ASSURANCES ARE OFFERED OR IMPLIED AS TO THE OVERALL FEASIBILITY OF THE PROJECT. ALL WORK SHALL BE SUBJECT TO REVIEW AND FINAL APPROVAL BY ALL APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES AND SHALL CONTAIN THE PROFESSIONAL SEAL AND SIGNATURE OF ALL REQUIRED DESIGN PROFESSIONALS PRIOR TO ANY USE OF THESE DOCUMENTS. PLANNING SOLUTIONS, INC. AND ITS CONSULTANTS SHALL BE DEEMED THE AUTHORS AND OWNERS OF THEIR RESPECTIVE INSTRUMENTS OF SERVICE AND SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS.

LANDSCAPING GENERAL NOTES:

1. DEVELOPER SHALL SUBMIT A LANDSCAPE PLAN SHOWING PLANT TYPE, LOCATION, AND QUANTITY OF PLANTS, THAT IS DESIGNED BY A QUALIFIED LANDSCAPE DESIGNER.
2. SHOW THE LOCATION OF SIDEWALK, LIGHT POLES, MAIL BOXES, DRIVEWAYS, FIRE HYDRANTS, INTERSECTIONS, AND ANY OTHER APPURTENANCE THAT MAY INFLUENCE THE PLACEMENT OF PLANTS.
3. LANDSCAPING SHALL BE SELECTED AND LOCATED TO DETER SOUND, FILTER AIR CONTAMINANTS, CURTAIL EROSION, MINIMIZE STORM WATER RUN-OFF, CONTRIBUTE TO LIVING PRIVACY, REDUCE THE VISUAL IMPACTS OF BUILDINGS/EQUIPMENT AND PAVED AREAS, SCREEN, REDUCE GLARE, AND EMPHASIZE OR SEPARATE OUTDOOR SPACES OF DIFFERENT USES OR CHARACTER.
4. LANDSCAPING SHALL BE DESIGNED TO BE HARMONIOUS WITH THE LOCAL SETTING AND WITH NEIGHBORING DEVELOPMENTS.
5. PLANTS AND TREES SHALL COMPLEMENT OR SUPPLEMENT SURROUNDING NATURAL VEGETATION.
6. PLANTS AND TREES SHALL BE IN SCALE WITH THE STRUCTURES AND EQUIPMENT DEVELOPMENT, KEEPING IN MIND THE MATURE SIZE OF PLANTINGS.
7. MINIMUM LANDSCAPING AS A PERCENT OF GROSS SITE AREA SHALL BE 15%.
8. DEVELOPER SHALL PROVIDE AN IRRIGATION PLAN.
   8.1 APPROPRIATE IRRIGATION SYSTEMS SHALL BE INSTALLED WHERE NEEDED TO ASSURE LANDSCAPING SUCCESS.
   8.2 DESIGN OF LANDSCAPING THAT INCLUDES XERISCAPE PRINCIPLES IS ENCOURAGED TO REDUCE LONG-TERM MAINTENANCE DEMANDS AND TO CONSERVE WATER.
   8.3 PLANTS SHALL BE GROUPED BY HYDROZONE WHICH WOULD INCORPORATE PLANT MATERIALS THAT REQUIRE LITTLE OR NO IRRIGATION AND RELY ON NATURAL MOISTURE AND RAINFALL FOR SURVIVAL ONCE ESTABLISHED.
9. LANDSCAPE SHALL BE DESIGNED WITH MAINTENANCE IN MIND:
   9.1 DEVELOPER SHALL PROVIDE A MAINTENANCE PLAN DESCRIBING FUNDING, RESPONSIBILITY, AND FREQUENCY OF MAINTENANCE.
   9.2 PLANTS AND TREES THAT MINIMIZE UPKEEP AND MAINTENANCE SHALL BE SELECTED.
   9.3 TREES, AS THEY GROW, SHALL BE PRUNED TO THEIR NATURAL FORM TO PROVIDE AT LEAST 10 FEET OF CLEARANCE FOR PEDESTRIANS AND 14 FEET FOR VEHICLES FROM THE SURFACE OF THE ROAD.
   9.4 SHRUBS SHALL BE MAINTAINED TO A MAXIMUM HEIGHT OF 42 INCHES FROM TOP OF CURB TO TOP OF PLANT. ENSURE THAT SHRUBS ARE TRIMMED BACK FROM FACE OF CURB.
10. WHERE THERE ARE OVERHEAD UTILITY LINES, TREE SPECIES THAT WILL NOT INTERFERE WITH THOSE LINES SHALL BE CHOSEN. DEVELOPER IS TO VERIFY WITH UTILITY ON SPECIES SELECTION.
11. TREES SHALL NOT BE PLANTED WITHIN 2 FEET OF ANY PERMANENT HARD SURFACE PAVING OR WALKWAY.
12. PARKING AND LOADING AREAS SHALL BE SCREENED FROM HORIZONTAL VIEW WITH THE USE OF DENSE LANDSCAPING, BERMS, OR WALLS.
13. PERIMETER AND SECURITY FENCING SHALL BE CONSTRUCTED TO MINIMIZE VISUAL IMPACT. WALLS OR FENCES SEPARATING ADJOINING PARCELS MAY BE LOCATED AT THE PROPERTY LINE. SECURITY FENCING SHALL BLEND INTO AND BE COMPATIBLE WITH LANDSCAPING AND SURROUNDING ENVIRONMENT. FENCING SHALL HAVE EARTH TONE COLORS OF BROWN, TAN GRAY, OR GREEN. WALLS SHALL BE CONSTRUCTED OF MATERIALS COMPATIBLE WITH THE BUILDING ACHITECTURE, LANDSCAPING, AND SURROUNDING ENVIRONMENT.
14. SITE AND BUILDING LIGHTING SHALL BE DESIGNED TO MINIMIZE GLARE OR OBJECTIONABLE EFFECTS TO THE ADJACENT PROPERTIES. SITE LIGHTING POLES SHALL NOT EXCEED 20 FEET IN HEIGHT AND SHALL DIRECT THE LIGHT DOWNWARD. LIGHTING SOURCES VIEWED FROM ABOVE OR BELOW ON ADJACENT PROPERTY SHALL BE SHIELDED. BUILDING LIGHTING IS TO BE DESIGNED AS PART OF THE ARCHITECTURE AND SHALL BE SHOWN ON THE PLANS. LIGHT DISTRIBUTION AND THE LIGHT LEVELS SHALL BE ADEQUATE FOR REASONABLE SECURITY AND SAFETY ON THE PREMISES.
15. EARTH BERMS MAY BE USED TO PROVIDE VARIATION IN THE GROUND PLANE AND FOR SCREENING INTERIOR PROTIONS OF THE SITE. CARE MUST BE TAKEN IN THEIR DESIGN TO AVOID CREATING AN ARTIFICIAL APPEARING LANDSCAPE. THE BERMED AREAS SHALL BE AS LONG, AS GRADUAL, AND AS GRACEFUL AS SPACE WILL ALLOW, AND SHOULD HAVE A MINIMUM HEIGHT ABOVE SURROUNDING GRADE OF THREE FEET. MAXIMUM SLOPES FOR BERMED AREAS SHALL BE 3:1 FOR TURF AREAS AND 2:1 FOR GROUNDCOVER AREAS.

LANDSCAPING W/IN R.O.W. NOTES:

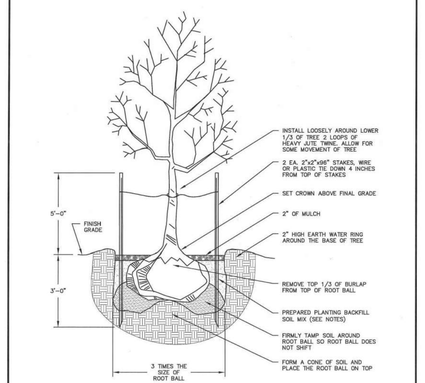
1. TREES SHALL NOT BE PLANTED CLOSER THAN 25 FEET FROM THE CURB LINE OF THE INTERSECTIONS OF STREETS OR ALLEYS, AND NOT CLOSER THAN 10 FEET FROM DRIVEWAYS, FIRE HYDRANTS, OR UTILITY POLES.
2. STREET TREES SHALL NOT BE PLANTED CLOSER THAN 30 FEET TO LIGHT STANDARDS, EXCEPT FOR PUBLIC SAFETY, NO NEW LIGHT STANDARD SHOULD BE POSITIONED CLOSER THAN 10 FEET TO ANY EXISTING STREET TREE, AND PREFERABLY SUCH LOCATIONS WILL BE AT LEAST 20 FEED DISTANCE.
3. TREES SHALL NOT BE PLANTED CLOSER THAN 2-1/2 FEET FROM THE FACE OF THE CURB EXCEPT AT INTERSECTIONS, WHERE IT SHOULD BE 25 FEET FROM THE CURB IN A CURB RETURN AREA.
4. EXISTING TREES MAY BE USED AS STREET TREES IF THERE WILL BE NO DAMAGE FROM THE DEVELOPMENT WHICH WILL KILL OR WEAKEN THE TREE.
5. VISION CLEARANCE HAZARDS SHALL BE AVOIDED AND VISION CLEARANCE STANDARDS SHALL BE ADHERED TO.

City of Camas WASHINGTON — LANDSCAPE DETAIL: LANDSCAPING NOTES — NOT TO SCALE — DETAIL NO. LS1
DETAIL APPROVED BY: _____ DATE: 5-17-19 — REVISION: 3 — DATE: 5/17/2019
S1-PLANTING.DWG

PLANTING NOTES:

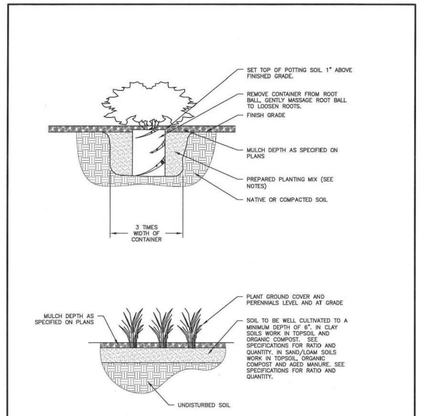
1. ALL PLANTING TO BE OF NURSERY STOCK GRADE NO. 1 OR BETTER AND MUST BE APPROVED PRIOR TO PLANTING.
2. PLANTING HOLES SHALL BE EXCAVATED THREE TIMES THE DIAMETER OF THE TREE ROOT BALL OR ROOT SYSTEM.
3. DECIDUOUS TREES SHALL HAVE STRAIGHT TRUNKS, BE FULL BRANCHED, HAVE A MINIMUM CALIPER OF 2 INCHES AND BE ADEQUATELY STAKED FOR PLANTING. CALIPER OF TREES SHALL BE LARGER WHEN REQUIRED BY OTHER CITY STANDARDS OR PLANS.
4. EVERGREEN TREES SHALL BE A MINIMUM OF THREE FEET IN HEIGHT, FULLY BRANCHED AND ADEQUATELY STAKED FOR PLANTING.
5. DECIDUOUS TREES SHALL BE A MINIMUM 2" CAUPER UNLESS APPROVED BY THE CITY.
6. POTTED OR B&B PLANTS SHALL BE A MINIMUM SIZE OF 3 GALLONS UNLESS APPROVED BY THE CITY.
7. SHRUBS SHALL BE PLANTED ACCORDING TO RECOGNIZED LANDSCAPE STANDARD PRACTICE FOR MAINTENANCE, APPEARANCE, HEALTH OF THE PLANTS, AND OVERALL AESTHETICS.
8. PLANT UPRIGHT AND FACE TO GIVE BEST APPEARANCE OR RELATIONSHIP TO OTHER PLANTS AND STRUCTURES.
   8.1 SET TREES AT SAME LEVEL AS GROWN. REMOVE BURLAP FROM AROUND THE TOP OF EACH ROOT BALL.
   8.2 SET TREES AN INCH ABOVE FINISH GRADE.
   8.3 STAKE OR GUY TREES IMMEDIATELY AFTER PLANTING (SEE DETAIL PL3, PL4, & PL5)
   8.4 REMOVE STAKES OR GUY WIRES ONE YEAR AFTER INSTALLATION.
9. PLACE AND COMPACT BACKFILL SOIL MIXTURE CAREFULLY TO AVOID INJURY TO ROOTS, AND TO FILL ALL VOIDS. BACKFILL MIX SHALL CONSIST OF 1/4 APPROVED HUMUS MATERIAL TO 3/4 TOPSOIL, PLUS SOIL AMENDMENTS/FERTILIZERS AS PER SOIL ANALYSIS (TO BE PERFORMED PRIOR TO PLANTING TREES).
10. WHEN HOLE IS NEARLY FILLED, COMPLETELY SOAK AND ALLOW WATER TO DRAIN AWAY. FILL HOLE TO FINISH GRADE. PROVIDE 2 INCH HIGH BERM WATER RING AT THE BASE OF EACH TREE. REMOVE BERM AT THE END OF CONTRACT MAINTENANCE PERIOD.
11. GROUND COVER SHALL BE PLANTED ACCORDING TO RECOGNIZED LANDSCAPE STANDARD PRACTICE FOR MAINTENANCE, APPEARANCE, HEALTH OF THE PLANTS, AND OVERALL AESTHETICS.
12. TREES, AS THEY GROW, SHALL BE PRUNED TO THEIR NATURAL FORM TO PROVIDE AT LEAST 10 FEET OF CLEARANCE ABOVE SIDEWALKS AND 14 FEET ABOVE STREET ROADWAY SURFACES.
13. TREE MAINTENANCE -- IN ORDER TO INSURE ESTABLISHMENT, SURVIVAL AND GROWTH, TREES SHALL BE MULCHED WITH 4" DEEP COMPOST AND WATERED AS NECESSARY DURING THE FIRST TWO GROWING SEASONS. PRUNING TO BE AS FOLLOWS:
   13.1. YEAR 1 -- ONLY DEAD, BROKEN, OR CROSSING BRANCHES SHALL BE PRUNED.
   13.2. YEAR 2 -- A CLASS 1 PRUNE, PURSUANT TO NATIONAL ARBORIST ASSOCIATION STANDARDS, SHALL BE PERFORMED. THE PURPOSE OF THIS PRUNING IS TO ESTABLISH PROPER SCAFFOLD BRANCHING, RAISE THE CROWN FOR ROAD/SIDEWALK CLEARANCE, AND TO REMOVE ANY DEAD, DYING, OR CROSSING BRANCHES.
   13.3. YEAR 3 -- A CLASS 1 PRUNE, PURSUANT TO NATIONAL ARBORIST ASSOCIATION STANDARDS, SHALL BE PERFORMED. THE PURPOSE OF THIS PRUNING IS TO CONTINUE TO ESTABLISH THE PROPER SCAFFOLD BRANCHING, CONTINUE TO RAISE THE CROSSING FOR ROAD/SIDEWALK CLEARANCE, AND TO REMOVE ANY DEAD, DYING, OR CROSSING BRANCHES.
14. DEFINITIONS:
   14.1. BALLED AND BURLAPPED (B&B) -- TREES AND SHRUBS WITH A LARGE BALL OF SOIL AROUND THE ROOTS WRAPPED IN BURLAP.
   14.2. BARE-ROOT -- OFFERED BY NURSERIES IN WINTER AND EARLY SPRING WITH ALL THE SOIL REMOVED FROM THEIR ROOTS.
   14.3. CALIPER -- THE DIAMETER OF THE TRUNK MEASURED AT 4-FEET FROM THE GROUND.
   14.4. GROUND COVER -- LIVING MATERIAL THAT DOES NOT INCLUDE BARK CHIPS OR OTHER MULCH.

City of Camas WASHINGTON — LANDSCAPE DETAIL: PLANTING NOTES — NOT TO SCALE — DETAIL NO. LS2
DETAIL APPROVED BY: _____ DATE: 5-17-19 — REVISION: 3 — DATE: 5/17/2019
S1-PLANTING.DWG



NOTES:
1. A ROOT BARRIER SHOULD BE INSTALLED AT THE EDGE OF PAVEMENT OR 4 FEET WIDE AND 6 FEET WIDE RECTANGLE AROUND THE TREE. SEE DETAILS PL7, PL8 & PL9
2. BACKFILL MIX SHALL CONSIST OF THE FOLLOWING: 0.75 PART TOPSOIL, 0.25 PART APPROVED HUMUS MATERIAL, SOIL AMENDMENTS/FERTILIZERS AS PER SOIL ANALYSIS (TO BE PERFORMED BEFORE PLANTING TREES).

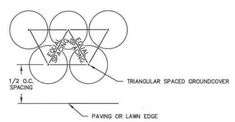
City of Camas WASHINGTON — LANDSCAPE DETAIL: DECIDUOUS BALLED/BURLAP TREE PLANTING — NOT TO SCALE — DETAIL NO. LS4
DETAIL APPROVED BY: _____ DATE: 5-17-19 — REVISION: 2 — DATE: 5/17/2019
S1-PLANTING.DWG



NOTES:
1. SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING.
2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
3. BACKFILL MIX SHALL CONSIST OF THE FOLLOWING: 0.75 PART TOPSOIL, 0.25 PART APPROVED HUMUS MATERIAL, SOIL AMENDMENTS/FERTILIZERS AS PER SOIL ANALYSIS (TO BE PERFORMED BEFORE PLANTING).

City of Camas WASHINGTON — LANDSCAPE DETAIL: SHRUB CONTAINER PLANTING — NOT TO SCALE — DETAIL NO. LS5
DETAIL APPROVED BY: _____ DATE: 5-17-19 — REVISION: 2 — DATE: 5/17/2019
S1-PLANTING.DWG

GROUNDCOVER PLANTING DETAIL



ENLARGEMENT DETAIL: TRIANGULAR SPACING

City of Camas WASHINGTON — LANDSCAPE DETAIL: GROUNDCOVER PLANTING DETAIL — NOT TO SCALE — DETAIL NO. LS7
DETAIL APPROVED BY: _____ DATE: 5-17-19 — REVISION: 2 — DATE: 5/17/2019
S1-PLANTING.DWG

Planning Solutions, Inc
Creating Solution to Complex Issue
4400 NE 77th Avenue
Suite 275
VANCOUVER, WA 9866
VOICE: 360-750-9000 FAX: 360-713-61
www.planningsolutionsinc.co

STATE OF WASHINGTON — CHRISTOPHER A. BAUMAN — LICENSED LANDSCAPE ARCHITECT — EXP. DATE

PRELIMINARY — NOT FOR CONSTRUCTION — SUBJECT TO CHANGE

13TH STREET GAS STATION

20101 NE 13th Street
Camas, Washington

DRAWN: HA/CB	CHECKED: CB
SCALE: AS SHOWN	DATE: 11.03.23

JOB #: 23-1887

ISSUED FOR: PLR

REVISIONS:
1.
2.
3.
4.
5.
6.

SHEET NAME:
FINAL LANDSCAPE DETAILS

SHEET #:
PD

SHEET 7 OF 8

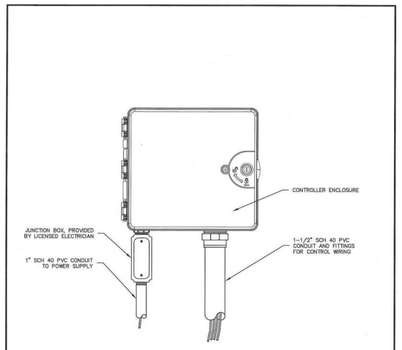
© COPYRIGHT 2023, PLANNING SOLUTIONS, INC. NO PART OF THIS DRAWING MAY BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION OF PLANNING SOLUTIONS, INC.

DISCLAIMER AND LIMITATIONS: ANY WORK CONTAINED HEREIN INCLUDING BUT NOT LIMITED TO PLANS AND DOCUMENTS ARE INSTRUMENTS OF SERVICE INTENDED FOR USE SOLELY WITH RESPECT TO THIS PROJECT. ALL WORK SHALL BE CONSIDERED CONCEPTUAL AND SUBJECT TO CHANGE. THESE INSTRUMENTS OF SERVICE SHALL BE CONSIDERED A WORK IN PROGRESS WHERE UNKNOWN FACTORS EXIST AND JURISDICTIONAL REQUIREMENTS HAVE NOT BEEN VERIFIED. DUE TO THE HIGH DEGREE OF UNCERTAINTY ASSOCIATED WITH A CONCEPTUAL DESIGN, THESE INSTRUMENTS OF SERVICE SHALL NOT BE USED AS THE BASIS FOR A FINANCIAL EVALUATION OR CONSTRUCTION COST ESTIMATING. NO ASSURANCES ARE OFFERED OR IMPLIED AS TO THE OVERALL FEASIBILITY OF THE PROJECT. ALL WORK SHALL BE SUBJECT TO REVIEW AND FINAL APPROVAL BY ALL APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES AND SHALL CONTAIN THE PROFESSIONAL SEAL AND SIGNATURE OF ALL REQUIRED DESIGN PROFESSIONALS PRIOR TO ANY USE OF THESE DOCUMENTS. PLANNING SOLUTIONS, INC. AND ITS CONSULTANTS SHALL BE DEEMED THE AUTHORS AND OWNERS OF THEIR RESPECTIVE INSTRUMENTS OF SERVICE AND SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS.

IRRIGATION CONSTRUCTION NOTES:

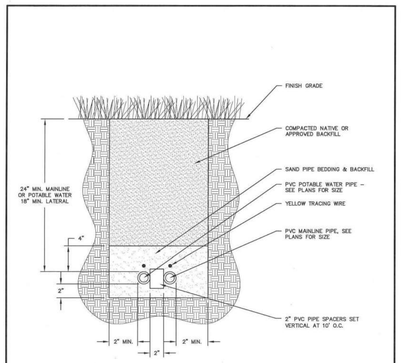
1. THE CONTRACTOR SHALL INSPECT THE SITE AND VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.
2. IRRIGATION PLANS ARE SCHEMATIC REPRESENTATIONS ONLY. PLACE LINES IN A COMMON TRENCH WHENEVER POSSIBLE. FIELD ADJUST LINES TO AVOID CONFLICT WITH UTILITIES.
3. IRRIGATION IS COORDINATED WITH THE PLANTING PLAN AND SITE IMPROVEMENTS AND IS DESIGNED WITH TRIANGULAR SPACING GIVING HEAD TO HEAD COVERAGE. COORDINATE IRRIGATION HEAD LAYOUT WITH NEW PLANT MATERIALS. LOCATE SPRAY HEADS 30" FROM BASE OF TREE. DO NOT ALTER HEAD LOCATION, PIPE LAYOUT, OR VALVE LOCATION WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER. NOTIFY THE CITY ENGINEER IF DISCREPANCIES OCCUR BETWEEN THE PLANS AND FIELD CONDITIONS.
4. ALL COMPONENTS OF IRRIGATION SYSTEM SHALL BE INSTALLED AND PROPERLY ADJUSTED TO PROVIDE ADEQUATE COVERAGE AND MINIMIZATION OF OVER SPRAY ONTO WALKS, BUILDINGS, PARKING AREAS, ETC.
5. ALL PIPE SIZES INDICATED ARE MINIMUMS. CONTRACTOR MAY NOT DECREASE PIPE SIZE. LARGER PIPE SIZES MAY BE USED AT NO ADDITIONAL COST TO OWNER. IRRIGATION LATERALS ARE SIZED BEGINNING AT THE AUTOMATIC VALVE AND CONTINUING IN DIRECTION OF FLOW. REDUCTIONS IN PIPE SIZE ARE LABELED BEGINNING DOWNSTREAM OF NEAREST FITTING. ALL LATERALS NOT SIZED ARE MINIMUM 3/4".
6. INSTALL ALL IRRIGATION PIPE AND CONTROL WIRES IN MINIMUM 4" PVC SLEEVE BELOW ALL PAVED SURFACES UNLESS OTHERWISE INDICATED ON THE PLANS. INSTALL SLEEVES PRIOR TO PLACEMENT OF PAVEMENTS AND PAVEMENT SUB-BASE. SEE PIPE SLEEVING DETAIL FOR FURTHER REQUIREMENTS.
7. COORDINATE IRRIGATION POINTS OF CONNECTION AND LOCATION OF AUTOMATIC CONTROL VALVES WITH THE ENGINEER. COORDINATE ALL WORK WITH OTHER TRADES, I.E. ELECTRICAL, MASONRY, ETC.
8. CONTRACTOR TO PROGRAM AUTOMATIC CONTROLLER TO ALLOW FOR THE EQUIVALENT OF 1" OF WATER PER WEEK.
9. ALL PIPES SHALL BE TRENCHED. PROVIDE POSITIVE DRAINAGE OF MAINLINE. PLACE MANUAL DRAIN AT LOW POINTS IN MAINLINE. IDENTIFY LOCATIONS ON AS-BUILTS.
10. USE 45° ELBOWS INSTEAD OF 90° ELBOWS ON ALL MAINLINES 2-1/2" AND LARGER. INSTALL CONCRETE THRUST BLOCKS AT ALL MAINLINE CHANGES IN DIRECTION. POUR MINIMUM OF 1 CUBIC FOOT OF CONCRETE ON UNDISTURBED SOIL. WRAP PIPE IN PLASTIC PRIOR TO COVERING WITH CONCRETE.
11. CONTRACTOR TO INSTALL CONTROLLER, CPU ELECTRICAL, PHONE AND ACCESSORIES AS REQUIRED. CONTRACTOR TO FURNISH CONTROL WIRES FROM VALVES TO CONTROLLER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING 110 VOLT SERVICE FROM BUILDING TO EXISTING JUNCTION BOX IN CONTROLLER HOUSING AND CONNECT CONTROLLER SERVICE.
12. ALL TONING WIRE SHALL BE 14 GAUGE YELLOW HOPE INSULATED COPPER CLAD STEEL WITH HOPE DIRECT BURY INSULATION. SEAL SPLICE CONNECTIONS WITH 3M DBY OR KING GEL CAPS.
13. ALL DIRECT BURY CONTROL WIRING AND CABLING SHALL HAVE SPLICE CONNECTIONS SEALED WITH 3M DBY OR RAIN BIRD DB SERIES WIRE CONNECTORS IN A SPLICE BOX.
14. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.
15. WATER METER SHALL BE INSTALLED BY THE CITY. CONTRACTOR RESPONSIBLE FOR CONNECTIONS DOWNSTREAM OF WATER METER.
16. CONTRACTOR TO VERIFY WATER PRESSURE TO ENSURE THAT PRESSURE MATCHES THE SYSTEM DESIGN PRESSURE.
17. WHERE REQUIRED, CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.

LANDSCAPE DETAIL: IRRIGATION CONSTRUCTION NOTES — NOT TO SCALE — DETAIL NO. IR1



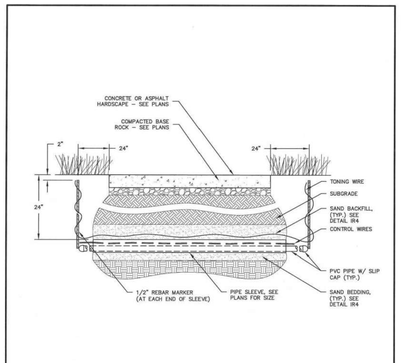
NOTES:
1. IRRIGATION CONTROLLER SHALL BE A RAINBIRD ESP-LXME SERIES PROGRAMMABLE CONTROLLER, OR APPROVED EQUAL.
2. INTERIOR INSTALLATIONS DO NOT REQUIRE AN ENCLOSURE WHEN MOUNTED WITHIN THE UTILITY ROOM OF A RESTROOM OR OTHER FACILITY WHERE THE PUBLIC HAS NO ACCESS.
3. FOR EXTERIOR WALL MOUNTED APPLICATIONS SEE DETAIL IR3.

LANDSCAPE DETAIL: IRRIGATION CONTROLLER – INDOOR MOUNT — NOT TO SCALE — DETAIL NO. IR2



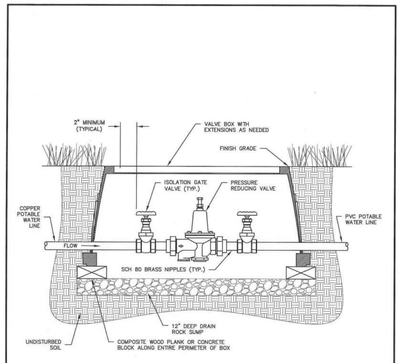
NOTES:
1. ALL TONING WIRE SHALL BE 14 GAUGE YELLOW HOPE INSULATED COPPER CLAD STEEL SEAL SPLICE CONNECTIONS WITH 3M DBY OR KING GEL CAPS.
2. PROVIDE A 48 INCH COIL OF TONING WIRE IN EACH VALVE BOX.

LANDSCAPE DETAIL: IRRIGATION TRENCH — NOT TO SCALE — DETAIL NO. IR4



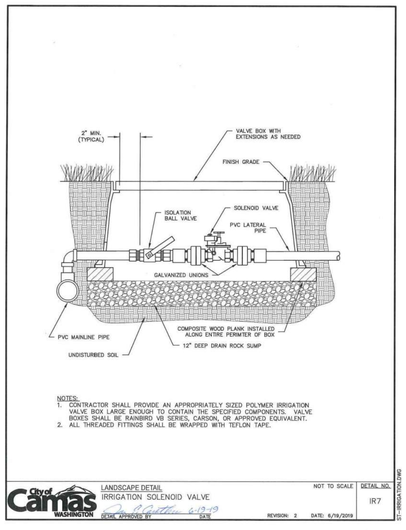
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED IRRIGATION POLYMER VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. PROVIDE TONING WIRE ALONG ALL PIPE SLEEVING.
3. ALL TONING WIRE SHALL BE 14 GAUGE YELLOW HOPE INSULATED COPPER CLAD STEEL. SEAL SPLICE CONNECTIONS WITH 3M DBY OR KING GEL CAPS.

LANDSCAPE DETAIL: IRRIGATION PIPE SLEEVE — NOT TO SCALE — DETAIL NO. IR5



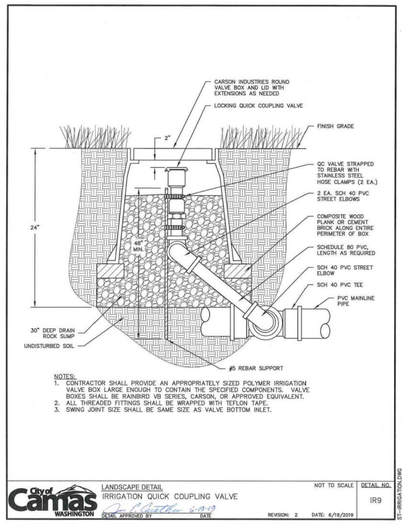
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
3. PRESSURE REDUCING VALVE SHALL BE A WATTS M/N 25AUB-Z3 WITH DOUBLE UNION END CONNECTIONS, OR APPROVED EQUAL.
4. FOR APPLICATIONS WHERE DRINKING FOUNTAINS ARE SUPPLIED, ALL COMPONENTS SHALL BE SUITABLE FOR POTABLE WATER.

LANDSCAPE DETAIL: IRRIGATION PRESSURE REGULATOR — NOT TO SCALE — DETAIL NO. IR6



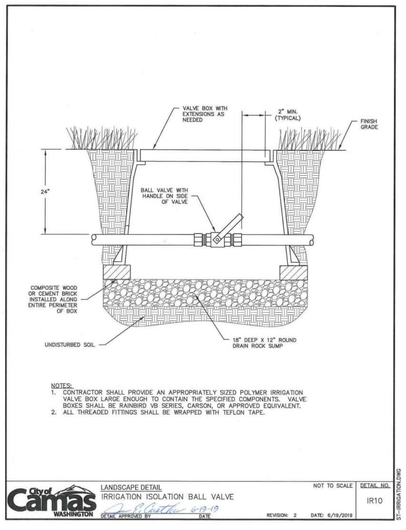
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.

LANDSCAPE DETAIL: IRRIGATION SOLENOID VALVE — NOT TO SCALE — DETAIL NO. IR7



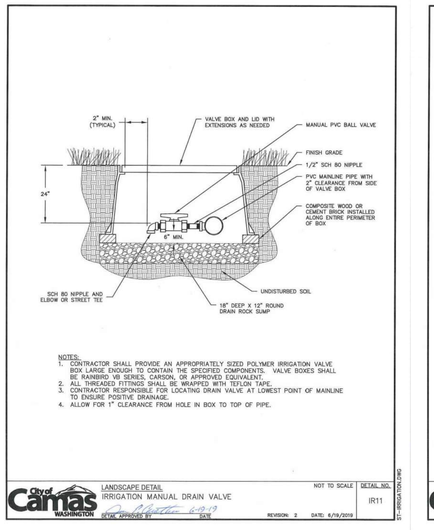
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
3. SWING JOINT SIZE SHALL BE SAME SIZE AS VALVE BOTTOM INLET.

LANDSCAPE DETAIL: IRRIGATION QUICK COUPLING VALVE — NOT TO SCALE — DETAIL NO. IR9



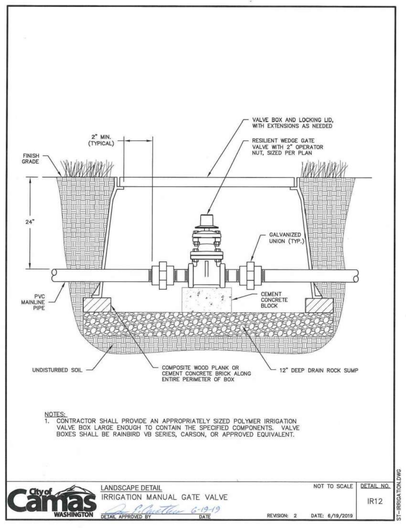
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.

LANDSCAPE DETAIL: IRRIGATION ISOLATION BALL VALVE — NOT TO SCALE — DETAIL NO. IR10



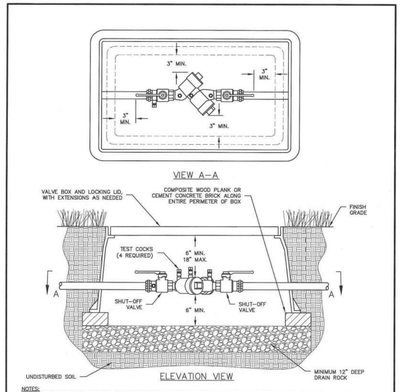
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
3. CONTRACTOR RESPONSIBLE FOR LOCATING DRAIN VALVE AT LOWEST POINT OF MAINLINE TO ENSURE POSITIVE DRAINAGE.
4. ALLOW FOR 1" CLEARANCE FROM HOLE IN BOX TO TOP OF PIPE.

LANDSCAPE DETAIL: IRRIGATION MANUAL DRAIN VALVE — NOT TO SCALE — DETAIL NO. IR11



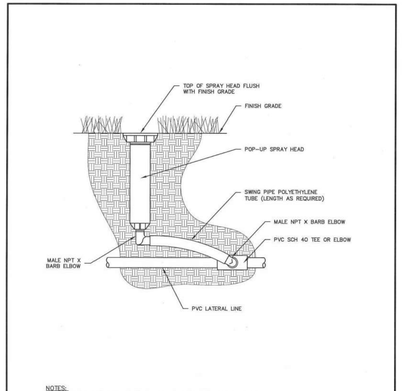
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.

LANDSCAPE DETAIL: IRRIGATION MANUAL GATE VALVE — NOT TO SCALE — DETAIL NO. IR12



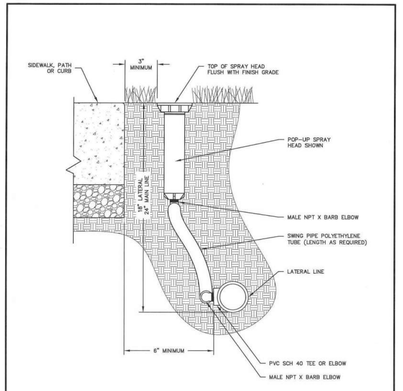
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. APPROVED DOUBLE CHECK VALVE ASSEMBLY TO LAY HORIZONTAL WITH GROUND. TEST COCKS TO EITHER FACE OUTWARDS OR UPWARDS FROM ASSEMBLY.
3. DESIGNED FOR BACK SIPHONING AND BACK PRESSURE.
4. THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
5. DO NOT INSTALL UNLESS MINIMUM AND MAXIMUM FLOW RATES EXCEEDED ALL CLEARANCES ARE MET.
6. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING. MUST BE ACCESSIBLE AND PROTECTED FROM FREEZING CONDITIONS.
7. THE DOUBLE CHECK VALVE BACKFLOW PREVENTER ASSEMBLY SHALL BE ASSE LISTED 1015 APPROVED AND INCLUDE FULL PORT BALL VALVES WITH RESILIENT SEATS AND UNION CONNECTIONS.
8. A PLUMBING PERMIT IS REQUIRED. PLEASE CONTACT THE CITY OF CAMAS BUILDING DEPARTMENT.
9. MUST BE TESTED AFTER INSTALLATION BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF CAMAS WATER DEPARTMENT.

LANDSCAPE DETAIL: IRRIGATION DOUBLE CHECK VALVE ASSY. — NOT TO SCALE — DETAIL NO. IR13



NOTES:
1. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
2. SWING PIPE SHALL BE POLYETHYLENE AND SIZE SHALL NOT BE LESS THAN HEAD INLET SIZE.
3. POP-UP SPRAY HEADS SHALL BE RAIN BIRD 1800 OR APPROVED EQUAL. SUBMITTAL REQUIRED.
4. WHEN SPRAY HEADS ARE LOCATED ALONG SIDEWALK OR CURBING THE HEADS SHALL BE MINIMUM 3" FROM HARDSCAPE AND PIPES MINIMUM 6" FROM HARDSCAPE.

LANDSCAPE DETAIL: IRRIGATION POP-UP SPRAY HEAD — NOT TO SCALE — DETAIL NO. IR15



NOTES:
1. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
2. SWING PIPE SHALL BE POLYETHYLENE AND SHALL NOT BE LESS THAN HEAD INLET SIZE.
3. WHEN SPRAY HEADS ARE LOCATED ALONG SIDEWALK OR CURBING THE HEADS SHALL BE MINIMUM 3" FROM HARDSCAPE AND PIPES MINIMUM 6" FROM HARDSCAPE.

LANDSCAPE DETAIL: IRRIGATION HEAD PLACEMENT ALONG HARDSCAPE — NOT TO SCALE — DETAIL NO. IR16

© COPYRIGHT 2023, PLANNING SOLUTIONS, INC. NO PART OF THIS DRAWING MAY BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION OF PLANNING SOLUTIONS, INC.

Planning Solutions, Inc
Creating Solution to Complex Issue
4400 NE 77th Avenue
Suite 275
VANCOUVER, WA 9866
VOICE: 360-750-9000 FAX: 360-713-61
www.planningsolutionsinc.co

STATE OF WASHINGTON · CHRISTOPHER A BAUMAN · LICENSED LANDSCAPE ARCHITECT · EXP. DATE

PRELIMINARY NOT FOR CONSTRUCTION SUBJECT TO APPROVAL

13TH STREET GAS STATION

20101 NE 13th Street
Camas, Washington

DRAWN: Camas | CHECKED: CB
SCALE: AS SHOWN | DATE: 11.09.23
JOB #: 23-1837
ISSUED FOR: PLR
REVISIONS:
1
2
3
4
5
6

SHEET NAME:
PRELIMINARY IRRIGATION DETAILS

SHEET #:
ID

SHEET 8 OF 8

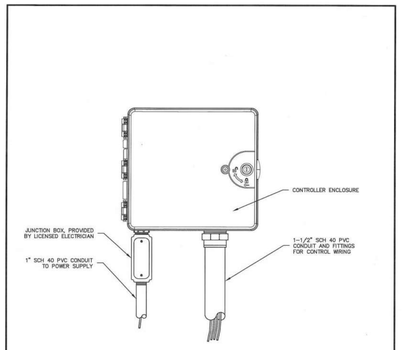
DISCLAIMER AND LIMITATIONS: ANY WORK CONTAINED HEREIN INCLUDING BUT NOT LIMITED TO PLANS AND DOCUMENTS ARE INSTRUMENTS OF SERVICE INTENDED FOR USE SOLELY WITH RESPECT TO THIS PROJECT. ALL WORK SHALL BE CONSIDERED CONCEPTUAL AND SUBJECT TO CHANGE. THESE INSTRUMENTS OF SERVICE SHALL BE CONSIDERED A WORK IN PROGRESS WHERE UNKNOWN FACTORS EXIST AND JURISDICTIONAL REQUIREMENTS HAVE NOT BEEN VERIFIED. DUE TO THE HIGH DEGREE OF UNCERTAINTY ASSOCIATED WITH A CONCEPTUAL DESIGN, THESE INSTRUMENTS OF SERVICE SHALL NOT BE USED AS THE BASIS FOR A FINANCIAL EVALUATION OR CONSTRUCTION COST ESTIMATING. NO ASSURANCES ARE OFFERED OR IMPLIED AS TO THE OVERALL FEASIBILITY OF THE PROJECT. ALL WORK SHALL BE SUBJECT TO REVIEW AND FINAL APPROVAL BY ALL APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES AND SHALL CONTAIN THE PROFESSIONAL SEAL AND SIGNATURE OF ALL REQUIRED DESIGN PROFESSIONALS PRIOR TO ANY USE OF THESE DOCUMENTS. PLANNING SOLUTIONS, INC. AND ITS CONSULTANTS SHALL BE DEEMED THE AUTHORS AND OWNERS OF THEIR RESPECTIVE INSTRUMENTS OF SERVICE AND SHALL RETAIN ALL COMMON LAW STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS.

Exhibit 32 APPEAL24-1001

IRRIGATION CONSTRUCTION NOTES:

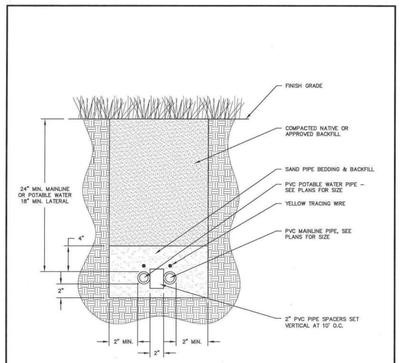
1. THE CONTRACTOR SHALL INSPECT THE SITE AND VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.
2. IRRIGATION PLANS ARE SCHEMATIC REPRESENTATIONS ONLY. PLACE LINES IN A COMMON TRENCH WHENEVER POSSIBLE. FIELD ADJUST LINES TO AVOID CONFLICT WITH UTILITIES.
3. IRRIGATION IS COORDINATED WITH THE PLANTING PLAN AND SITE IMPROVEMENTS AND IS DESIGNED WITH TRIANGULAR SPACING GIVING HEAD TO HEAD COVERAGE. COORDINATE IRRIGATION HEAD LAYOUT WITH NEW PLANT MATERIALS. LOCATE SPRAY HEADS 30" FROM BASE OF TREE. DO NOT ALTER HEAD LOCATION, PIPE LAYOUT, OR VALVE LOCATION WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER. NOTIFY THE CITY ENGINEER IF DISCREPANCIES OCCUR BETWEEN THE PLANS AND FIELD CONDITIONS.
4. ALL COMPONENTS OF IRRIGATION SYSTEM SHALL BE INSTALLED AND PROPERLY ADJUSTED TO PROVIDE ADEQUATE COVERAGE AND MINIMIZATION OF OVER SPRAY ONTO WALKS, BUILDINGS, PARKING AREAS, ETC.
5. ALL PIPE SIZES INDICATED ARE MINIMUMS. CONTRACTOR MAY NOT DECREASE PIPE SIZE. LARGER PIPE SIZES MAY BE USED AT NO ADDITIONAL COST TO OWNER. IRRIGATION LATERALS ARE SIZED BEGINNING AT THE AUTOMATIC VALVE AND CONTINUING IN DIRECTION OF FLOW. REDUCTIONS IN PIPE SIZE ARE LABELED BEGINNING DOWNSTREAM OF NEAREST FITTING. ALL LATERALS NOT SIZED ARE MINIMUM 3/4".
6. INSTALL ALL IRRIGATION PIPE AND CONTROL WIRES IN MINIMUM 4" PVC SLEEVE BELOW ALL PAVED SURFACES UNLESS OTHERWISE INDICATED ON THE PLANS. INSTALL SLEEVES PRIOR TO PLACEMENT OF PAVEMENTS AND PAVEMENT SUB-BASE. SEE PIPE SLEEVING DETAIL FOR FURTHER REQUIREMENTS.
7. COORDINATE IRRIGATION POINTS OF CONNECTION AND LOCATION OF AUTOMATIC CONTROL VALVES WITH THE ENGINEER. COORDINATE ALL WORK WITH OTHER TRADES, I.E. ELECTRICAL, MASONRY, ETC.
8. CONTRACTOR TO PROGRAM AUTOMATIC CONTROLLER TO ALLOW FOR THE EQUIVALENT OF 1" OF WATER PER WEEK.
9. ALL PIPES SHALL BE TRENCHED. PROVIDE POSITIVE DRAINAGE OF MAINLINE. PLACE MANUAL DRAIN AT LOW POINTS IN MAINLINE. IDENTIFY LOCATIONS ON AS-BUILTS.
10. USE 45° ELBOWS INSTEAD OF 90° ELBOWS ON ALL MAINLINES 2-1/2" AND LARGER. INSTALL CONCRETE THRUST BLOCKS AT ALL MAINLINE CHANGES IN DIRECTION. POUR MINIMUM OF 1 CUBIC FOOT OF CONCRETE ON UNDISTURBED SOIL. WRAP PIPE IN PLASTIC PRIOR TO COVERING WITH CONCRETE.
11. CONTRACTOR TO INSTALL CONTROLLER, CPU ELECTRICAL, PHONE AND ACCESSORIES AS REQUIRED. CONTRACTOR TO FURNISH CONTROL WIRES FROM VALVES TO CONTROLLER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING 110 VOLT SERVICE FROM BUILDING TO EXISTING JUNCTION BOX IN CONTROLLER HOUSING AND CONNECT CONTROLLER SERVICE.
12. ALL TONING WIRE SHALL BE 14 GAUGE COPPER CLAD STEEL WITH HOPE DIRECT BURY INSULATION. SEAL SPLICE CONNECTIONS WITH 3M DBY OR KING GEL CAPS.
13. ALL DIRECT BURY CONTROL WIRING AND CABLING SHALL HAVE SPLICE CONNECTIONS SEALED WITH 3M DBY OR RAIN BIRD DB SERIES WIRE CONNECTORS IN A SPLICE BOX.
14. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.
15. WATER METER SHALL BE INSTALLED BY THE CITY. CONTRACTOR RESPONSIBLE FOR CONNECTIONS DOWNSTREAM OF WATER METER.
16. CONTRACTOR TO VERIFY WATER PRESSURE TO ENSURE THAT PRESSURE MATCHES THE SYSTEM DESIGN PRESSURE.
17. WHERE REQUIRED, CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.

LANDSCAPE DETAIL: IRRIGATION CONSTRUCTION NOTES — NOT TO SCALE — DETAIL NO. IR1



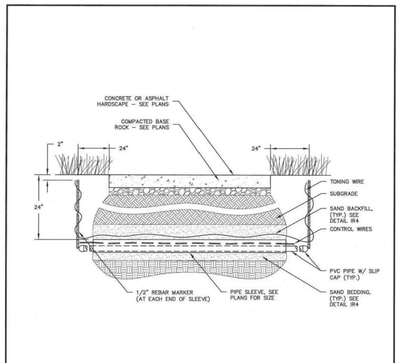
NOTES:
1. IRRIGATION CONTROLLER SHALL BE A RAINBIRD ESP-LXME SERIES PROGRAMMABLE CONTROLLER, OR APPROVED EQUAL.
2. INTERIOR INSTALLATIONS DO NOT REQUIRE AN ENCLOSURE WHEN MOUNTED WITHIN THE UTILITY ROOM OF A RESTROOM OR OTHER FACILITY WHERE THE PUBLIC HAS NO ACCESS.
3. FOR EXTERIOR WALL MOUNTED APPLICATIONS SEE DETAIL IR3.

LANDSCAPE DETAIL: IRRIGATION CONTROLLER – INDOOR MOUNT — NOT TO SCALE — DETAIL NO. IR2



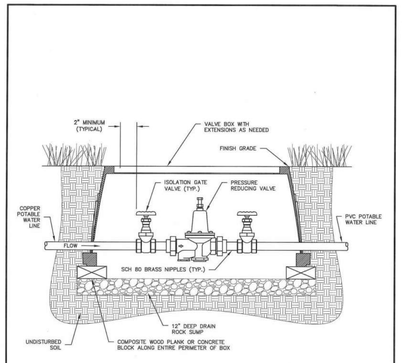
NOTES:
1. ALL TONING WIRE SHALL BE 14 GAUGE YELLOW HOPE INSULATED COPPER CLAD STEEL SEAL SPLICE CONNECTIONS WITH 3M DBY OR KING GEL CAPS.
2. PROVIDE A 48 INCH COIL OF TONING WIRE IN EACH VALVE BOX.

LANDSCAPE DETAIL: IRRIGATION TRENCH — NOT TO SCALE — DETAIL NO. IR4



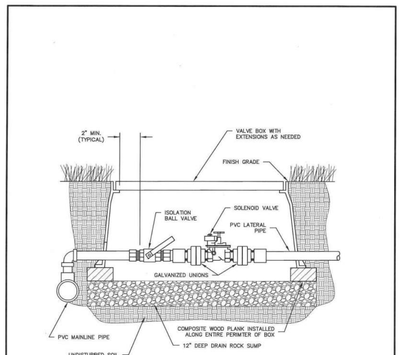
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED IRRIGATION POLYMER VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. PROVIDE TONING WIRE ALONG ALL PIPE SLEEVING.
3. ALL TONING WIRE SHALL BE 14 GAUGE YELLOW HOPE INSULATED COPPER CLAD STEEL SEAL SPLICE CONNECTIONS WITH 3M DBY OR KING GEL CAPS.

LANDSCAPE DETAIL: IRRIGATION PIPE SLEEVE — NOT TO SCALE — DETAIL NO. IR5



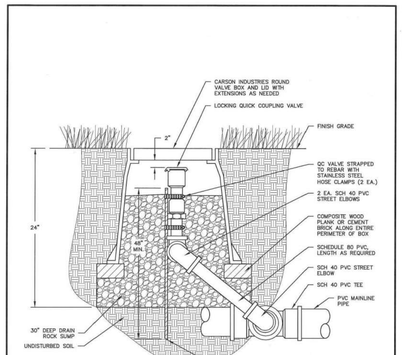
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
3. PRESSURE REDUCING VALVE SHALL BE A WATTS M/N 25AUB-Z3 WITH DOUBLE UNION END CONNECTIONS, OR APPROVED EQUAL.
4. FOR APPLICATIONS WHERE DRINKING FOUNTAINS ARE SUPPLIED, ALL COMPONENTS SHALL BE SUITABLE FOR POTABLE WATER.

LANDSCAPE DETAIL: IRRIGATION PRESSURE REGULATOR — NOT TO SCALE — DETAIL NO. IR6



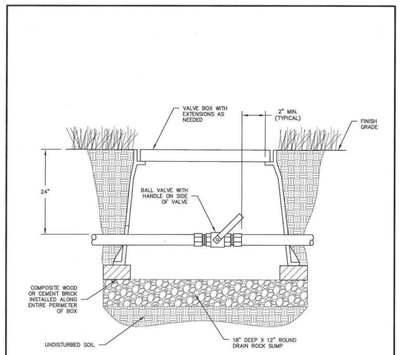
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.

LANDSCAPE DETAIL: IRRIGATION SOLENOID VALVE — NOT TO SCALE — DETAIL NO. IR7



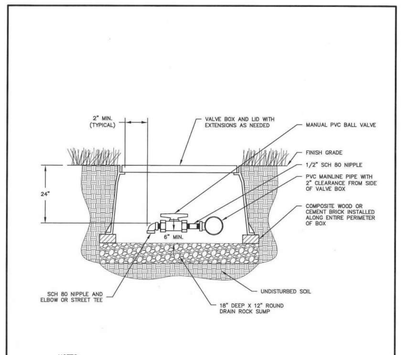
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
3. SWING JOINT SIZE SHALL BE SAME SIZE AS VALVE BOTTOM INLET.

LANDSCAPE DETAIL: IRRIGATION QUICK COUPLING VALVE — NOT TO SCALE — DETAIL NO. IR9



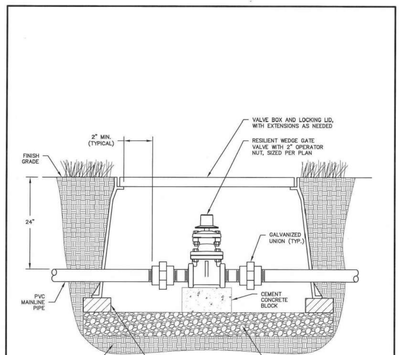
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.

LANDSCAPE DETAIL: IRRIGATION ISOLATION BALL VALVE — NOT TO SCALE — DETAIL NO. IR10



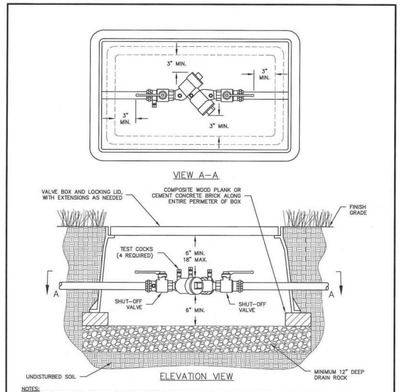
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
3. CONTRACTOR RESPONSIBLE FOR LOCATING DRAIN VALVE AT LOWEST POINT OF MAINLINE TO ENSURE POSITIVE DRAINAGE.
4. ALLOW FOR 1" CLEARANCE FROM HOLE IN BOX TO TOP OF PIPE.

LANDSCAPE DETAIL: IRRIGATION MANUAL DRAIN VALVE — NOT TO SCALE — DETAIL NO. IR11



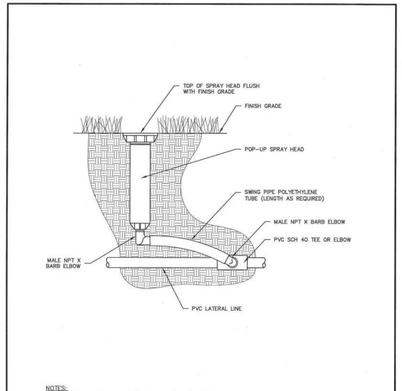
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.

LANDSCAPE DETAIL: IRRIGATION MANUAL GATE VALVE — NOT TO SCALE — DETAIL NO. IR12



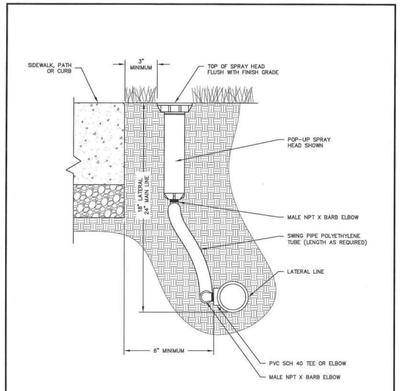
NOTES:
1. CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED POLYMER IRRIGATION VALVE BOX LARGE ENOUGH TO CONTAIN THE SPECIFIED COMPONENTS. VALVE BOXES SHALL BE RAINBIRD VB SERIES, CARSON, OR APPROVED EQUIVALENT.
2. APPROVED DOUBLE CHECK VALVE ASSEMBLY TO LAY HORIZONTAL WITH GROUND. TEST COCKS TO EITHER FACE OUTWARDS OR UPWARDS FROM ASSEMBLY.
3. DESIGNED FOR BACK SIPHONING AND BACK PRESSURE.
4. THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
5. DO NOT INSTALL UNLESS MINIMUM AND MAXIMUM CLEARANCES ARE MET.
6. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING. MUST BE ACCESSIBLE AND PROTECTED FROM FREEZING CONDITIONS.
7. THE DOUBLE CHECK VALVE BACKFLOW PREVENTER ASSEMBLY SHALL BE ASSE LISTED 1015 APPROVED AND INCLUDE FULL PORT BALL VALVES WITH RESILIENT SEATS AND UNION CONNECTIONS.
8. A PLUMBING PERMIT IS REQUIRED. PLEASE CONTACT THE CITY OF CAMAS BUILDING DEPARTMENT.
9. MUST BE TESTED AFTER INSTALLATION BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF CAMAS WATER DEPARTMENT.

LANDSCAPE DETAIL: IRRIGATION DOUBLE CHECK VALVE ASSY. — NOT TO SCALE — DETAIL NO. IR13



NOTES:
1. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
2. SWING PIPE SHALL BE POLYETHYLENE AND SIZE SHALL NOT BE LESS THAN HEAD INLET SIZE.
3. POP-UP SPRAY HEADS SHALL BE RAIN BIRD 1800 OR APPROVED EQUAL, SUBMITTAL REQUIRED.
4. WHEN SPRAY HEADS ARE LOCATED ALONG SIDEWALK OR CURBING THE HEADS SHALL BE MINIMUM 3" FROM HARDSCAPE AND PIPES MINIMUM 6" FROM HARDSCAPE.

LANDSCAPE DETAIL: IRRIGATION POP-UP SPRAY HEAD — NOT TO SCALE — DETAIL NO. IR15



NOTES:
1. ALL THREADED FITTINGS SHALL BE WRAPPED WITH TEFLON TAPE.
2. SWING PIPE SHALL BE POLYETHYLENE AND SIZE SHALL NOT BE LESS THAN HEAD INLET SIZE.
3. WHEN SPRAY HEADS ARE LOCATED ALONG SIDEWALK OR CURBING THE HEADS SHALL BE MINIMUM 3" FROM HARDSCAPE AND PIPES MINIMUM 6" FROM HARDSCAPE.

LANDSCAPE DETAIL: IRRIGATION HEAD PLACEMENT ALONG HARDSCAPE — NOT TO SCALE — DETAIL NO. IR16

Planning Solutions, Inc.
Creating Solution to Complex Issue
4400 NE 77th Avenue
Suite 275
VANCOUVER, WA 9866
VOICE: 360-750-9000 FAX: 360-713-61
www.planningsolutionsinc.co

STATE OF WASHINGTON · CHRISTOPHER A BAUMAN · LICENSED LANDSCAPE ARCHITECT · EXP. DATE

PRELIMINARY NOT FOR CONSTRUCTION SUBJECT TO APPROVAL

13TH STREET GAS STATION

20101 NE 13th Street
Camas, Washington

DRAWN: Camas | CHECKED: CB
SCALE: AS SHOWN | DATE: 9.15.23
JOB #: 23-1837
ISSUED FOR: PLR
REVISIONS:
1
2
3
4
5
6

SHEET NAME:
PRELIMINARY IRRIGATION DETAILS

SHEET #: ID

SHEET 8 OF 8

© COPYRIGHT 2023, PLANNING SOLUTIONS, INC. NO PART OF THIS DRAWING MAY BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION OF PLANNING SOLUTIONS, INC.

DISCLAIMER AND LIMITATIONS: ANY WORK CONTAINED HEREIN INCLUDING BUT NOT LIMITED TO PLANS AND DOCUMENTS ARE INSTRUMENTS OF SERVICE INTENDED FOR USE SOLELY WITH RESPECT TO THIS PROJECT. ALL WORK SHALL BE CONSIDERED CONCEPTUAL AND SUBJECT TO CHANGE. THESE INSTRUMENTS OF SERVICE SHALL BE CONSIDERED A WORK IN PROGRESS WHERE UNKNOWN FACTORS EXIST AND JURISDICTIONAL REQUIREMENTS HAVE NOT BEEN VERIFIED. DUE TO THE HIGH DEGREE OF UNCERTAINTY ASSOCIATED WITH A CONCEPTUAL DESIGN, THESE INSTRUMENTS OF SERVICE SHALL NOT BE USED AS THE BASIS FOR A FINANCIAL EVALUATION OR CONSTRUCTION COST ESTIMATING. NO ASSURANCES ARE OFFERED OR IMPLIED AS TO THE OVERALL FEASIBILITY OF THE PROJECT. ALL WORK SHALL BE SUBJECT TO REVIEW AND FINAL APPROVAL BY ALL APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES AND SHALL CONTAIN THE PROFESSIONAL SEAL AND SIGNATURE OF ALL REQUIRED DESIGN PROFESSIONALS PRIOR TO ANY USE OF THESE DOCUMENTS. PLANNING SOLUTIONS, INC. AND ITS CONSULTANTS SHALL BE DEEMED THE AUTHORS AND OWNERS OF THEIR RESPECTIVE INSTRUMENTS OF SERVICE AND SHALL RETAIN ALL COMMON LAW STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS.