

PROJECT DATA

CLIENT: COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027

PROJECT ADDRESS: 22330 HATHAWAY AVE.
HAYWARD, CA 94541

SITE AREA: 10.87 ACRES (473,566 S.F.)

BOUNDARIES INFORMATION: THIS PLAN HAS BEEN PREPARED BY USING MULVANNY ARCHITECTS SITE PLAN DATED 2/95.

BUILDING DATA:

TOTAL EXIST. BUILDING	124,287 S.F.
DEMOLISH DETACHED TIRE CENTER	8,580 S.F.
REVISED BUILDING TOTAL	115,707 S.F.
INCLUDING:	
EXIST. UTILITY ROOMS	420 S.F.
EXIST. MECHANICAL ROOM	261 S.F.
EXIST. BALER/COMPACTOR ROOM	972 S.F.
EXIST. ENCLOSED CANOPY	1,831 S.F.
EXIST. MEZZANINE	2,427 S.F.

EXIST. PARKING DATA:

EXISTING PARKING PROVIDED:	
STANDARD STALLS	426 STALLS
HANDICAP STALLS (2 VAN STALL)	16 STALLS
TRUCK STALLS	51 STALLS
TOTAL PARKING	493 STALLS
NO. OF STALLS PER 1000 S.F. OF BUILDING AREA:	4.29 STALLS
(*) PARKING NEEDED TO MAINTAIN 4.00 / 1000 S.F.:	463 STALLS
(*) 1.0 SPACE / 250 S.F. PER CITY OF HAYWARD MUNICIPAL CODE SECTION 10-2.330.	

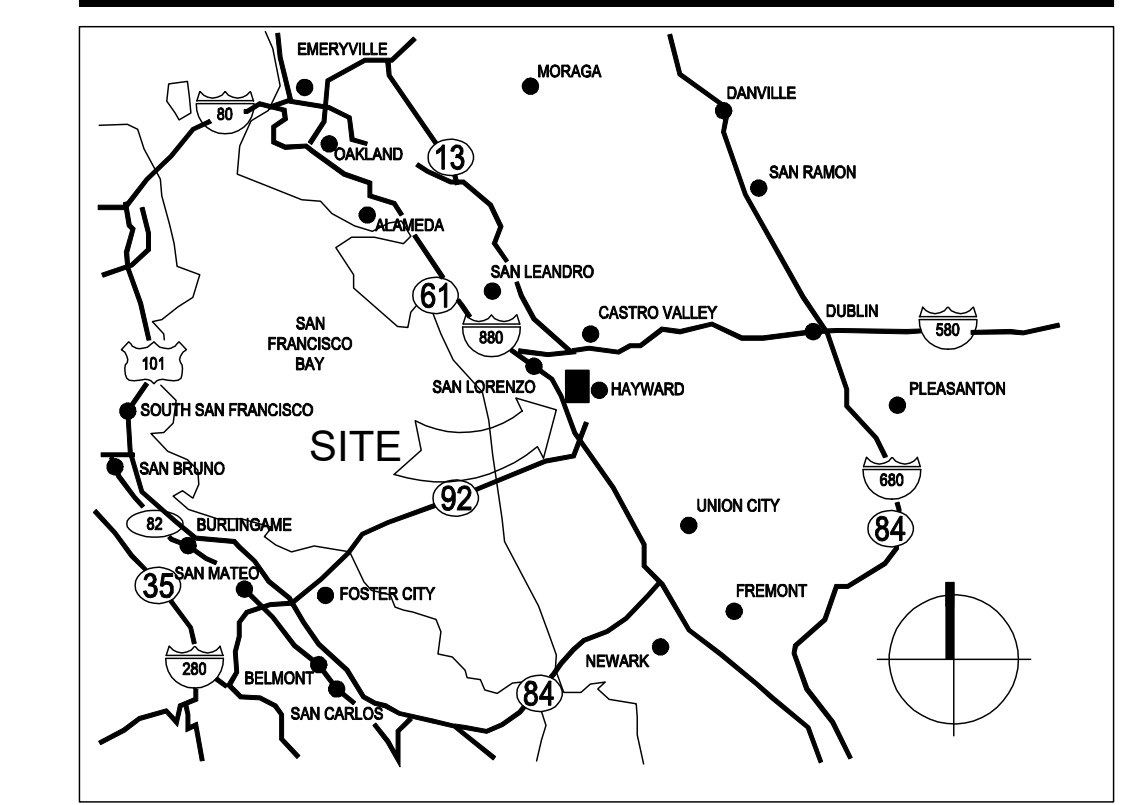
PROPOSED PARKING:

STANDARD STALLS	330 STALLS
HANDICAP STALLS (2 VAN STALL)	16 STALLS
TRUCK STALLS	52 STALLS
TOTAL PARKING	398 STALLS
NO. OF STALLS PER 1000 S.F. OF BUILDING AREA:	3.46 STALLS
TOTAL PARKING LOST	95 STALLS

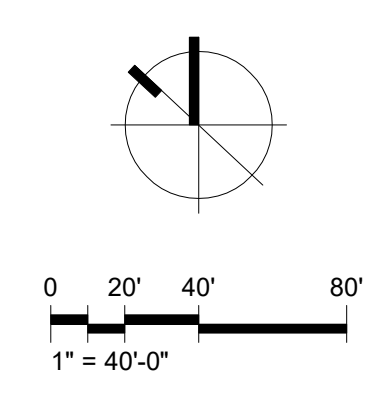
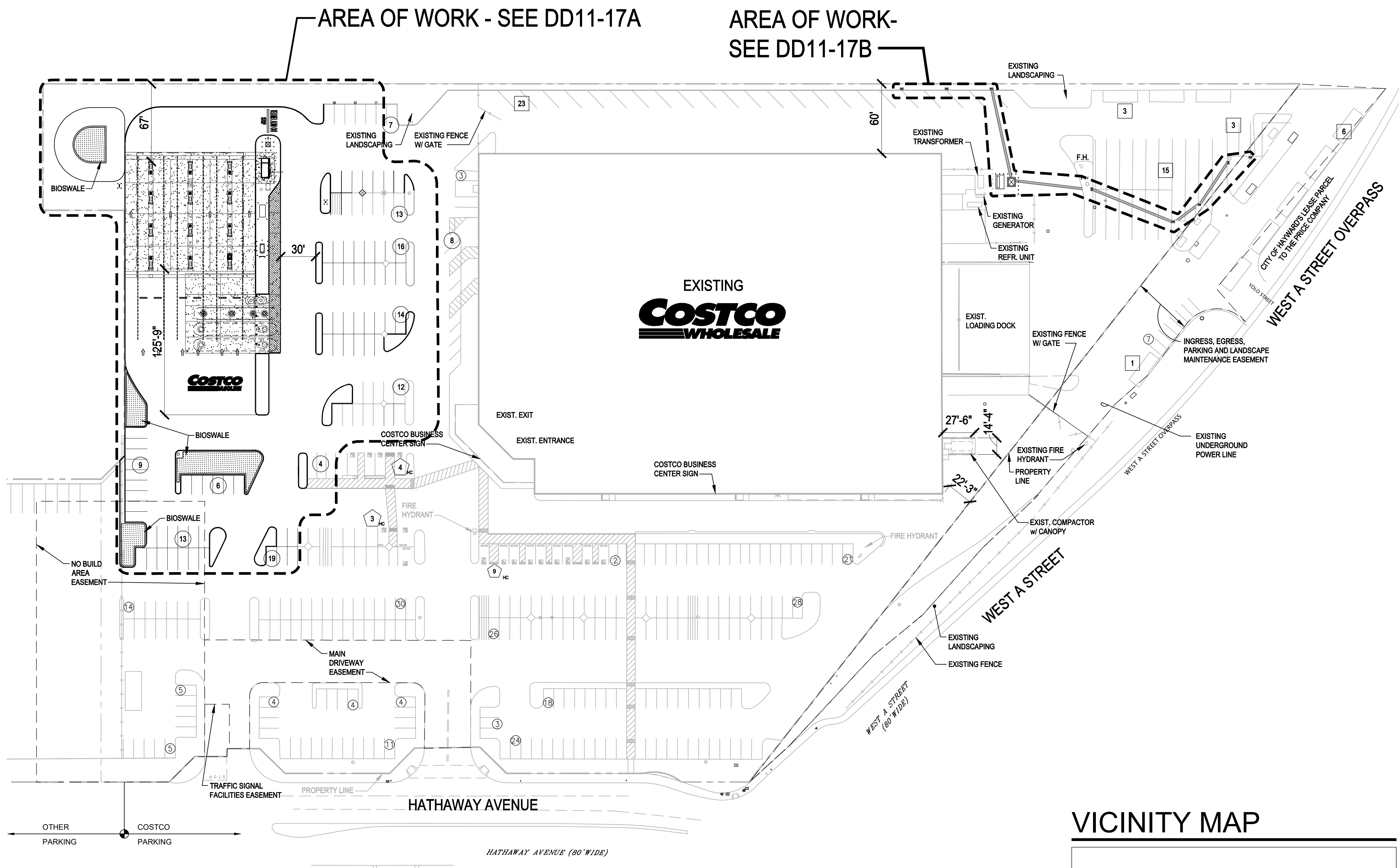
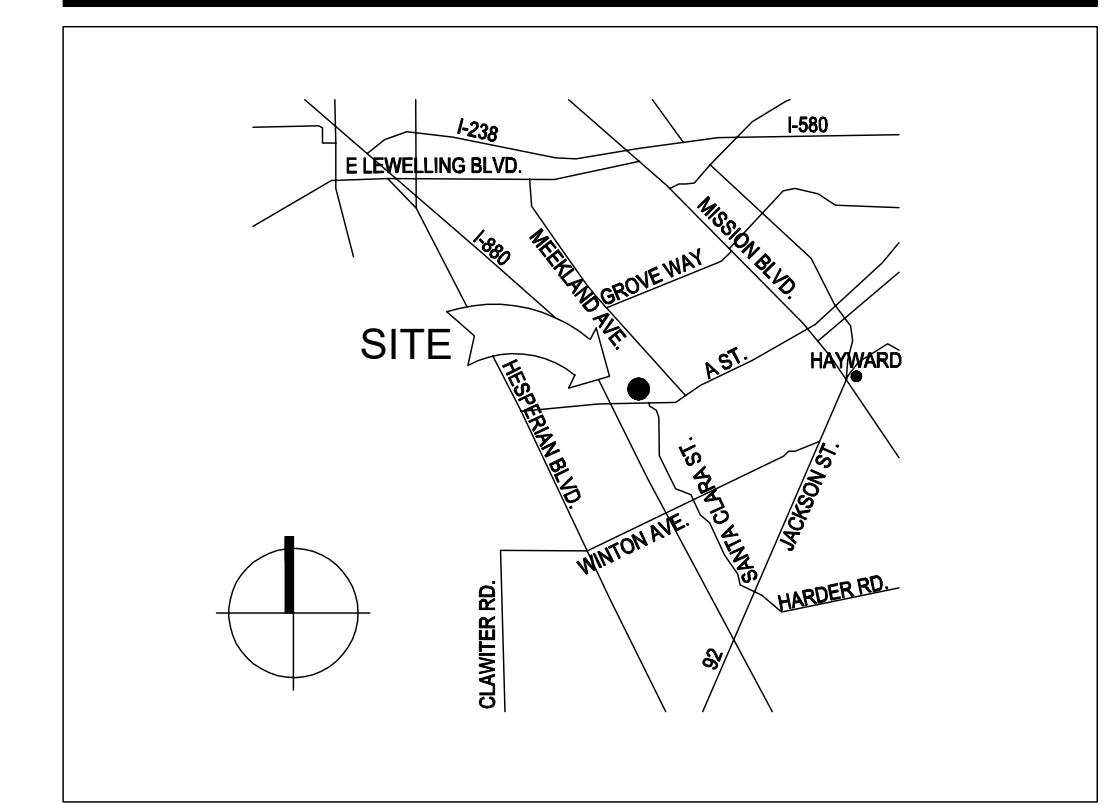
FUEL FACILITY DATA:

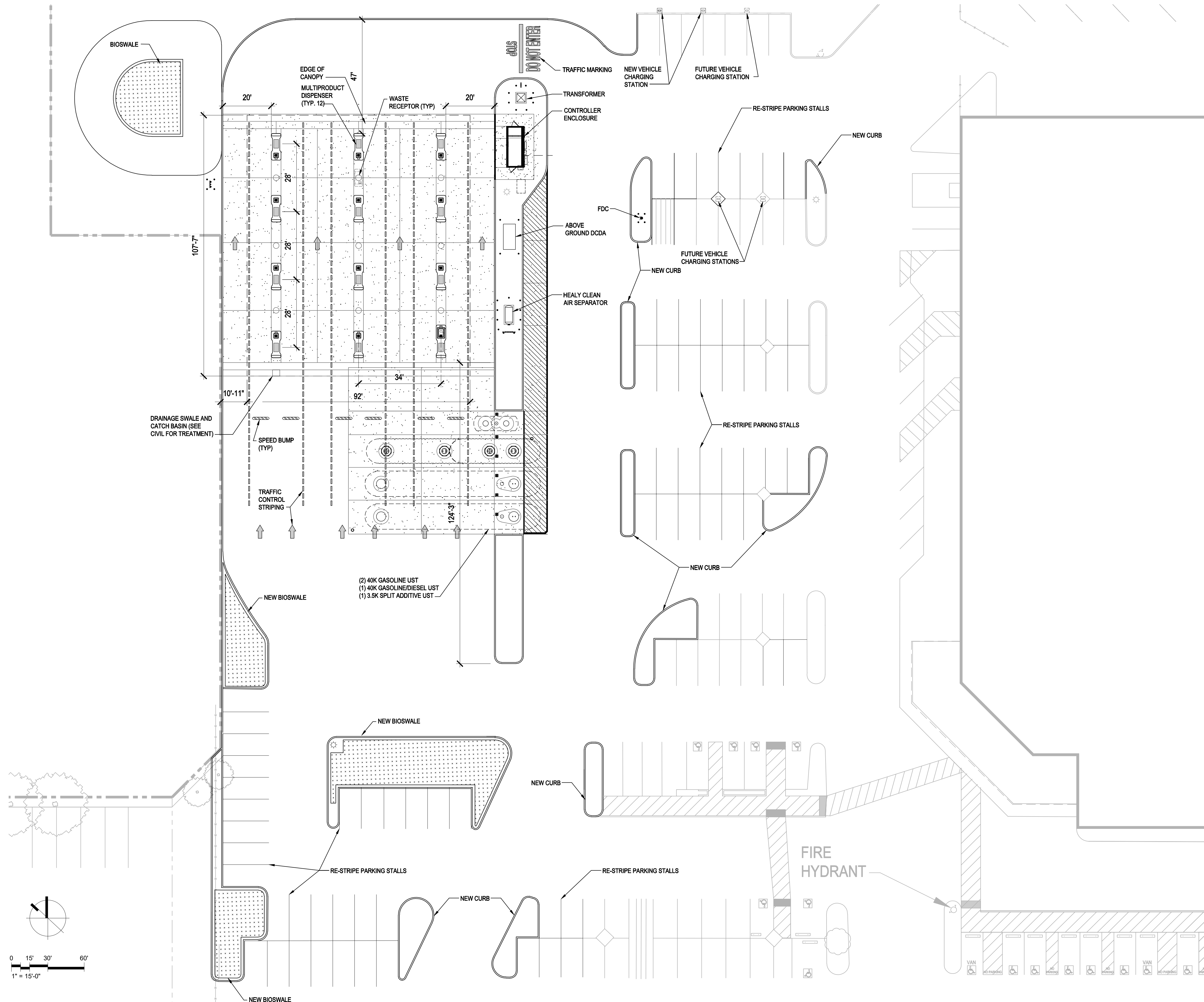
OCCUPANCY GROUP:	M (MERCANTILE)
CONSTRUCTION TYPE:	II B
FUEL CANOPY AREA:	9,346 SF
FUEL CANOPY HEIGHT:	17'-6" TO TOP OF CANOPY

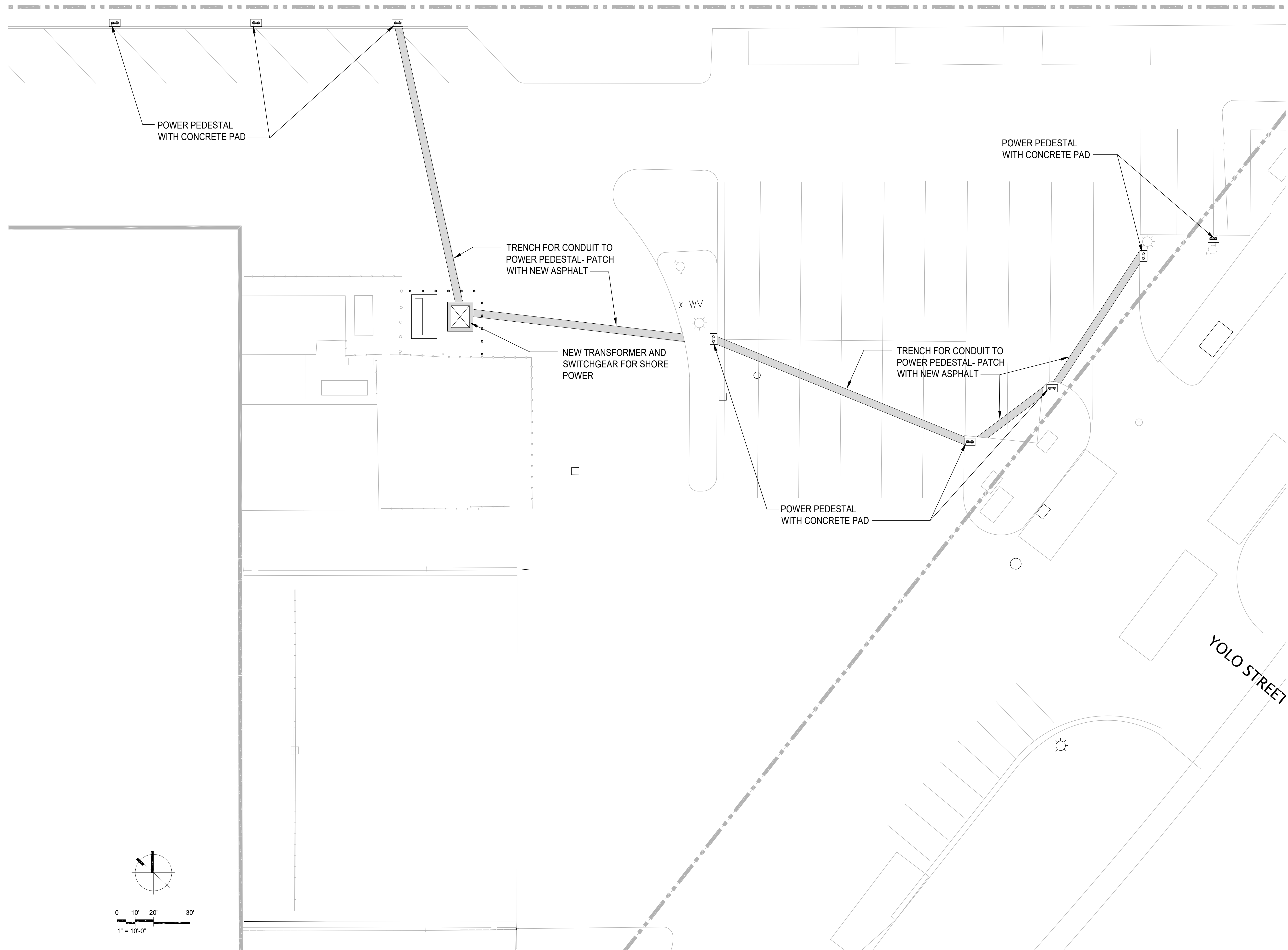
REGIONAL MAP

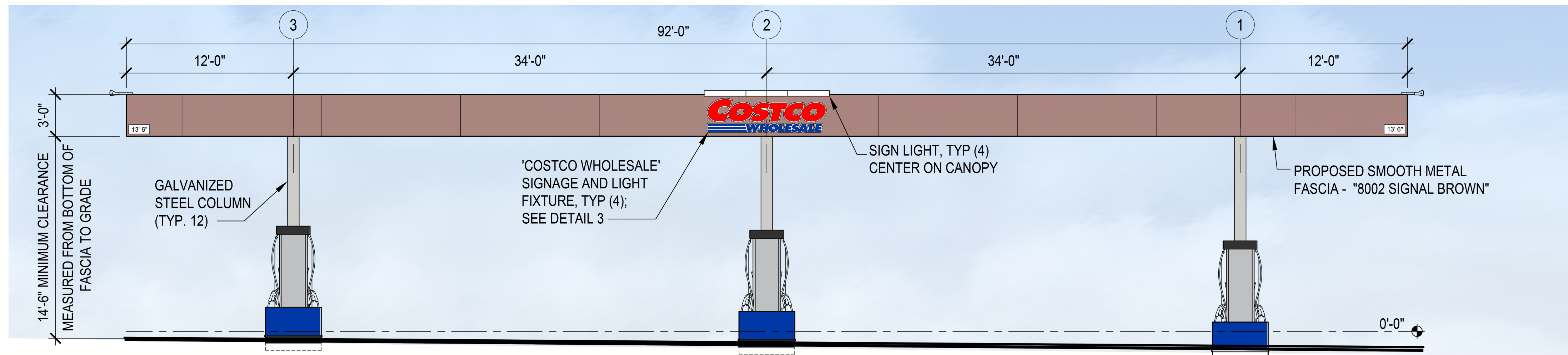


VICINITY MAP

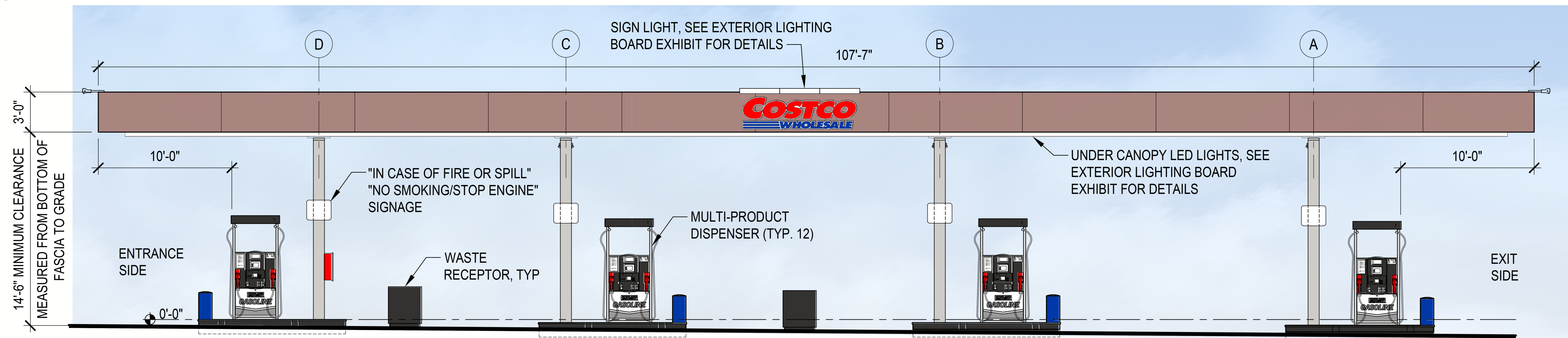




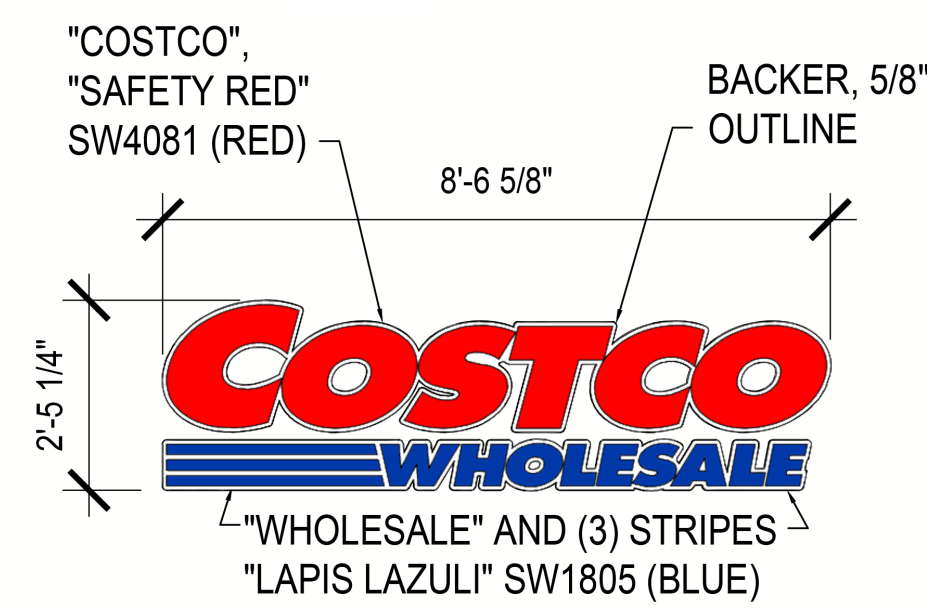




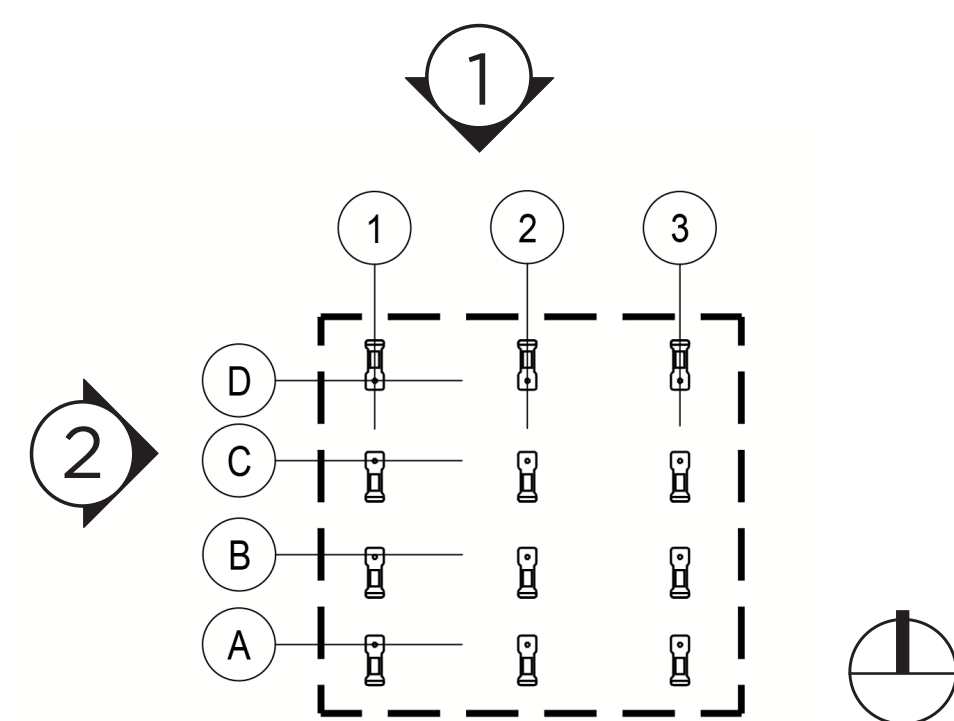
1 NORTH CANOPY AND DISPENSER ISLANDS (SOUTH ELEV. SIM.)
SCALE: 1/4" = 1'-0"



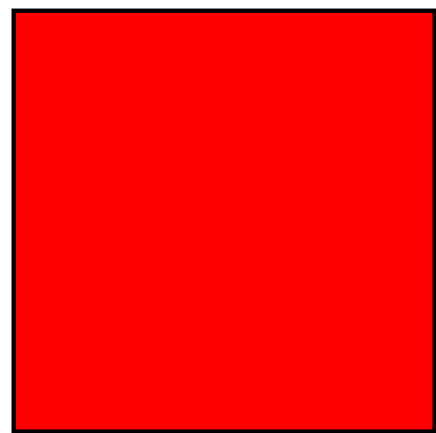

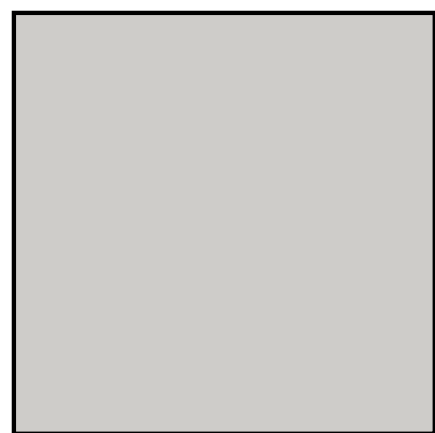
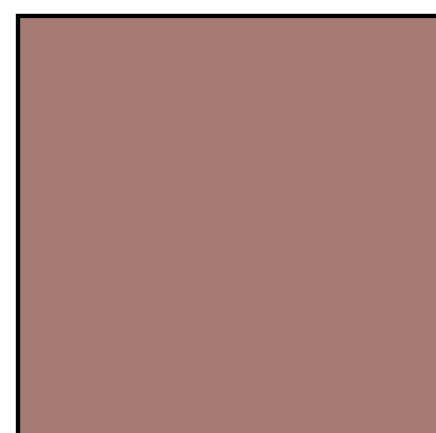
2 WEST CANOPY AND DISPENSER ISLANDS (EAST ELEV. SIM.)
SCALE: 1/4" = 1'-0"

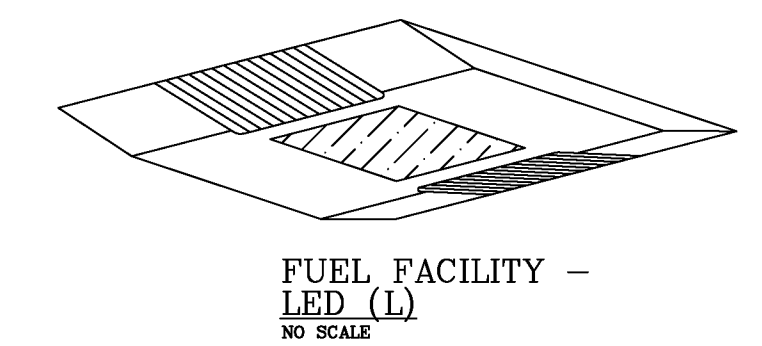
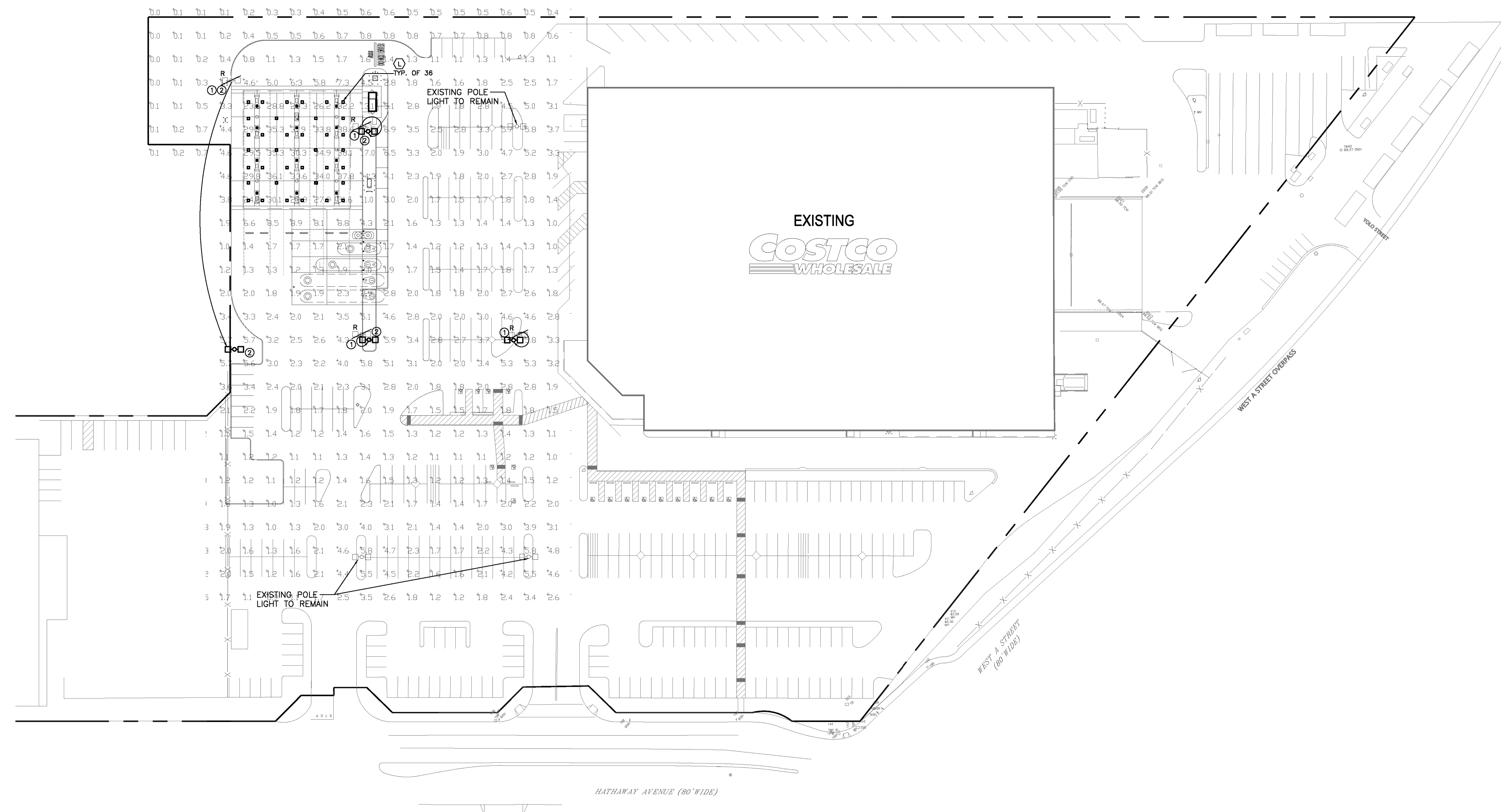


3 CANOPY SIGN
SCALE: 1/2" = 1'-0"

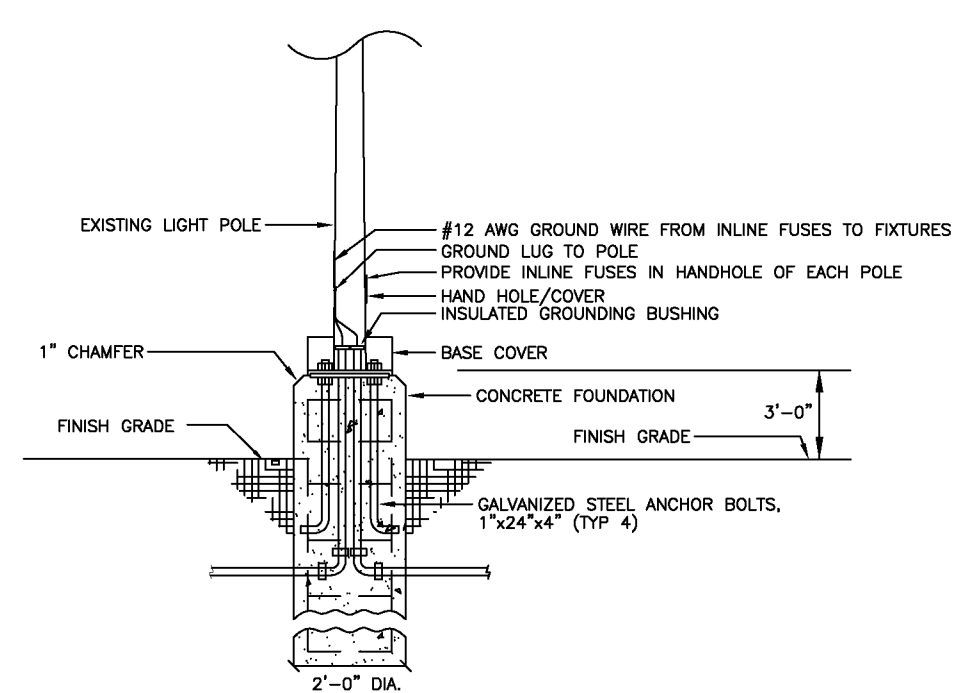


4 KEY PLAN
SCALE: NTS

			
A 'COSTCO' 'SAFETY RED' - SW4081	B 'WHOLESALE' 'COSTCO BLUE' - SW 1805	C METAL COLUMN GALVANIZED STEEL	D METAL FASCIA PANEL SPRAYLAT - 8002 SIGNAL BROWN



SITE PLAN
SCALE: 1" = 50'



NOTE: PROVIDE CONCRETE J-BOX AS REQUIRED.
THIS DETAIL IS FOR ELECTRICAL CONDUITS ROUTING ONLY.
SEE STRUCTURAL DRAWINGS FOR CONSTRUCTION DETAIL.

EXISTING POLE BASE DETAIL
NO SCALE

PLAN NOTES:

- ① EXISTING FIXTURE TO BE REMOVED AND RELOCATED. RELOCATED EXISTING POLE AND FIXTURES. DEMOLISH EXISTING BASE. PROVIDE NEW BASE AT NEW LOCATION. INTERCEPT EXISTING FEEDER AWAY FROM NEW FUEL FACILITY. PROVIDE HEAVY DUTY TRAFFIC RATED J-BOX AND EXTEND TO NEW LOCATION. FIELD VERIFY. SEAL CONDUITS PER NEC 514.
- ② E.C. TO SEAL UNDERGROUND CONDUITS WITHIN 10' OF ENTERING GROUND ON BOTH ENDS. SEAL POLE AND ASSOCIATED J-BOX. PROVIDE EXPLOSION-PROOF-RATED J-BOX AND OTHER ELECTRICAL DEVICES NEAR FUELING FACILITY. REFER TO NEC ARTICLE 514.

LIGHTING FIXTURE SCHEDULE						
TYPE	MANUFACTURER	NUMBER	LAMPS	MOUNT	WATT	REMARKS
①	OREE	CPY250-B-PD-F-B-UL-WH-5000K	LED	SURFACE	96	



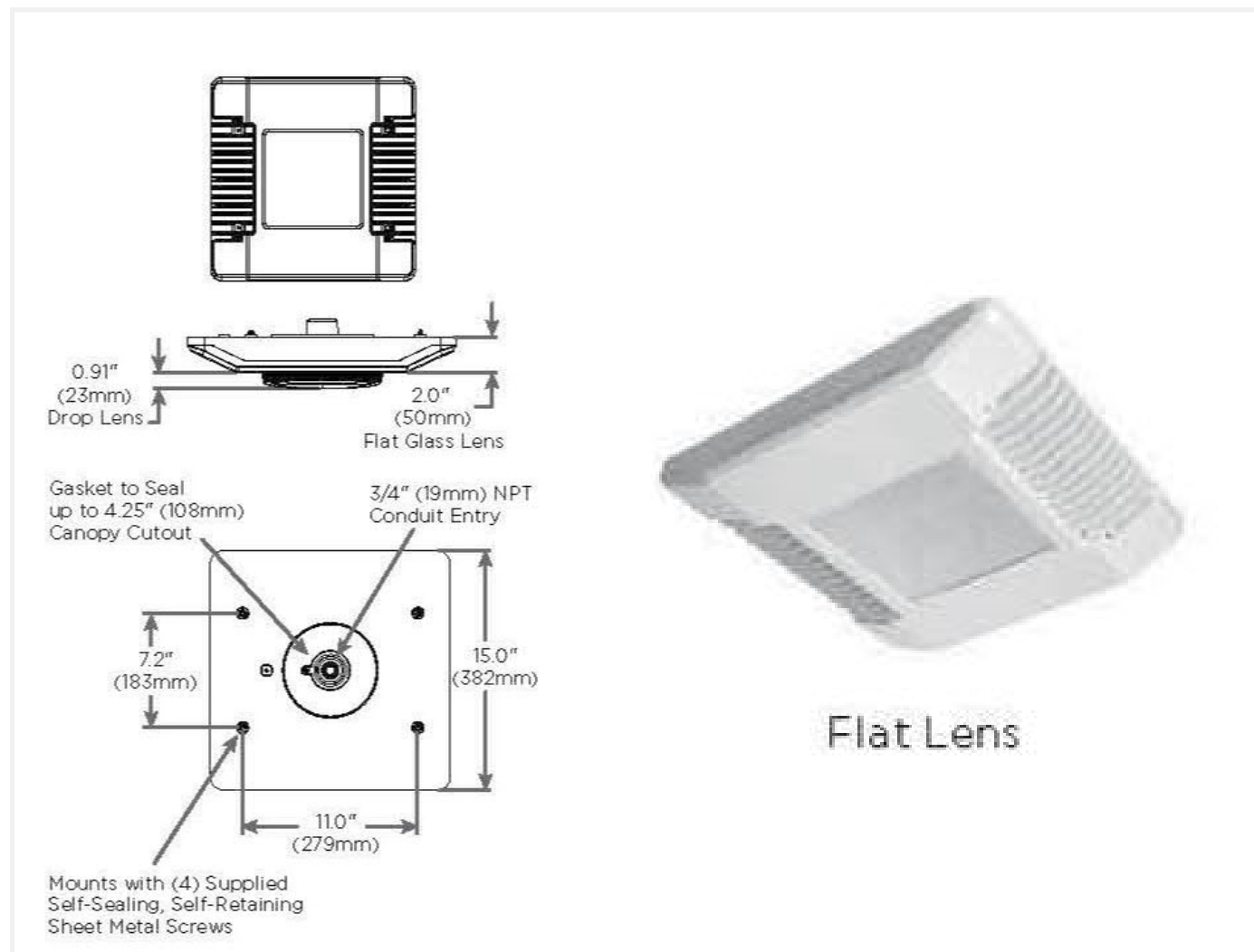
MARCH 30, 2020
PROJECT #94-0360-20
HAYWARD, CA

PHOTOMETRIC SITE PLAN

DD41-01



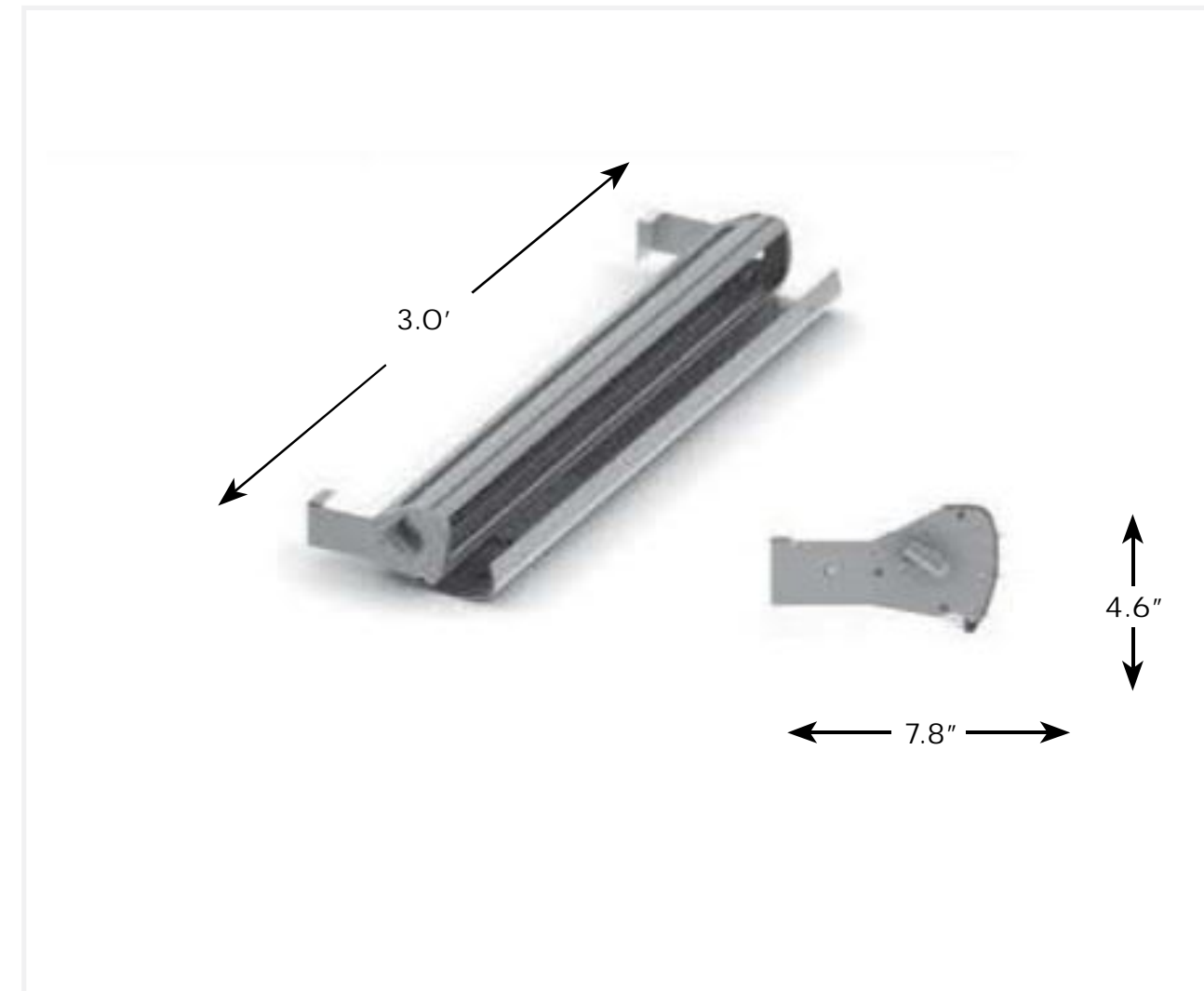
CREE CPY250 WITH FLAT LENS
 CREE
 MODEL NO. CPY250-A-DM-F-B-UL-WH
 122 WATTS



UNDER CANOPY LIGHTING

1 CPY250 WITH FLAT LENS

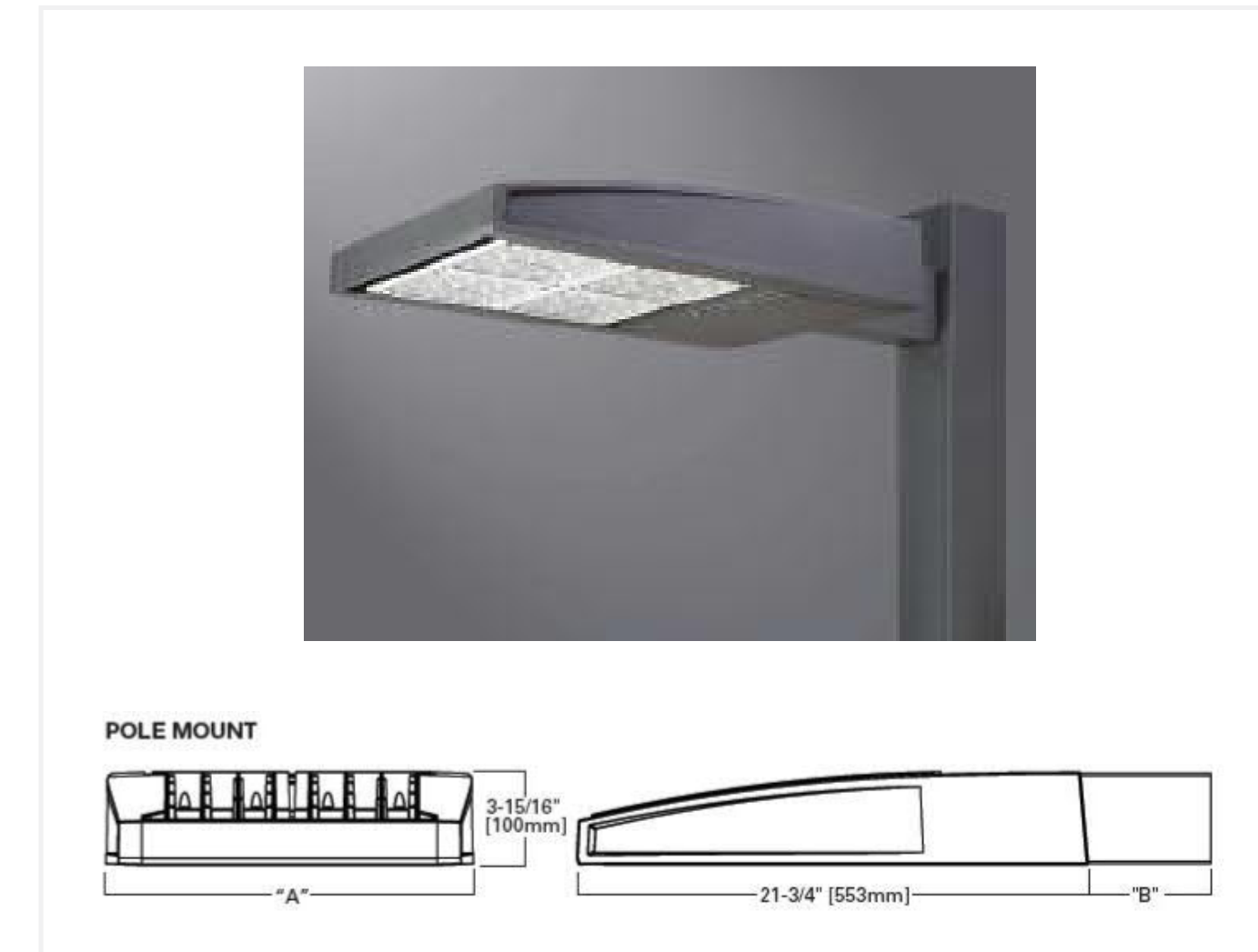
CREE LINEAR FACADE LIGHTER
 CREE
 MODEL NO. LFL-3-DO-UL-WH
 22 WATTS



SIGN LIGHTING

2 LFL-3-DO-UL-WH

GLEON - GALLEON LED
 EATON COOPER LIGHTING
 POLE MOUNT LED



SITE LIGHTING

3 GLEON - GALLEON LED

PRELIMINARY SITE PLAN

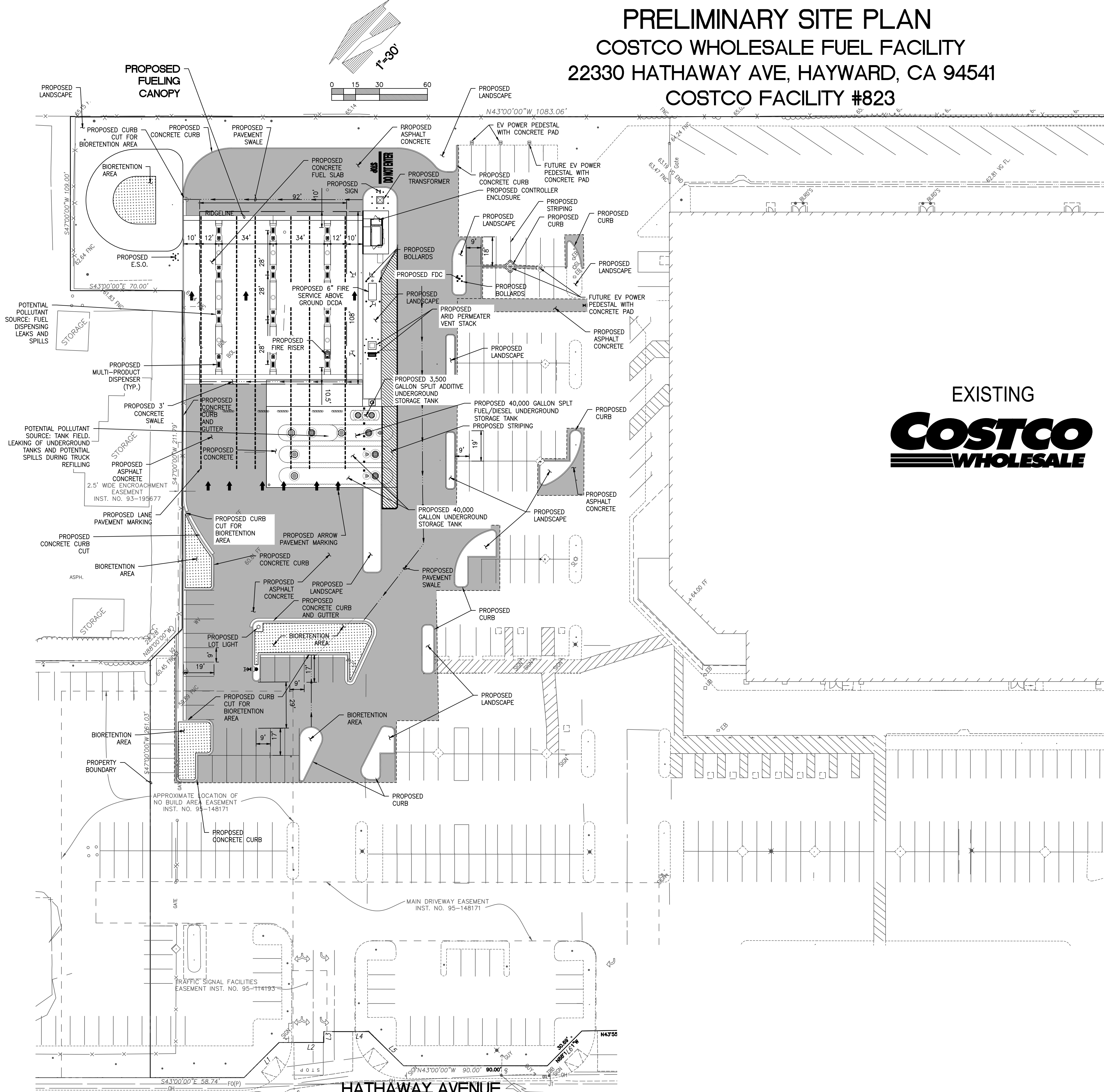
COSTCO WHOLESALE FUEL FACILITY

22330 HATHAWAY AVE, HAYWARD, CA 94541

COSTCO FACILITY #823

LEGEND

	EXISTING CONCRETE		PROPOSED ASPHALT
	EXISTING CURB		PROPOSED CONCRETE
	EXISTING CANOPY DRIPLINE		SLURRY SEAL
	EXISTING EASEMENT		PROPOSED CURB
	EXISTING EDGE OF PAVEMENT		SAWCUT LINE
	EXISTING STORM DRAIN		PROPOSED PVC (STORM)
	EXISTING WATER LINE		PROPOSED CANOPY DRIPLINE
	EXISTING UNDERGROUND TELEPHONE LINE		PROPOSED PERFORATED PVC
	EXISTING UNDERGROUND POWER		PROPOSED INLET
	EXISTING STORM DRAIN CATCH BASIN		PROPOSED CLEANOUT
	EXISTING STORM CLEANOUT		FLOW PATH
	EXISTING SPOT ELEVATION		PROPOSED SPOT GRADE
			PROPOSED GRADING SLOPE
			MATCH EXISTING PAVEMENT GRADE



DISTURBED AREA SUMMARY:

TOTAL AREA =	76,247 SF	
IMPERVIOUS:	EXISTING 72,642 SF	PROPOSED 62,001 SF
PERVIOUS:	3,605 SF	14,246 SF



PROJECT TEAM:

OWNER
COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027

LANDSCAPE ARCHITECT
BARGHAUSEN CONSULTING ENGINEERS, INC.
18215 72ND AVE. S.
KENT, WA 98032
PHONE: (425) 251-6222
FAX: (425) 251-8782
CONTACT: JEFF VARLEY

CIVIL ENGINEER
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PHONE: (425) 251-6222
FAX: (425) 251-8782
CONTACT: MEGAN PALMER, P.E.

SURVEYOR
KIER AND WRIGHT CIVIL ENGINEERS AND SURVEYORS, INC.
2850 COLLIER CANYON ROAD
LIVERMORE, CA 94551
PHONE: (925) 245-8788
FAX: (925) 245-8796
CONTACT: GARY LAMB

ARCHITECT
MG2
1101 SECOND AVENUE, SUITE 100
SEATTLE, WA 98101
PHONE: (206) 962-6500
FAX: (206) 962-6499

CIVIL SHEET INDEX:

- C1 PRELIMINARY SITE PLAN
- C2 PRELIMINARY SHORE POWER DEMOLITION AND SITE PLAN
- C3 PRELIMINARY DEMOLITION PLAN
- C4 PRELIMINARY GRADING AND UTILITY PLAN
- C5 PRELIMINARY STORMWATER CONTROL PLAN
- C6 PRELIMINARY TREE REMOVAL PLAN

LANDSCAPE SHEET INDEX:

- L1 PRELIMINARY SITE PLAN
- L2 PRELIMINARY SITE PLAN
- L3 PRELIMINARY IRRIGATION PLAN
- L4 IRRIGATION NOTES AND DETAILS

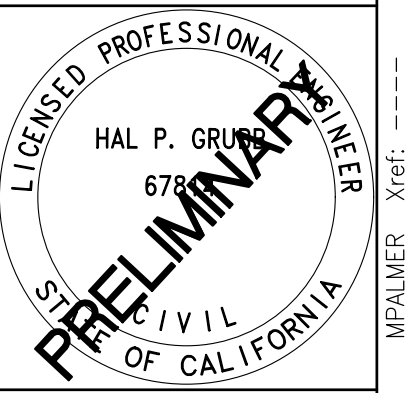
POLLUTANT SOURCE TREATMENT TABLE

SOURCE	TREATMENT
UNDERCANOPY	OIL/WATER SEPARATOR
TANK FIELD	BIORETENTION

No.	Date	By	Appr.	Revision
3	6/17/20	JSI	CRU	FIRE SUPPRESSION REQUEST
2	4/28/20	JSI	CRU	REVISIONS PER CITY COMMENTS

Title:
PRELIMINARY SITE PLAN
22330 HATHAWAY AVE.
HAYWARD, CA 94541
COSTCO FUEL FACILITY #823

For:
Costco GASOLINE
COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027



Scale:	Horizontal 1"=30'	Vertical
Designed	TR	TR
Drawn	TR	TR
Checked	MESF	CRU
Approved	CRU	CRU
Date	6/15/18	

18215 72ND AVENUE SOUTH
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CIVIL ENGINEERING, LAND PLANNING,
SURVEYING, ENVIRONMENTAL SERVICES

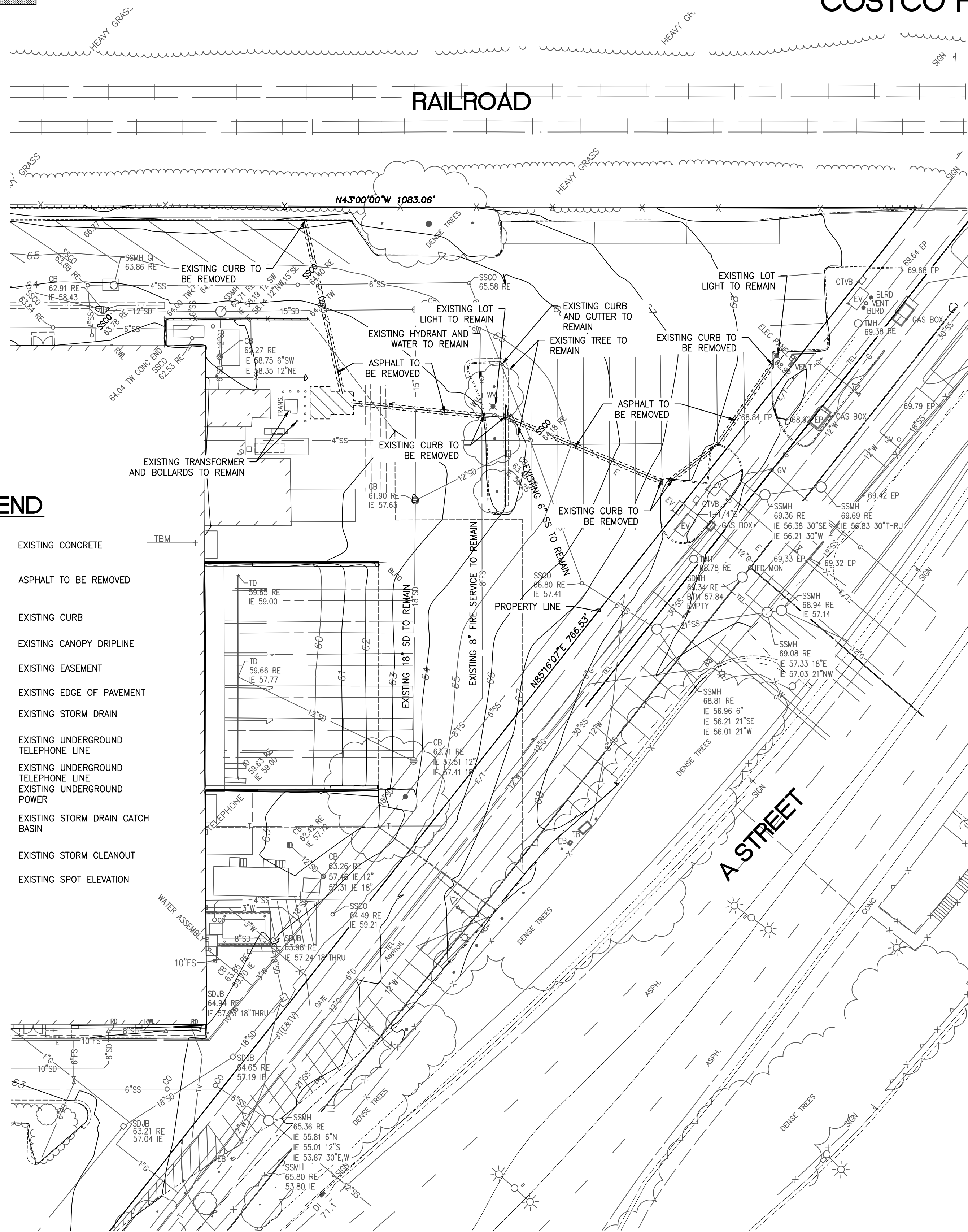
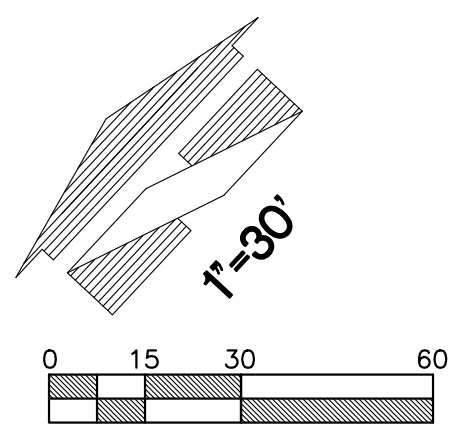


PRELIMINARY SHORE POWER SITE AND DEMO PLAN

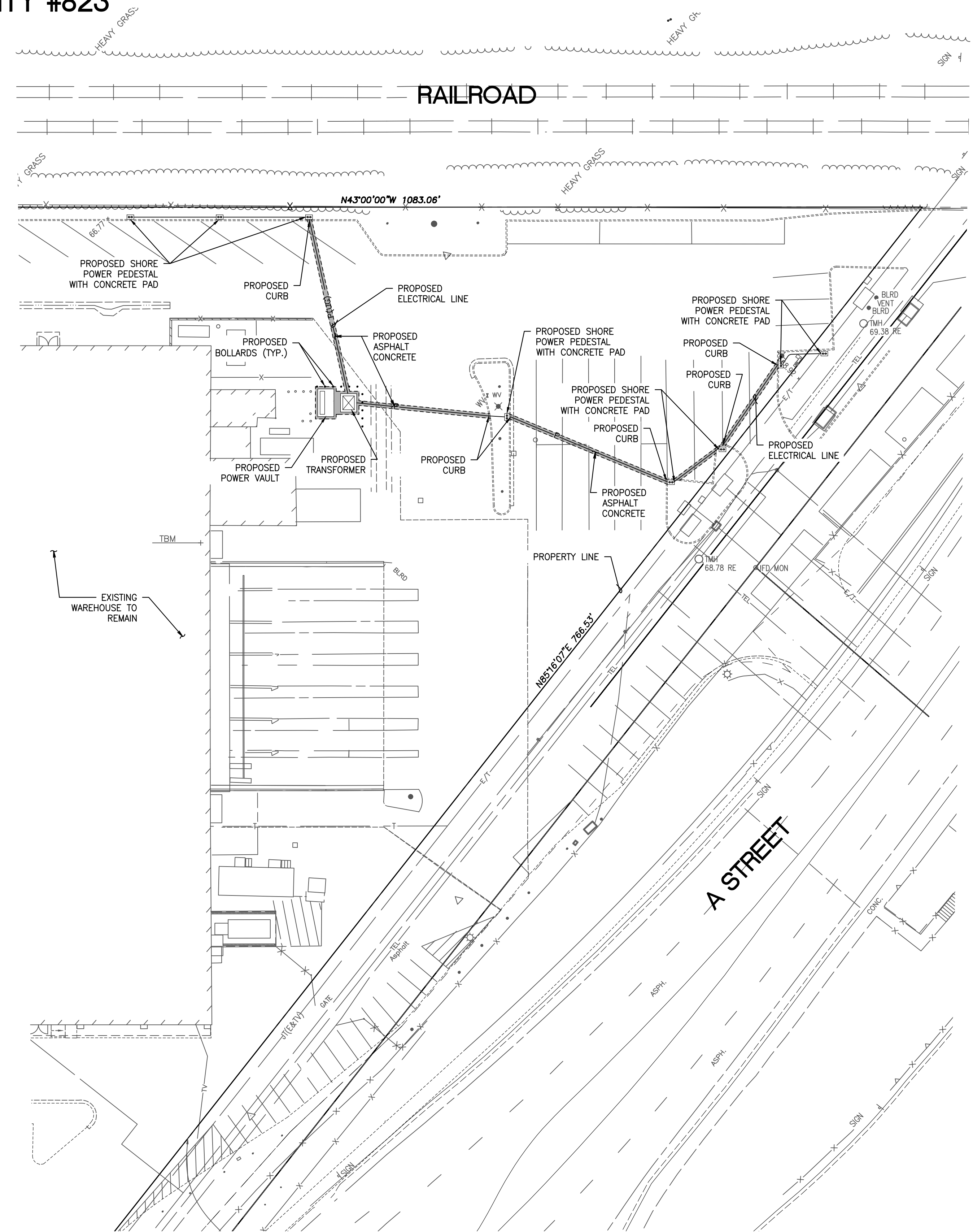
COSTCO WHOLESALE FUEL FACILITY

22330 HATHAWAY AVE, HAYWARD, CA 94541

COSTCO FACILITY #823



SHORE POWER DEMOLITION PLAN
1"=30'



SHORE POWER SITE PLAN
1"=30'

LEGEND

- EXISTING CONCRETE
- ASPHALT TO BE REMOVED
- EXISTING CURB
- EXISTING CANOPY DRIPLINE
- EXISTING EASEMENT
- EXISTING EDGE OF PAVEMENT
- EXISTING STORM DRAIN
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING UNDERGROUND POWER
- EXISTING STORM DRAIN CATCH BASIN
- EXISTING STORM CLEANOUT
- EXISTING SPOT ELEVATION

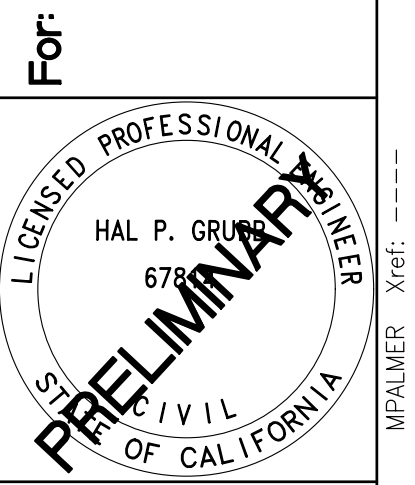
POTENTIAL UTILITY CONFLICT. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND NEW UTILITIES PRIOR TO CONSTRUCTION. SEE UTILITY CONFLICT NOTE. THE EXISTING WATER, STORM, AND SANITARY SEWER SERVICE SHOWN IS APPROXIMATE, BASED ON FIELD SURVEYS AND "AS-BUILT" RECORDS. THE GENERAL CONTRACTOR SHALL "POTHOLE" THE EXISTING UTILITIES TO VERIFY THE DIAMETER AND LOCATION (INCL. ELEVATIONS) PRIOR TO CONSTRUCTION. ANY DISCREPANCIES IN THE LOCATION OF THE EXISTING PIPE OR INCOMPATIBILITY OF THE DESIGN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNERS REPRESENTATIVE, AND BARGHAUSEN CONSULTING ENGINEERS (425-251-6222).

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLES THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-227-2600 AND THEN POTHOLES ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH

3	6/17/20	JSI	MESH	CRU	REVISIONS PER CITY COMMENTS
2	4/28/20	JSI	MESH	CRU	REVISION
No.	Date	By	Clcd.	Appr.	Revision

Title: PRELIMINARY SHORE POWER SITE AND DEMO PLAN
22330 HATHAWAY AVE.
HAYWARD, CA 94541
COSTCO FUEL FACILITY #823

For: **COSTCO GASOLINE**
COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027



Scale:	Horizontal	1"=30'	Vertical	
Designed	TR	Drawn	TR	Checked
				MESP
Approved	CRU	Date	6/5/18	

18215 72ND AVENUE SOUTH
KENT, WA 98032
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CIVIL ENGINEERING, LAND PLANNING,
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Job Number: **6636**
Sheet: **2** of **6**

PRELIMINARY DEMOLITION PLAN

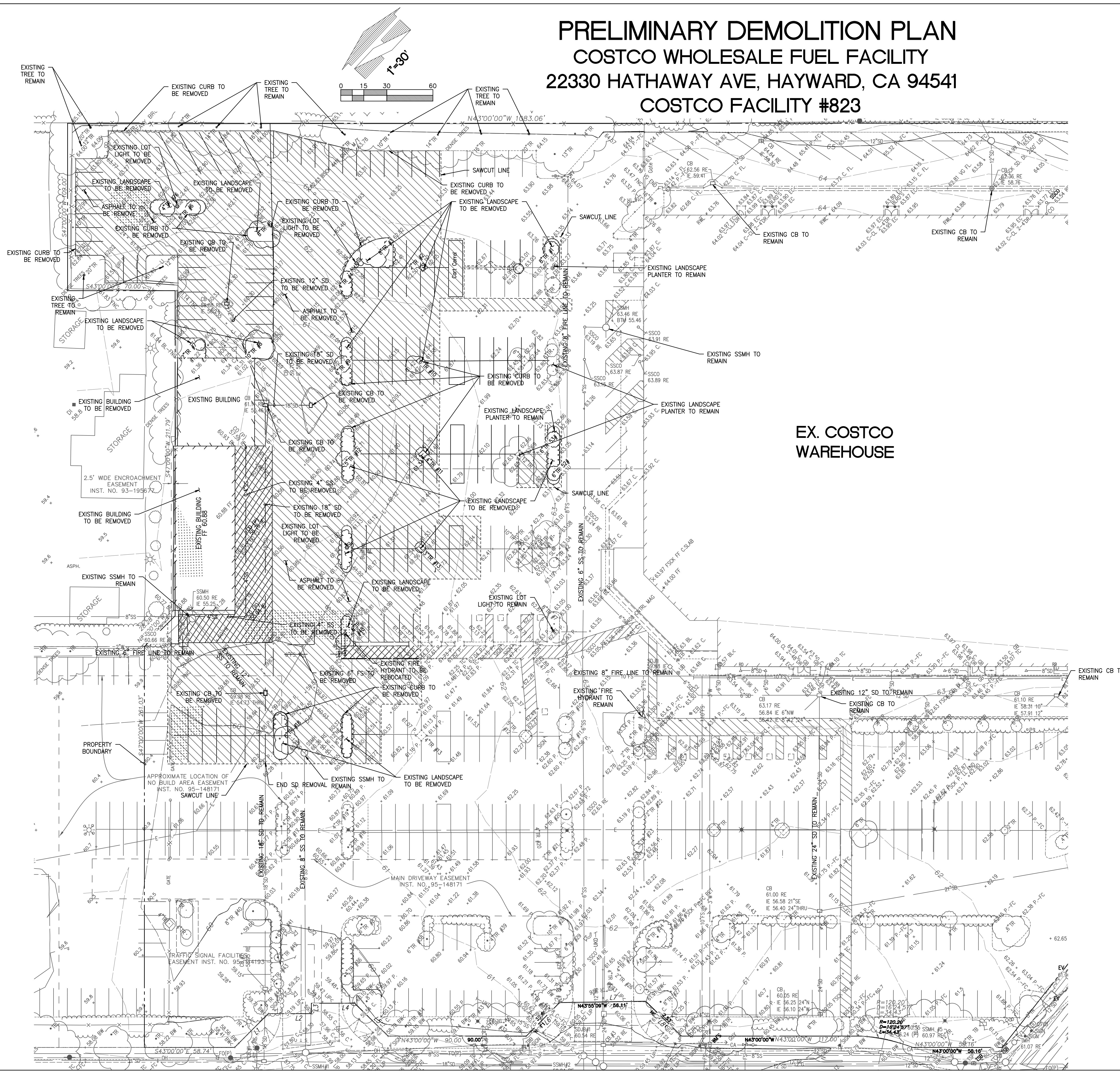
COSTCO WHOLESALE FUEL FACILITY

22330 HATHAWAY AVE, HAYWARD, CA 94541

COSTCO FACILITY #823

LEGEND

	EXISTING ASPHALT
	EXISTING CONCRETE
	ASPHALT TO BE REMOVED
	EXISTING CURB
	EXISTING CANOPY DRIPLINE
	EXISTING EASEMENT
	EXISTING EDGE OF PAVEMENT
	EXISTING STORM DRAIN
	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING UNDERGROUND POWER
	EXISTING STORM DRAIN CATCH BASIN
	EXISTING STORM CLEANOUT
	EXISTING SPOT ELEVATION

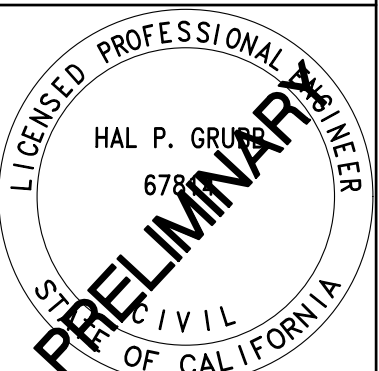


EX. COSTCO
WAREHOUSE

No.	Date	By	Check	Appr.	Revision
3	6/17/20	JSI	MESP	CRJ	FIRE SUPPRESSION REQUEST
2	4/28/20	JSI	MESP	CRJ	REVISIONS PER CITY COMMENTS

Title:
PRELIMINARY DEMOLITION PLAN
22330 HATHAWAY AVE.
HAYWARD, CA 94541
COSTCO FUEL FACILITY #823

For:
COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027



Scale:
 Horizontal 1"=30'
 Vertical 1"=10'

Designed: TR
 Drawn: TR
 Checked: MESP
 Approved: CRJ
 Date: 6/5/18

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 KENT, WA 98032
 (425)251-6222
 (425)251-8782 FAX

CIVIL ENGINEERING, LAND PLANNING,
 SURVEYING, ENVIRONMENTAL SERVICES



Job Number: **6636**
 Sheet: **3** of **6**

POTENTIAL UTILITY CONFLICT. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND NEW UTILITIES PRIOR TO CONSTRUCTION. SEE UTILITY CONFLICT NOTE. THE EXISTING WATER, STORM, AND SANITARY SEWER SERVICE SHOWN IS APPROXIMATE, BASED ON FIELD SURVEYS AND "AS-BUILT" RECORDS. THE GENERAL CONTRACTOR SHALL "POTHOLE" THE EXISTING UTILITIES TO VERIFY THE DIAMETER AND LOCATION (INCL. ELEVATIONS) PRIOR TO CONSTRUCTION. ANY DISCREPANCIES IN THE LOCATION OF THE EXISTING PIPE OR INCOMPATIBILITY OF THE DESIGN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNERS REPRESENTATIVE, AND BARGHAUSEN CONSULTING ENGINEERS (425-251-6222).

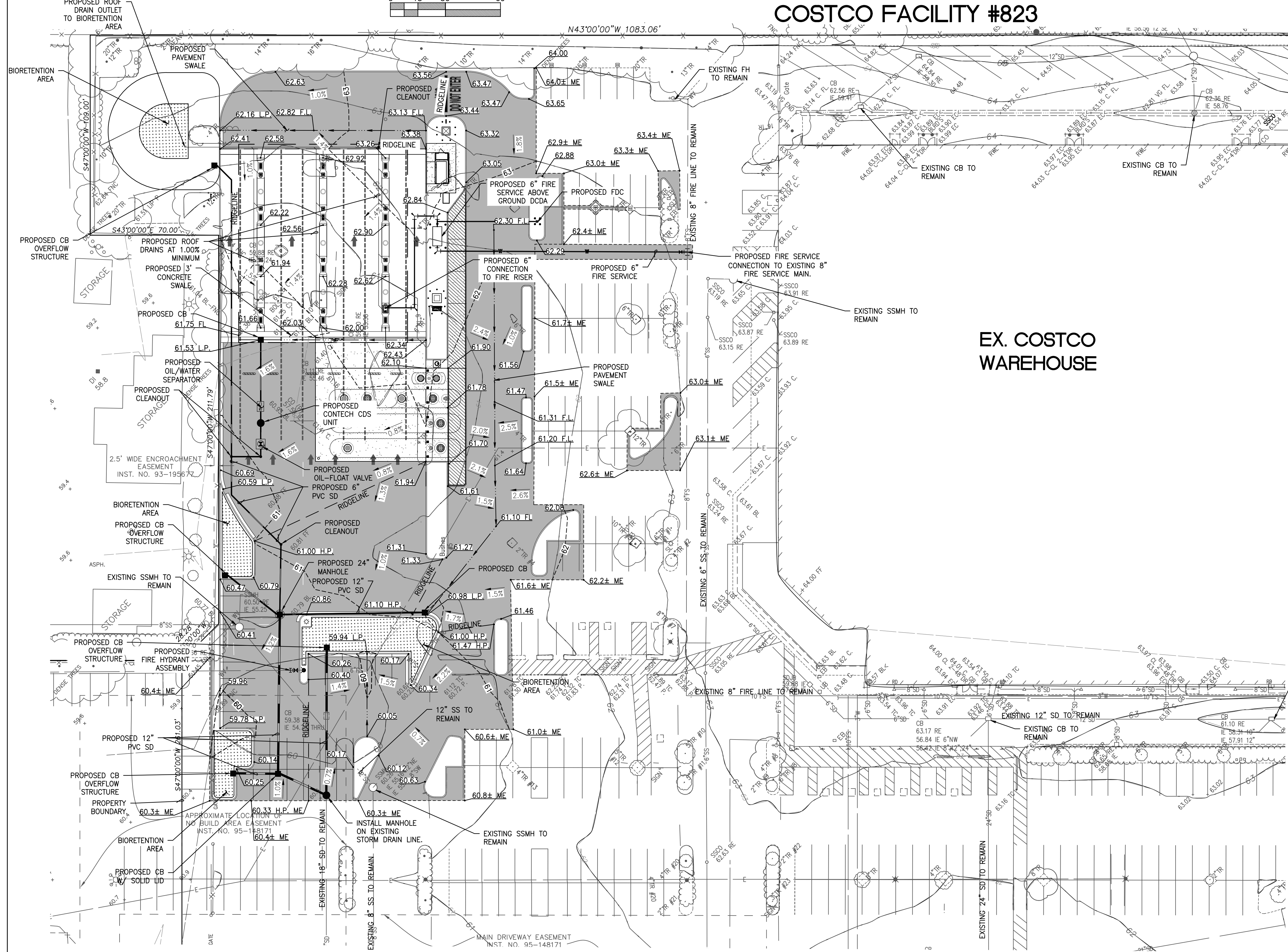
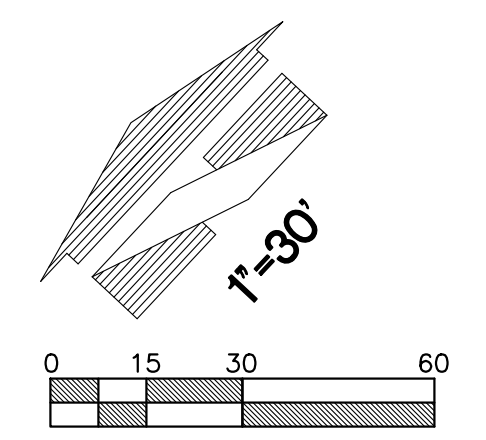
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PRELIMINARY GRADING AND UTILITY PLAN

COSTCO WHOLESALE FUEL FACILITY

22330 HATHAWAY AVE, HAYWARD, CA 94541

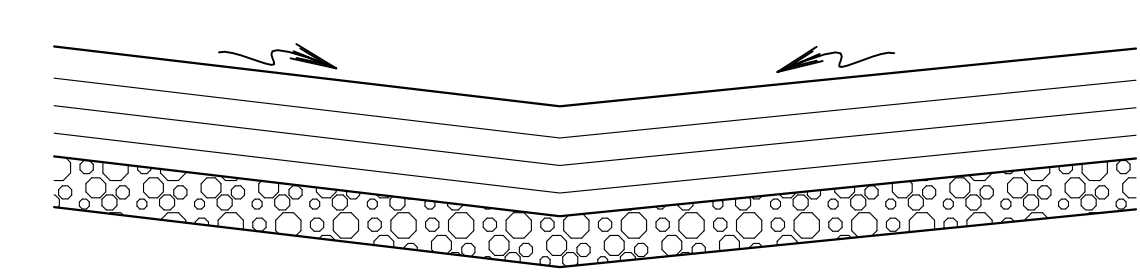
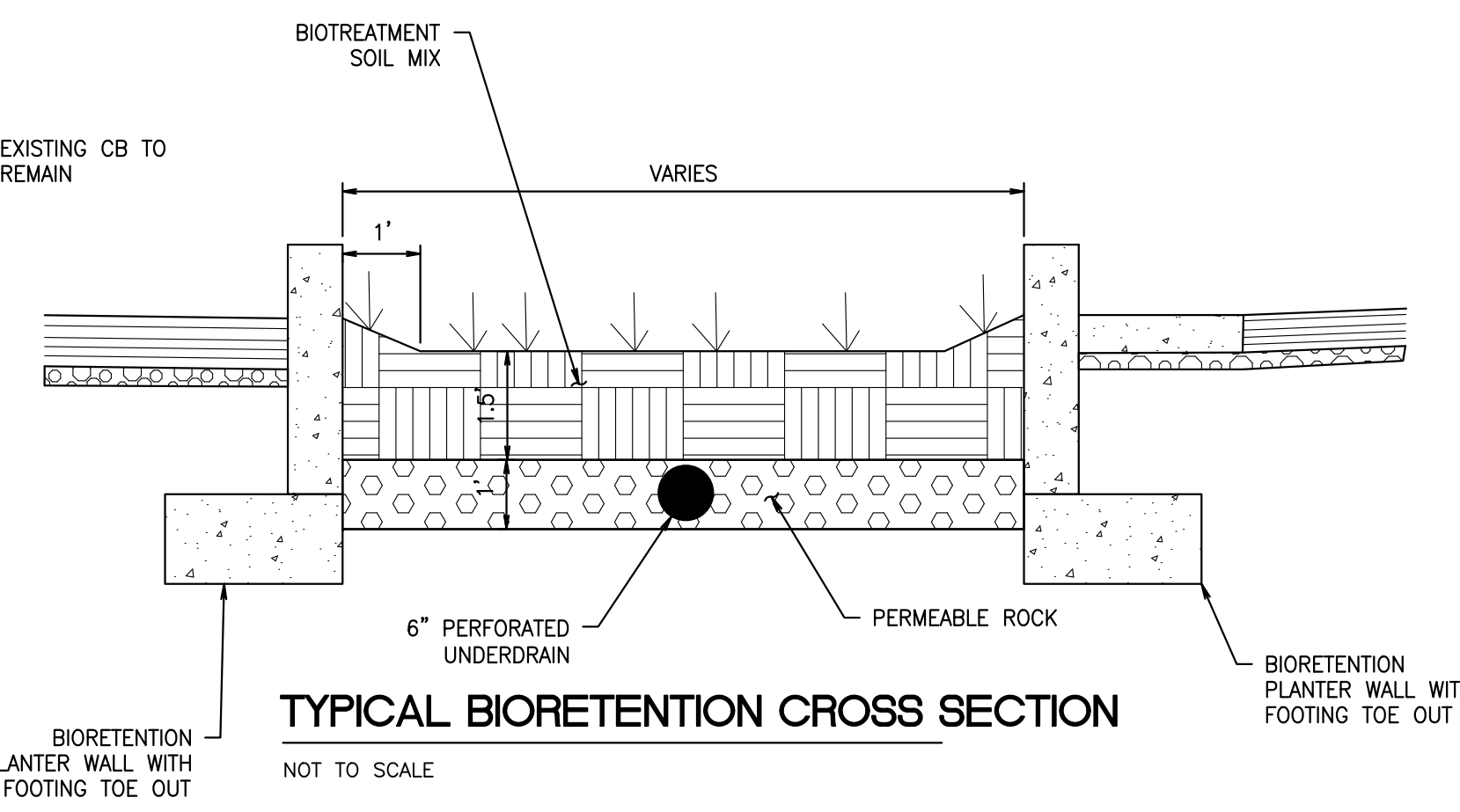
COSTCO FACILITY #823



LEGEND

- PROPOSED ASPHALT
- PROPOSED CONCRETE
- SLURRY SEAL
- PROPOSED CURB
- SAWCUT LINE
- PROPOSED PVC (STORM)
- PROPOSED CANOPY DRIPLINE
- PROPOSED PERFORATED PVC
- PROPOSED INLET
- PROPOSED CLEANOUT
- FLOW PATH
- PROPOSED SPOT GRADE
- PROPOSED GRADING SLOPE
- MATCH EXISTING
- EXISTING ASPHALT
- EXISTING CONCRETE
- EXISTING CURB
- EXISTING CANOPY DRIPLINE
- EXISTING EASEMENT
- EXISTING EDGE OF PAVEMENT
- EXISTING STORM DRAIN
- EXISTING WATER LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING UNDERGROUND POWER
- EXISTING STORM DRAIN CATCH BASIN
- EXISTING STORM CLEANOUT
- EXISTING SPOT ELEVATION

EX. COSTCO
WAREHOUSE

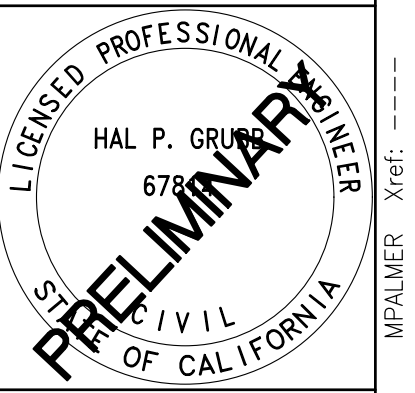


HYDRANT NUMBER	LOCATION	PRESSURE - PSI		DISCHARGE - GPM			
		STATIC	RESIDUAL	PITOT	ORIFICE	OBSERVED	20 PSI CALC
3529-03	22330 HATHAWAY AVENUE	100	92	X	2.5	1491.5	5171.2
3629-01	22330 HATHAWAY AVENUE	X	X	79	X	X	X

FIRE SUPPRESSION REQUEST
 REVISIONS PER CITY COMMENTS
 No. Date By Appr.

Title:
 PRELIMINARY GRADING AND UTILITY PLAN
 22330 HATHAWAY AVE.
 HAYWARD, CA 94541
 COSTCO FUEL FACILITY #823

For:
COSTCO GASOLINE
 COSTCO WHOLESALE
 999 LAKE DRIVE
 ISSAQUAH, WA 98027



Scale: Horizontal 1"=30' Vertical
 Designed: TR Drawn: TR Checked: MESF Approved: CRJ Date: 6/5/18
 File: \\72:162.60\Projects\066006\preliminary\6636-Prelim Plans mesp.dwg Date/Time: 7/1/2020 9:23 AM Scale: 0.009988

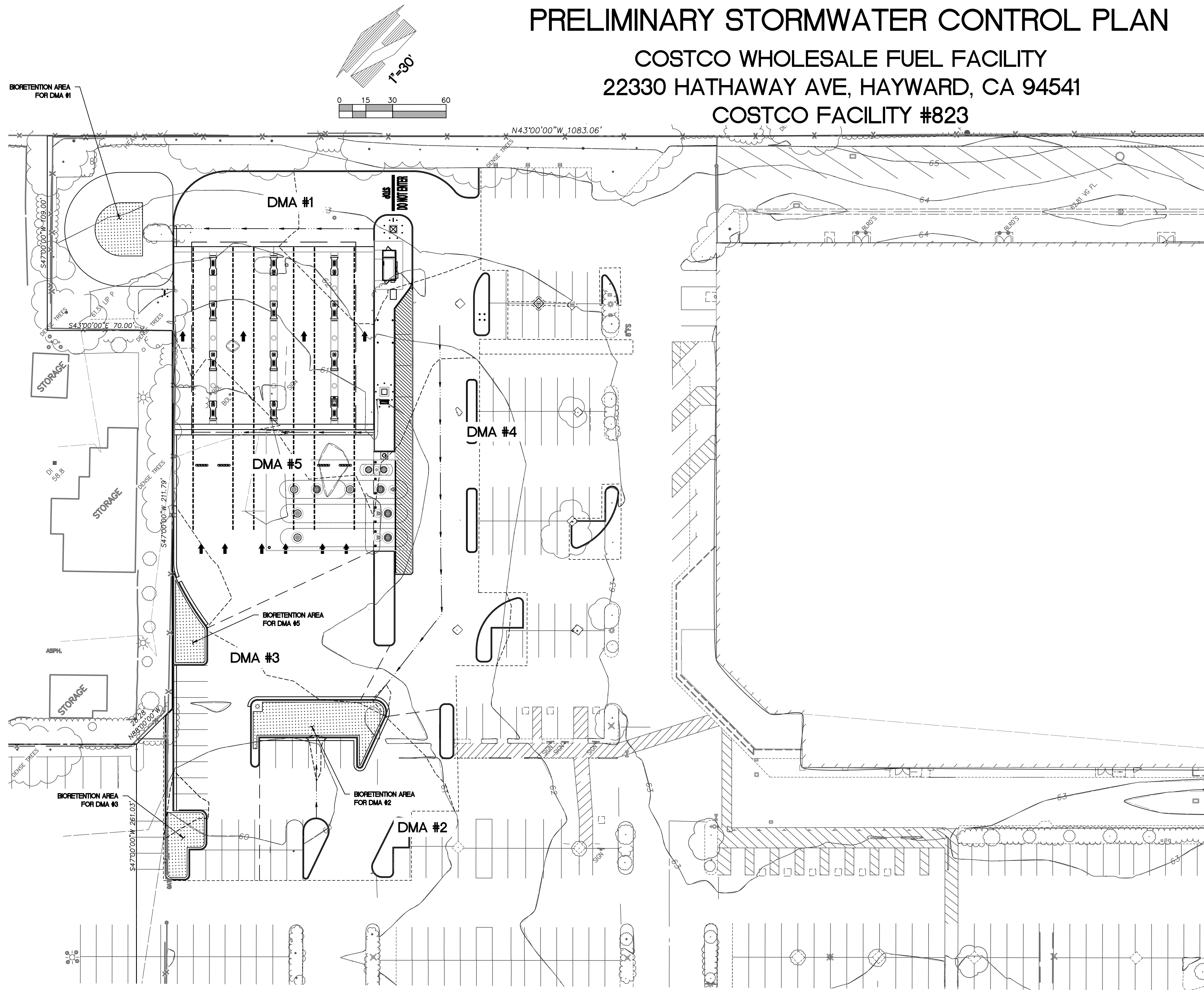
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 KENT, WA 98032
 (425)251-6222
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 CIVIL ENGINEERING, LAND PLANNING,
 SURVEYING, ENVIRONMENTAL SERVICES



Job Number: **6636**
 Sheet: **4** of **6**

PRELIMINARY STORMWATER CONTROL PLAN

COSTCO WHOLESALE FUEL FACILITY
22330 HATHAWAY AVE, HAYWARD, CA 94541
COSTCO FACILITY #823



LEGEND

	PROPOSED ASPHALT
	PROPOSED CONCRETE
	SLURRY SEAL
	PROPOSED CURB
	SAWCUT LINE
	PROPOSED PVC (STORM)
	PROPOSED CANOPY DRIPLINE
	PROPOSED PERFORATED PVC
	PROPOSED INLET
	PROPOSED CLEANOUT
	FLOW PATH
	PROPOSED SPOT GRADE
	PROPOSED GRADING SLOPE
	MATCH EXISTING
	EXISTING ASPHALT
	EXISTING CONCRETE
	EXISTING CURB
	EXISTING CANOPY DRIPLINE
	EXISTING EASEMENT
	EXISTING EDGE OF PAVEMENT
	EXISTING STORM DRAIN
	EXISTING WATER LINE
	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING UNDERGROUND POWER
	EXISTING STORM DRAIN CATCH BASIN
	EXISTING STORM CLEANOUT
	EXISTING SPOT ELEVATION

No.	Date	By	CRJ	Appr.	Revision
3	6/17/20	JSI	MESP	CRJ	FIRE SUPPRESSION REQUEST
2	4/28/20	JSI	MESH	CRJ	REVISIONS PER CITY COMMENTS

STORMWATER TREATMENT MEASURES SUMMARY TABLE

DMA AREA	TREATMENT CONTROL MEASURES	TYPES OF IMPERVIOUS AREA	TOTAL AREA (SF)	PERVIOUS AREA (SF)	IMPERVIOUS AREA (SF)	EFFECTIVE IMPERVIOUS AREA (SF)	EFFECTIVE PERVIOUS AREA (SF)	TREATMENT AREA REQUIRED (SF)	TREATMENT AREA PROVIDED (SF)	DEPTH OF PONDING (INCHES)	TREATMENT TYPE	SIZING METHOD
1	BIORETENTION	ASPHALT PAVEMENT/CANOPY	19208 (9,936 CANOPY)	4408	14800	14800	N/A	636	700	6	BIORETENTION	FLOW BASED (4% METHOD)
2	BIORETENTION	ASPHALT PAVEMENT	34792	1576	33216	33216	N/A	1344	1383	6	BIORETENTION	FLOW BASED (4% METHOD)
3	BIORETENTION	ASPHALT PAVEMENT	11764	566	11198	11198	N/A	453	574	6	BIORETENTION	FLOW BASED (4% METHOD)
4	NO TREATMENT	ASPHALT PAVEMENT	51002	2933	48069	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	BIORETENTION	CONCRETE/ASPHALT PAVEMENT	11143	0	11143	11143	N/A	445	518	6	BIORETENTION	FLOW BASED (4% METHOD)

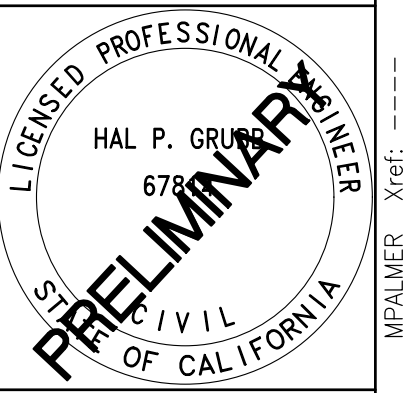
ALTERNATIVE COMPLIANCE NARRATIVE

TREATMENT OF THE ENTIRE PROJECT AREA IS NOT FEASIBLE, BECAUSE THE SITE IS ALREADY DEVELOPED. TREATING THE ENTIRE PROJECT AREA WOULD REQUIRE RE-GRADING THAT WOULD SIGNIFICANTLY INCREASE THE LIMITS OF DISTURBANCE. IN ADDITION, SOME AREAS OF THE PROJECT, SUCH AS THE AREA UNDER THE FUEL CANOPY, ARE HYDRAULICALLY ISOLATED BECAUSE OF INCREASED RISK FOR POLLUTANT CONTAMINATION AND CANNOT BE ROUTED THROUGH BIORETENTION.

IN ORDER TO TREAT THE REQUIRED SQUARE FOOTAGE WITH LID BMPs, THE PROJECT PROPOSES TO TREAT AN EQUIVALENT AREA. MUCH OF DMA #2 DOES NOT FALL WITHIN THE PROJECT SITE, BUT WILL BE TREATED WITH BIORETENTION IN THE PROPOSED CONDITION. WE BELIEVE THIS WOULD BRING THE IMPROVEMENTS INTO COMPLIANCE UNDER THE OFFSITE EQUIVALENT TREATMENT PROVISION DESCRIBED IN CHAPTER 9 OF THE 2016 ALAMEDA TGD.

Title: PRELIMINARY STORMWATER CONTROL PLAN
22330 HATHAWAY AVE.
HAYWARD, CA 94541
COSTCO FUEL FACILITY #823

For: **COSTCO GASOLINE**
COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027



Scale: Horizontal 1"=30'
Vertical 1"=30'

Designed: TR
Drawn: TR
Checked: MESP
Approved: CRJ
Date: 6/5/18

18215 72ND AVENUE SOUTH
KENT, WA 98032
(425)251-6222
(425)251-8782 FAX
CIVIL ENGINEERING, LAND PLANNING,
SURVEYING, ENVIRONMENTAL SERVICES



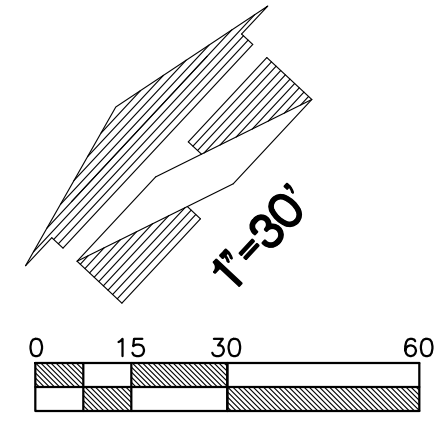
Job Number: 6636
Sheet: 5 of 6

PRELIMINARY TREE REMOVAL PLAN

COSTCO WHOLESALE FUEL FACILITY

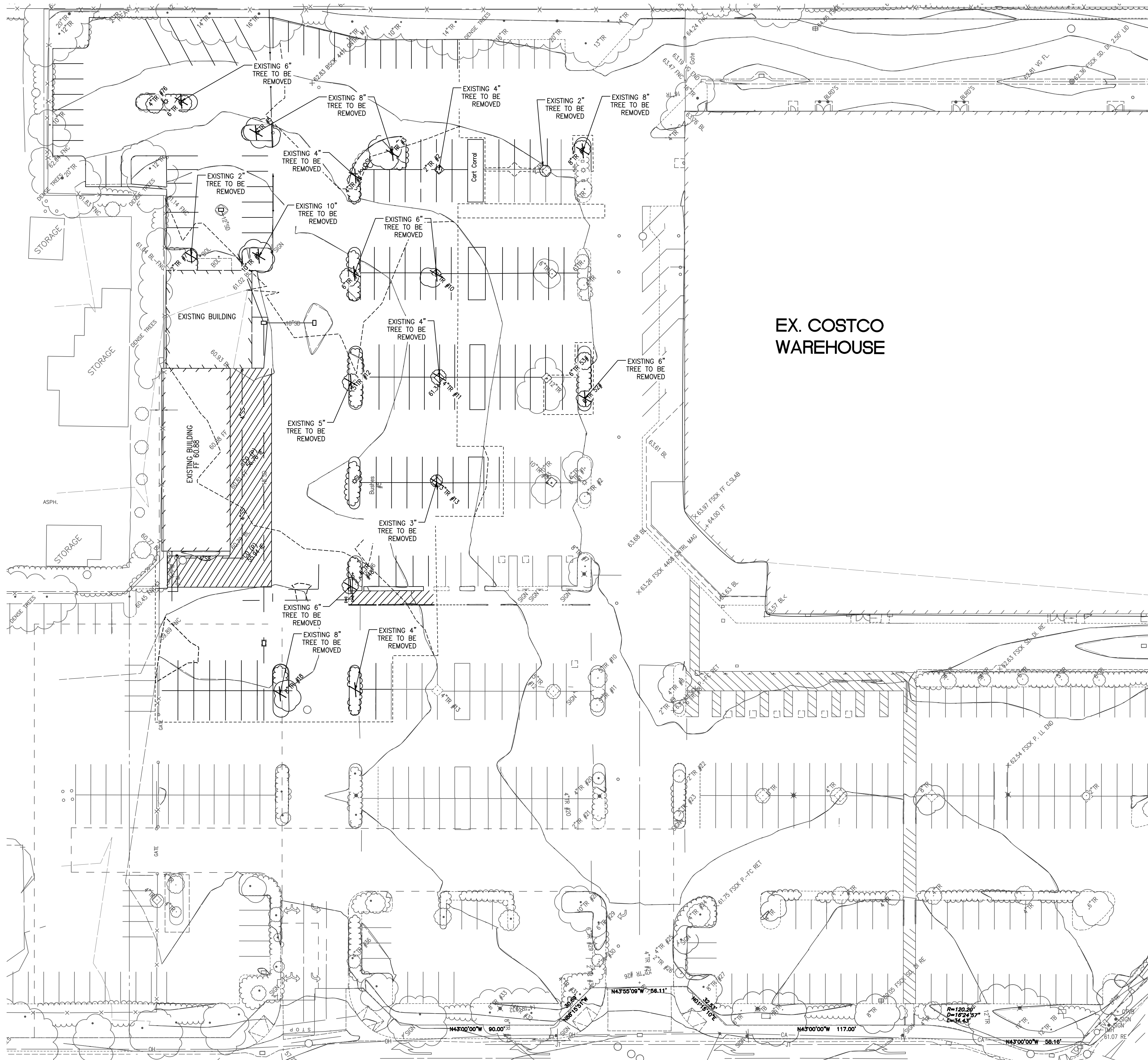
22330 HATHAWAY AVE, HAYWARD, CA 94541

COSTCO FACILITY #823



LEGEND

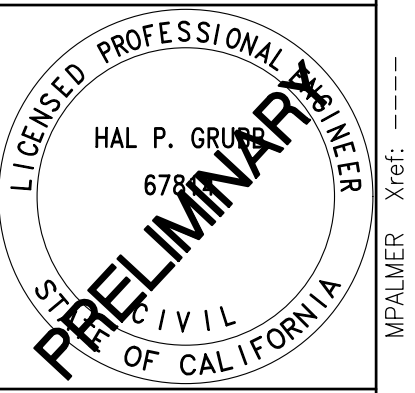
- EXISTING ASPHALT
- EXISTING CONCRETE
- EXISTING CURB
- EXISTING CANOPY DRIPLINE
- EXISTING EASEMENT
- EXISTING EDGE OF PAVEMENT
- EXISTING STORM DRAIN
- W EXISTING UNDERGROUND TELEPHONE LINE
- T EXISTING UNDERGROUND TELEPHONE LINE
- E EXISTING UNDERGROUND POWER
- EXISTING STORM DRAIN CATCH BASIN
- EXISTING STORM CLEANOUT
- EXISTING SPOT ELEVATION
- EXISTING TREE TO BE REMOVED



No.	Date	By	Appr.	Revision
3	6/17/20	JSI	MESP	CRJ
2	4/28/20	JSI	MESP	CRJ

Title:
 PRELIMINARY TREE REMOVAL PLAN
 22330 HATHAWAY AVE.
 HAYWARD, CA 94541
 COSTCO FUEL FACILITY #823

For:
COSTCO GASOLINE
 COSTCO WHOLESALE
 999 LAKE DRIVE
 ISSAQUAH, WA 98027



Scale:	Horizontal	Vertical
Designed	TR	
Drawn	TR	
Checked	MESP	
Approved	CRJ	
Date	6/5/18	

18215 72ND AVENUE SOUTH
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Job Number: **6636**
 Sheet: **6** of **6**

CAUTION:
 POTENTIAL UTILITY CONFLICT. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND NEW UTILITIES PRIOR TO CONSTRUCTION. SEE UTILITY CONFLICT NOTE. THE EXISTING WATER, STORM, AND SANITARY SEWER SERVICE SHOWN IS APPROXIMATE, BASED ON FIELD SURVEYS AND "AS-BUILT" RECORDS. THE GENERAL CONTRACTOR SHALL "POTHOLE" THE EXISTING UTILITIES TO VERIFY THE DIAMETER AND LOCATION (INCL. ELEVATIONS) PRIOR TO CONSTRUCTION. ANY DISCREPANCIES IN THE LOCATION OF THE EXISTING PIPE OR INCOMPATIBILITY OF THE DESIGN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNERS REPRESENTATIVE, AND BARGHAUSEN CONSULTING ENGINEERS (425-251-6222).

UTILITY CONFLICT NOTE:
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-227-2800 AND THEN POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

PRELIMINARY LANDSCAPE PLAN

COSTCO WHOLESALE FUEL FACILITY

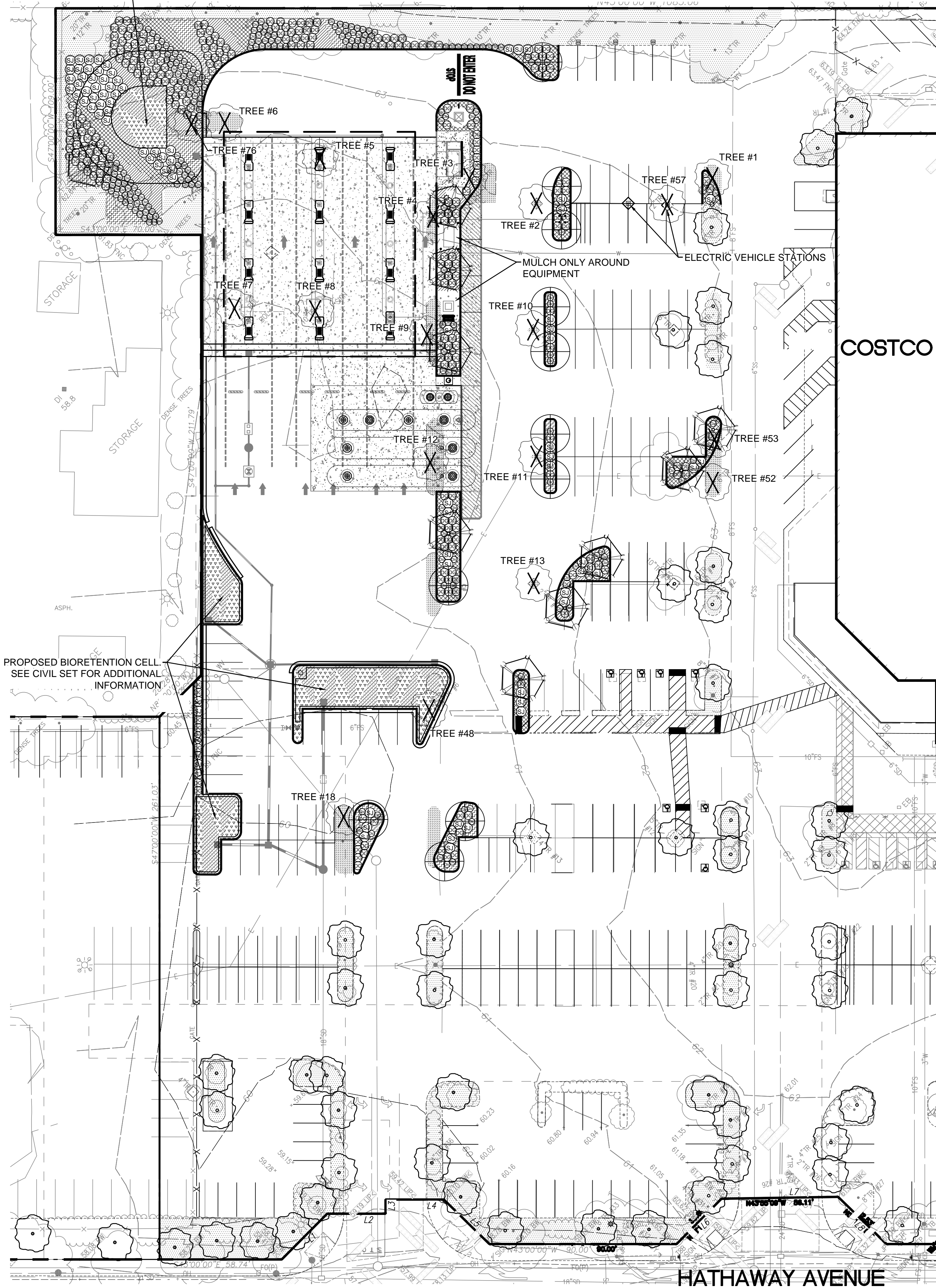
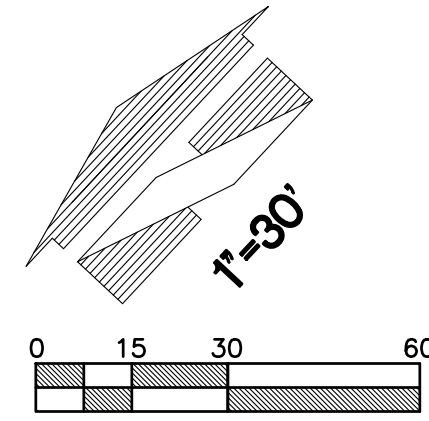
22330 HATHAWAY AVE, HAYWARD, CA 94541

COSTCO FACILITY #823

LANDSCAPE ARCHITECT SIGNATURE and DATE

I HAVE COMPLIED WITH THE CRITERIA OF THE CITY OF HAYWARD BAY-FRIENDLY WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE AND IRRIGATION DESIGN PLAN

PROPOSED BIORETENTION CELL. SEE CIVIL SET FOR ADDITIONAL INFORMATION



LEGEND

- EXISTING LANDSCAPE AND IRRIGATION TO BE RETAINED. SOME MODIFICATIONS TO THE EXISTING IRRIGATION MAY BE NECESSARY. RETURN AREAS TO PRE-CONSTRUCTION CONDITION
- EXISTING LANDSCAPE AND IRRIGATION TO BE REMOVED. CAP AND REMOVE PORTIONS OF EXISTING IRRIGATION NO LONGER NEEDED. RE-ROUTE PORTIONS OF EXISTING IRRIGATION SYSTEM AS NEEDED
- EXISTING TREE TO BE RETAINED, TYPICAL. PROTECT DURING CONSTRUCTION
- EXISTING TREE TO BE REMOVED, TYPICAL. WHERE NEW PLANTS ARE SHOWN TO BE INSTALLED WHERE A TREE IS TO BE REMOVED, LANDSCAPE CONTRACTOR TO REMOVE ENOUGH ROOTMASS IN ORDER TO BE ABLE TO INSTALL NEW PLANTS

PLANT SCHEDULE

SYMBOL	BOTANICAL/Common NAMES	SIZE	SPACING	QNT.	WUCOLS IV ZONE 1	REMARKS	HT. AT TIME OF INSTALL	MATURE HT. & WIDTH
TREES:								
	PISTACIA CHINENSIS / CHINESE PISTACHE	36" BOX	AS SHOWN	10	LOW	STAKE & GUY ONE GROWING SEASON; NURSERY GROWN, BRANCHED AT 5'	10'-12' HT.	30'-35' HT. x 25'-35' WIDTH
	OLEA EUROPAEA 'WILSON' / FRUITLESS OLIVE TREE	36" BOX	AS SHOWN	11	LOW	STAKE & GUY ONE GROWING SEASON; NURSERY GROWN, BRANCHED AT 5'	12'-13' HT.	25'-30' HT. x 25'-30' WIDTH
NOTE: FOR DECIDUOUS TREES, AT TIME OF INSTALLATION, BRANCHING HEIGHT TO START AT ABOUT 5' ABOVE FINISH GRADE AND CANOPY TO START AT 7'-8' ABOVE FINISH GRADE								
SHRUBS:								
	MUHLENBERGIA RIGENS / DEER GRASS	1 GAL	AS SHOWN	269	LOW	FULL AND BUSHY		4' HT. x 4' W.
	DICLIPTERA SUBRECTA / HUMMINGBIRD PLANT	1 GAL	AS SHOWN	225	LOW	FULL AND BUSHY		2' HT. x 3' W.
	STRELTZIA JUNCEA / NARROW-LEAF BIRD OF PARADISE	2 GAL	AS SHOWN	82	LOW	FULL AND BUSHY		4' HT. x 5' W.
	ANIGOSANTHOS 'AMBER VELVET' / AMBER VELVET KANGAROO PAW	1 GAL	AS SHOWN	231	LOW	FULL AND BUSHY		3' HT. x 3' W.
GROUNDCOVERS:								
	DYMONDIA MARGARETAE / DYMONDIA	1 GAL	18" O.C.	AS REQ'D	LOW	HOLD BACK 16" FROM BORDERS, TREES, AND SHRUBS		
	APTENIA 'RED APPLE' / BABY SUN ROSE	1 GAL	18" O.C.	AS REQ'D	LOW	HOLD BACK 16" FROM BORDERS, TREES, AND SHRUBS		
	SENECIO SERPENS / BLUE CHALK STICK	1 GAL	18" O.C.	AS REQ'D	LOW	HOLD BACK 16" FROM BORDERS, TREES, AND SHRUBS		
	CHONDROPETALUM TECTORUM / DWARF CAPE RUSH	1 GAL	18" O.C.	AS REQ'D	LOW	HOLD BACK 16" FROM BORDERS, TREES, AND SHRUBS		
	CAREX BARBARAE / BASKET SEDGE	1 GAL	18" O.C.	AS REQ'D	LOW	HOLD BACK 16" FROM BORDERS, TREES, AND SHRUBS		

TREE MITIGATION SUMMARY CHART

TREES TO BE REMOVED

NUMBER	BOTANICAL NAME	COMMON NAME	VALUE
#1	PYRUS CALLERYANA 'BRADFORD'	ARISTOCRAT PEAR	\$ 980.00
#2	ASH UNKNOWN STOCK		\$ 310.00
#3	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 730.00
#4	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 660.00
#5	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 730.00
#6	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 730.00
#7	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 510.00
#8	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 930.00
#9	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 990.00
#10	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 990.00
#11	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 760.00
#12	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 780.00
#13	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 670.00
#18	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 770.00
#48	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 1,380.00
#52	PYRUS CALLERYANA 'BRADFORD'	BRADFORD PEAR	\$ 1,150.00
#53	PYRUS CALLERYANA 'BRADFORD'	BRADFORD PEAR	\$ 1,150.00
#57	PYRUS CALLERYANA 'BRADFORD'	ARISTOCRAT PEAR	\$ 280.00
#76	FRAXINUS OXYCARPA 'RAYWOOD'	RAYWOOD ASH	\$ 730.00

TOTAL \$ 15,230.00

TREES TO BE PLANTED

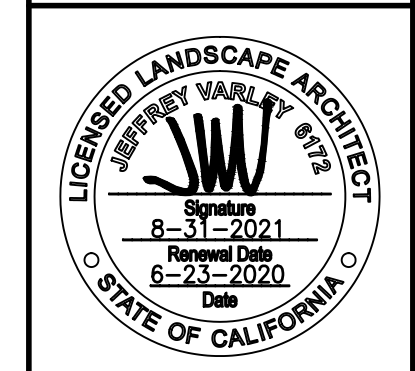
BOTANICAL NAME	COMMON NAME	SIZE	VALUE
PISTACIA CHINENSIS	CHINESE PISTACHE	36" BOX	\$ 742.00
PISTACIA CHINENSIS	CHINESE PISTACHE	36" BOX	\$ 742.00
PISTACIA CHINENSIS	CHINESE PISTACHE	36" BOX	\$ 742.00
PISTACIA CHINENSIS	CHINESE PISTACHE	36" BOX	\$ 742.00
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PISTACIA CHINENSIS	CHINESE PISTACHE	36" BOX	\$ 742.00
OLEA EUROPAEA 'WILSON'	FRUITLESS OLIVE TREE	36" BOX	\$ 742.00
OLEA EUROPAEA 'WILSON'	FRUITLESS OLIVE TREE	36" BOX	\$ 742.00
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OLEA EUROPAEA 'WILSON'	FRUITLESS OLIVE TREE	36" BOX	\$ 742.00
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OLEA EUROPAEA 'WILSON'	FRUITLESS OLIVE TREE	36" BOX	\$ 742.00
OLEA EUROPAEA 'WILSON'	FRUITLESS OLIVE TREE	36" BOX	\$ 742.00
OLEA EUROPAEA 'WILSON'	FRUITLESS OLIVE TREE	36" BOX	\$ 742.00

TOTAL \$ 15,380.00

Revision
No. Date By Cld. Appr.

Costco GASOLINE
COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027



Scale: Horizontal 1"=20'
Vertical 1"=20'

Designed BS
Drawn BS
Checked BS/JM
Approved JMV
Date 4/28/17

18215 72ND AVENUE SOUTH
KENT, WA 98032
(425)251-6222
(425)251-8752 FAX

CIVIL ENGINEERING, LAND PLANNING,
SURVEYING, ENVIRONMENTAL SERVICES



Job Number 6636
Sheet
L1 of 5

PRELIMINARY LANDSCAPE NOTES AND DETAILS

COSTCO WHOLESALE FUEL FACILITY

22330 HATHAWAY AVE, HAYWARD, CA 94541

COSTCO FACILITY #823

LANDSCAPE PLANTING NOTES AND MATERIALS

SCOPE OF WORK

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 90-DAY MAINTENANCE.

QUALIFICATIONS:
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 THE PRESIDING JURISDICTION.

JOB CONDITIONS:
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.

PROTECTION:
SAVE AND PROTECT ALL EXISTING PLANTINGS SHOWN TO REMAIN. 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.

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

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

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

90-DAY MAINTENANCE:
CONTRACTOR TO PROVIDE OWNER WITH A SCOPE OF WORK AT TIME OF INITIAL PROJECT BID TO PROVIDE LANDSCAPE AND IRRIGATION MAINTENANCE FOR 90 DAYS FOLLOWING COMPLETION OF PROJECT (ACCEPTANCE) OF FACILITY BY OWNER. WORK TO INCLUDE MAINTENANCE AS DESCRIBED BELOW, IN PLANTING AND IRRIGATION MAINTENANCE.

MATERIALS:

PLANT MATERIALS:
PLANT MATERIALS TO BE GRADE NO. 1, SIZED IN ACCORDANCE WITH (AAN) AMERICAN STANDARDS FOR NURSERY STOCK, CURRENT EDITION. 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; "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.

B) QUALITY:
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.

C) SUBSTITUTION:
NO SUBSTITUTION OF PLANT MATERIAL, SPECIES OR VARIETY, WILL BE PERMITTED UNLESS 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 REQUIRE SUBMITTAL TO REVISED LANDSCAPE PLAN TO CITY FOR APPROVAL.

SOIL PREPARATION:
FOR ALL NEW LANDSCAPE BEDS, INCORPORATE COMPOST AT A RATE OF AT LEAST FOUR CUBIC YARDS PER 1,000 SQUARE FEET TO A DEPTH OF SIX INCHES INTO LANDSCAPE AREA (UNLESS CONTRA-INDICATED BY A SOIL TEST).

SOIL AMENDMENTS AND ANY ADDITIONAL SOIL SUPPLEMENTS AND PROCEDURES SHALL BE DONE IN ACCORDANCE WITH A SOIL TEST. LANDSCAPE CONTRACTOR TO PROCURE SOIL TEST AND PROVIDE RESULTS TO LANDSCAPE ARCHITECT.

F) TOPSOIL PLACEMENT:

1. PROVIDE A TOTAL FINISH COURSE OF 4 INCHES OF TOPSOIL FOR LANDSCAPE AREAS AND 18/24 INCHES IN PARKING LOT ISLANDS.
2. IN ALL LANDSCAPE AREAS, PLACE 2 INCHES (6 INCHES IN PARKING LOT ISLANDS) OF TOPSOIL MIX WITH AMENDMENTS OVER THE PREPARED SUB-GRADE AND THOROUGHLY ROTOTILL WITH MULTIPLE PASSES INTO THE TOP 8 INCHES OF SUB-GRADE FOR A TOTAL DEPTH OF 8 INCHES IN LANDSCAPE AREAS (12 INCHES IN PARKING LOT ISLANDS). PLACE AN ADDITIONAL 2 INCH LIFT OF TOPSOIL, IN ALL LANDSCAPE AREAS AND A MINIMUM 12 INCH LIFT IN ALL PARKING LOT ISLANDS, FOR THE FINAL TOPSOIL DEPTH OF 4 INCHES IN LANDSCAPE AREAS AND 18/24 INCHES IN PARKING LOT ISLANDS.
3. PLACE ADDITIONAL TOPSOIL AND SOIL MIX AS REQUIRED TO MEET FINISH ELEVATIONS.

MULCH (TOPDRESSING):
ORGANIC RECYCLED CHIP WOOD, DARK BROWN, SIZE SHALL NOT EXCEED 1-1/2 INCH.

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

TREE STAKE:
SEE CITY OF HAYWARD STANDARD DETAIL THIS SET.

HERBICIDE:
HERBICIDE IS NOT RECOMMENDED FOR THE FIRST YEAR AFTER INSTALLATION.

ANTI-DESICCANT:
"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:

FINISH GRADES:
FINE GRADE AND REMOVE ROCKS 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.

TREES AND SHRUBS:
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.

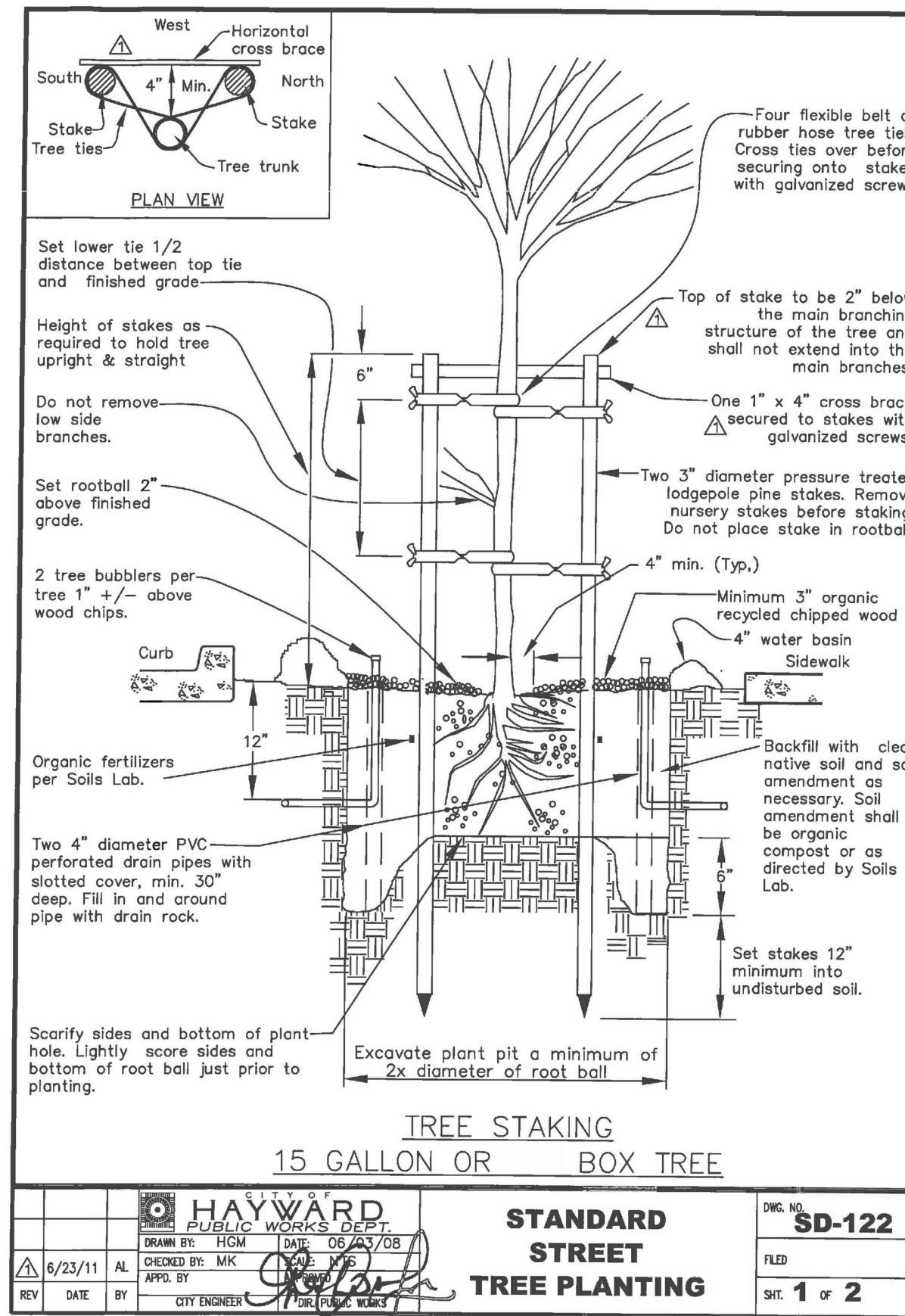
GROUNDCOVERS:
EXCAVATE PITS TO A MINIMUM OF 3 INCHES BELOW, AND TWICE THE ROOT BALL DIAMETER. WATER THOROUGHLY AND TAKE CARE TO ENSURE THAT ROOT CROWN IS AT PROPER GRADE, AS DETAILED.

MULCH:
MULCH ALL LANDSCAPE AREAS NOT COVERED BY LAWN AND/OR SEED. APPLY SUFFICIENT QUANTITY TO PROVIDE A 3-INCH DEPTH.

UTILITY CLEARANCES:
FIELD ADJUST PLANT LOCATIONS FOR 8-FOOT SEPARATION OF TREES/SHRUBS AND 2-FOOT SEPARATION FOR GROUNDCOVER FROM FIRE HYDRANTS AND UTILITY VAULTS.

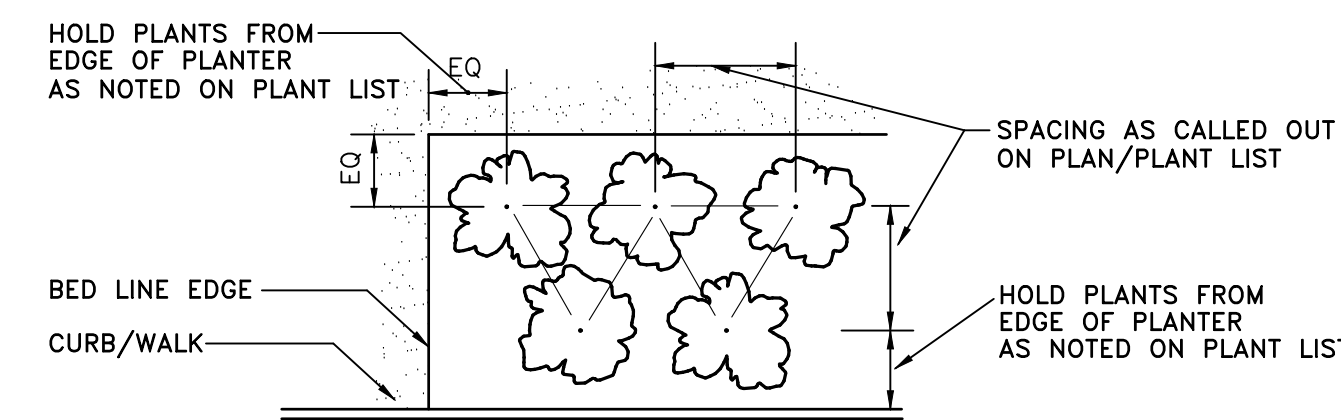
PLANTING MAINTENANCE:
CONTRACTOR TO MAINTAIN PLANTINGS THROUGH COMPLETED INSTALLATION, AND UNTIL ACCEPTANCE OF LANDSCAPE INSTALLATION. PLANTING MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATING, TIGHTENING AND REPAIRING OF TREE GUYS, RESETTling PLANTS TO PROPER GRADES OR POSITION, RE-ESTABLISHING 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.

IRRIGATION MAINTENANCE:
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 PLANT MATERIALS. CONTRACTOR TO PROVIDE THIS WORK IN ADDITION TO SPECIFIC WARRANTY/GUARANTEES.



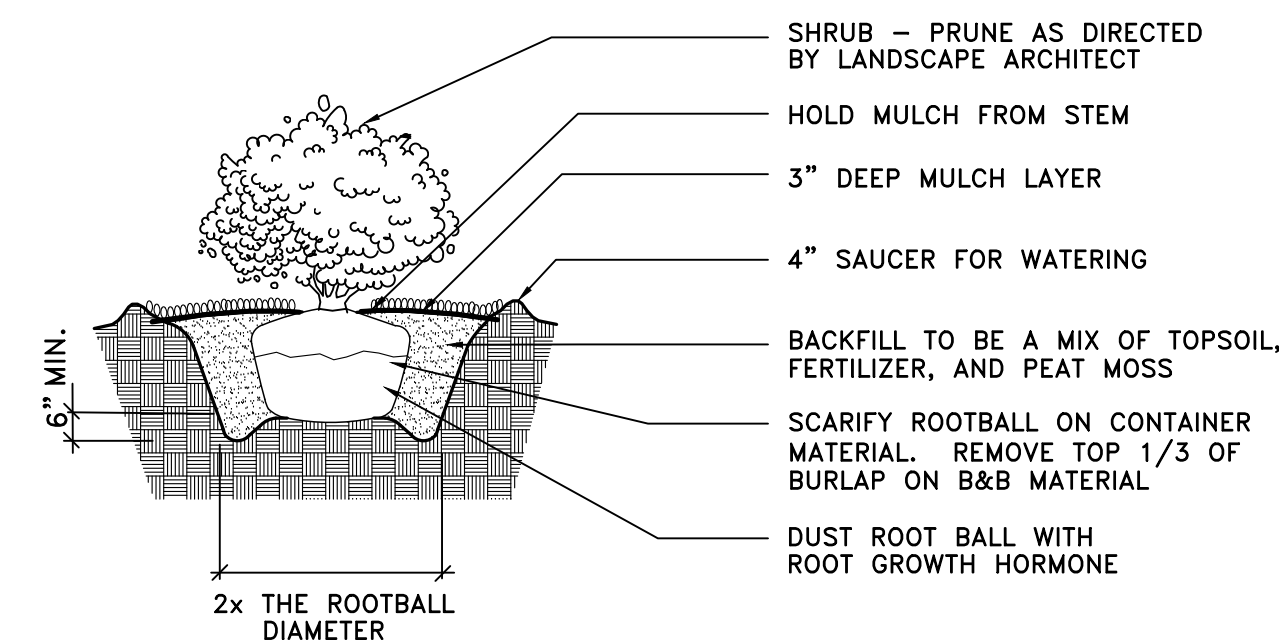
STREET TREE PLANTING SPECIFICATIONS:

1. Tree shall be healthy, disease and insect-free, well rooted, and properly trained with a straight trunk that can stand upright without support. Tree shall exhibit a central leader, or a main branch that can be trained as a central leader. Branches shall be well-developed and shall be evenly and radially distributed around the trunk. Root ball shall not exhibit kinked or circling roots.
2. Tree shall comply with federal and state laws requiring inspection for plant diseases and pest infestation. Clearance from the county agricultural commissioner, as required by law, shall be obtained before planting trees delivered from outside the county.
3. Prior to planting tree, determine the location of existing or future underground utilities. Locate tree a minimum of 5 feet from lateral service lines and driveways. Locate tree a minimum of 15 feet from a light pole, and a minimum of 30 feet from the face of a traffic signal, or as otherwise specified by the City.
4. Tree pit shall be tested for proper drainage prior to planting tree. Fill pit with water; if water remains after a 24-hour period, cuger three 4"-diameter by 3-foot deep holes at the bottom of the tree pit. Backfill with drain rock.
5. Set tree in an upright and plumb position. As much as possible, tree shall be positioned such that dominant branches are parallel to the roadway and are oriented away from potential conflicts.
6. If required by the City, a pressure-compensating bubbler, or drip emitters, shall be provided to each tree.
7. Depending on the planter strip width, or the tree well size and the tree species being planted, a 24" deep root-barrier may be required by the City to be placed between the root-ball and the curb and/or sidewalk. Length of strip barrier or size of the box barrier will be specified by the City.
8. Stakes are to be removed when the tree diameter meets or exceeds the diameter of the stake.



PLANT MATERIAL SPACING DETAIL

NOT TO SCALE

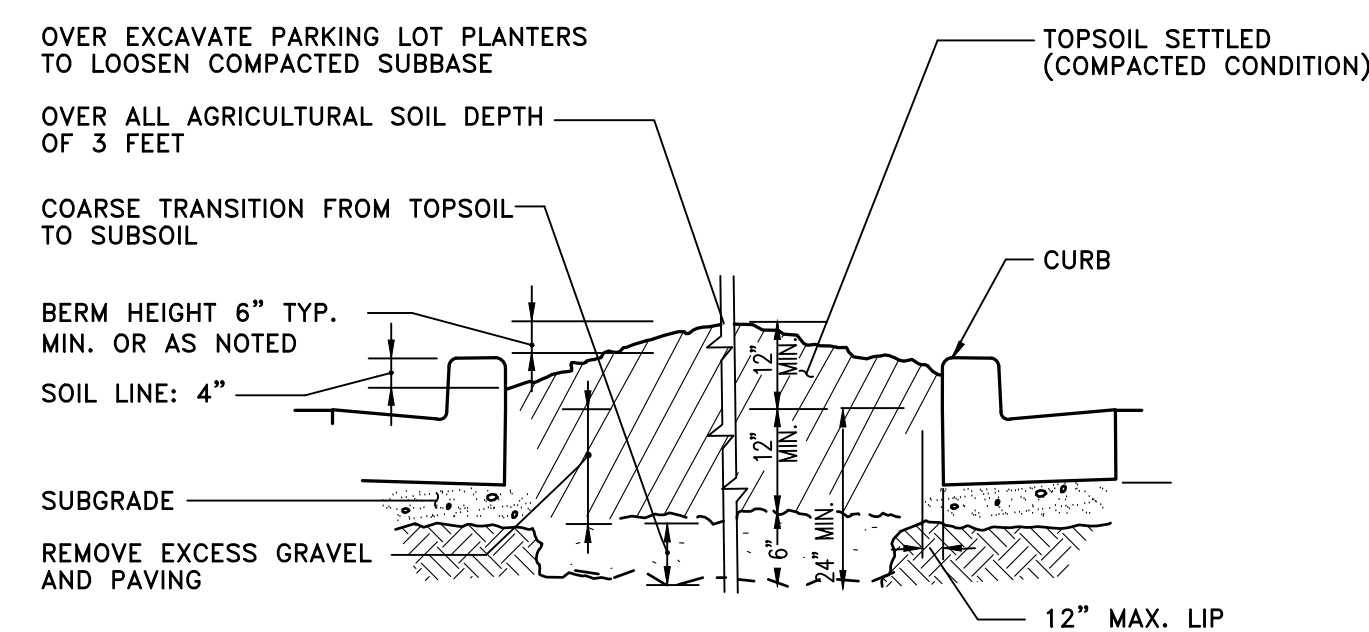


NOTE:
APPLY ADDITIONAL 4 OZ. 8-32-16 FERTILIZER INTO TOP 2" OF PLANTING MIX.

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

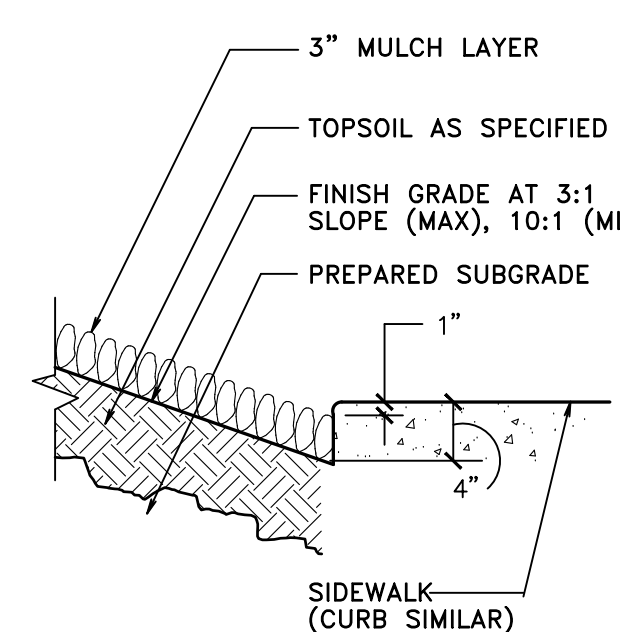
SHRUB PLANTING DETAIL

NOT TO SCALE



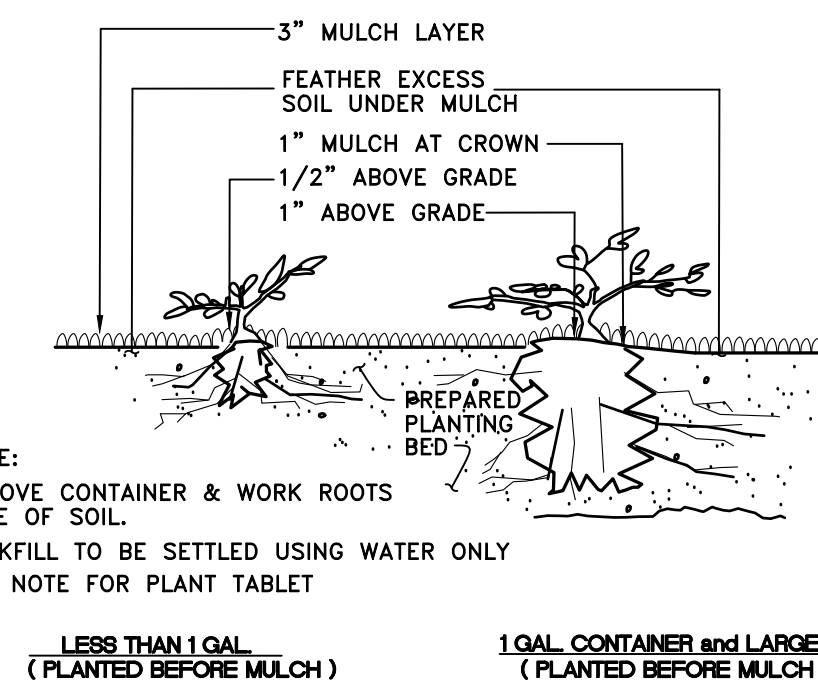
GRADING IN PARKING LOT PLANTER DETAIL

NOT TO SCALE



PLANTER SECTION DETAIL

NOT TO SCALE



NOTE:
REMOVE CONTAINER & WORK ROOTS FREE OF SOIL.
BACKFILL TO BE SETTLED USING WATER ONLY
SEE NOTE FOR PLANT TABLET

GROUNDCOVER PLANTING DETAIL

NOT TO SCALE

Revision

No. Date By Cld. Appr.

Title: PRELIMINARY LANDSCAPE NOTES AND DETAILS
22330 HATHAWAY AVE.
HAYWARD, CA 94541
COSTCO FUEL FACILITY #823

For: **COSTCO GASOLINE**
COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027



Scale: Horizontal 1"=20'
Vertical 1"=20'

Designed: BS
Drawn: BS
Checked: BS/JMK
Approved: JMK
Date: 4/28/17

18215 72ND AVENUE SOUTH
KENT, WA 98032
(425)251-6222
(425)251-8752 FAX
CIVIL ENGINEERING, LAND PLANNING,
SURVEYING, ENVIRONMENTAL SERVICES



Job Number: 6636
Sheet: L2 of 5

PRELIMINARY LANDSCAPE SOILS REPORT

COSTCO WHOLESALE FUEL FACILITY

22330 HATHAWAY AVE, HAYWARD, CA 94541

COSTCO FACILITY #823

San Jose Office
November 13, 2018
Report 18-306-0100

Evergreen Landcare Inc.
P.O. Box 1929
Fremont, CA 94538

Attn: Mark Oliver
RE: Costco, Hayward

Background

One sample was processed on November 2, 2018 identified as site soil from a depth of 12 inches from areas that are scheduled for new landscaping. Conventional and organic fertilizer and amendment recommendations were requested. The samples were analyzed for horticultural suitability, fertility, and physical characteristics. The results of the analyses are attached.

Analytical Results and Comments

The reaction of the sample is slightly alkaline at a pH of 7.2 with medium qualitative lime present. This is within the range preferred for most plants. Salinity (ECe), sodium and boron are safely low. The sodium adsorption ratio (SAR) indicates that sodium is adequately balanced by soluble calcium and magnesium; this balance is important for soil structure quality, which relates to the rate at which water infiltrates the soil.

According to the USDA Soil Classification system, the texture of the less than 2mm fraction of the soil is classified as sandy loam. Organic matter content is moderate at 4.0% dry weight. Based on this information the estimated infiltration rate is a moderate 0.29 inch per hour. Infiltration rates may vary due to differences in compaction across the site.

In terms of soil fertility, nitrogen and potassium are low. All of the other major nutrients are sufficient for proper plant nutrition at this time. Of the micronutrients, copper and zinc are sufficient while manganese and iron are fair.

Recommendations

Incorporation of nitrogen and potassium fertilizers is recommended at the time of planting. Incorporation of a nitrogen stabilized amendment or composted greenwaste product is also recommended in order to help improve soil nutrient holding capacity and porosity. If a composted greenwaste amendment is chosen, that would provide additional phosphorus and potassium as well as micronutrients, product depending.

The primary symptom of manganese and iron deficiencies is a general yellowing of leaves with veins remaining green. In severe cases, leaves may become pale yellow or whitish, but veins remain green. Brown spots may develop between veins and leaf margins may turn brown. Manganese deficiency symptoms appear first on younger leaves. Iron deficiency shows first and more severely on the newer growth at branch tips. If these symptoms are present after plant installation they may be treated with an application of a chelated micronutrient product at the manufacturer's recommended rate. Incorporation of a composted greenwaste amendment would also provide additional micronutrients and may be sufficient to negate any deficiency, product depending.

1101 S Winchester Blvd., Ste. G-173 San Jose, CA 95128
(408) 727-0330 (408) 727-5125 fax
www.waypointanalytical.com

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Evergreen Landcare Inc.
Report 18-306-0100

To Prepare for Mass Planting:

Drainage of the root zone should be improved by first loosening the top 10 inches of any undisturbed or compacted soil. The following materials should then be evenly spread and thoroughly blended with the top 6 inches of soil to form a homogenous layer:

Amount per 1000 Square Feet Conventional	
4 cubic yards	Nitrogen Stabilized Organic Amendment*
7 pounds	Ammonium Sulfate (21-0-0)
9 pounds	Potassium Sulfate (0-0-50)*

OR

Amount per 1000 Square Feet Organic	
4 cubic yards	Composted Greenwaste Organic Amendment*
6 pounds	Blood Meal (12-0-0)
14 pounds	Feather Meal (12-0-0)
9 pounds	Potassium Sulfate (0-0-50)*

*The rate may change based on the analysis of the chosen organic amendment. This rate is based on 270 lbs. of dry weight of organic matter per cubic yard of amendment. If a composted greenwaste amendment is chosen that provides a substantial amount of potassium, the potassium sulfate should be decreased or omitted accordingly.

For turf areas, the organic amendment should be decreased by half.

To Prepare Backfill For Trees and Shrubs:

- Excavate planting pits at least twice as wide as the diameter of the rootball.
- Soil immediately below the root ball should be left undisturbed to provide support but the sides and the bottom around the side should be cultivated to improve porosity.
- The top of the rootball should be at or slightly above final grade.
- The top 12 inches of backfill around the sides of the rootball of trees and shrubs may consist of the above amended soil or may be prepared as follows:

4 parts	Site Soil Conventional
1 part	Nitrogen Stabilized Organic Amendment*

Uniformly blended with:

Amount per Cubic Yard of Backfill Conventional	
1/3 pound	Ammonium Sulfate (21-0-0)
1/2 pound	Potassium Sulfate (0-0-50)*

OR

4 parts	Site Soil Organic
1 part	Composted Greenwaste Organic Amendment*

Uniformly blended with:

Amount per Cubic Yard of Backfill Organic	
1/3 pound	Blood Meal (12-0-0)
3/4 pound	Feather Meal (12-0-0)
1/2 pound	Potassium Sulfate (0-0-50)*

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Page 2 of 4

Evergreen Landcare Inc.
Report 18-306-0100

- Backfill below 12 inches required for 24 inch box or larger material should not contain the organic amendment, soil sulfur, ammonium sulfate, blood meal or feather meal but should still contain the potassium sulfate at the recommended rate.
- Ideally a weed and turf free zone should be maintained just beyond the diameter of the planting hole. A 2-4 inch deep layer of coarse mulch can be placed around the tree or shrub. Mulch should be kept a minimum 4 inches from the trunk.
- Irrigation of new plantings should take into consideration the differing texture of the rootball substrate and surrounding soil matrix to maintain adequate moisture during this critical period of establishment.

Maintenance

For turf areas, new sod should receive a light fertilization 2 weeks after planting with 16-6-8 applied at a rate of 4 pounds per 1000 square feet. For turf from seed this application should be after the first mowing. The area may then be maintained with primarily a nitrogen program of applying 5 pounds of ammonium sulfate (21-0-0) per 1000 square feet. Treatment should be at 45 to 60 day intervals until the turf becomes well established. Once the turf is well established, the frequency of fertilization should be decreased depending on color and rate of growth desired. In the spring and fall substitute a complete fertilizer such as 15-15-15 to help insure continuing adequate phosphorus and potassium.

Maintenance fertilization for other areas should rely primarily on a nitrogen only program supplemented with a complete fertilizer in the fall and spring. Beginning 45-60 days after planting, ammonium sulfate (21-0-0) should be applied at a rate of 5 pounds per 1000 square feet with reapplication every 45-60 days. Alternatively, slow release Sulfur-coated Urea (43-0-0) may be applied at 6 pounds per 1000 square feet every 90 days. Once plants are performing satisfactorily, the frequency of fertilization may be decreased depending on color and rate of growth desired. In the winter for a quick greening effect, calcium nitrate (15.5-0-0) may be applied at a 6 pound rate if applicable. Early fall and spring, substitute a complete fertilizer such as 15-15-15 to help insure continuing adequate phosphorus and potassium.

Alternatively, Blood Meal (12-0-0) provides available nitrogen fairly rapidly while materials such as Feather Meal (12-0-0), Soybean or Cotton Seed Meal (7-1-1) are slower to provide available nitrogen, but they extend the length of time they make this contribution. In order to provide a good supply of nitrogen for a 3-4 month time frame a good combination would be 6 pounds Blood Meal and 14 pounds Feather Meal per 1000 square feet. In the fall and spring, substitute a complete organic fertilizer such as 5-5-5 applied at the manufacturer's label rate. Or, nutrient rich composted greenwaste may be spread in a 1 to 2 inch layer, which generally carries enough nutrition to boost complete nutrition though a source of nitrogen might also be added at a half rate to assure adequate nitrogen availability.

If we can be of any further assistance, please feel free to contact us.

Alucchesi

Annamarie Lucchesi
alucchesi@waypointanalytical.com

Emailed 4 Pages: markoliver@evergreenlandcare.net

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Page 3 of 4

Project : Costco
Hayward

COMPREHENSIVE SOIL ANALYSIS

Report No : 18-306-0100
Purchase Order :
Date Recd : 11/02/2018
Date Printed : 11/09/2018
Page : 1 of 1

Sample Description - Sample ID	Half Sat	pH	ECe dS/m	NO ₃ -N ppm	NH ₄ -N ppm	PO ₄ -P ppm	K ppm	Ca ppm	Mg ppm	Cu ppm	Zn ppm	Mn ppm	Fe ppm	Organic % dry wt.	Lab No.
	%	Qual													
Site Soil 6-12"	27	7.2	0.7	2	17	26	94	3332	360	2.8	4.5	9	36	4.0	26919
	196	Medium		0.4	0.8	0.4	1.0	0.8	1.1	0.5	0.4	0.4			

Saturation Extract Values				Gravel %		Percent of Sample Passing 2 mm Screen					USDA Soil Classification	Lab No.			
Ca	Mg	Na	K	SO ₄	SAR	Coarse 6-12	Fine 2-6	Very Coarse 1-2	Coarse 0.6-1	Med. to Very Fine 0.05-0.6			Silt 002-06	Clay 0-002	
meq/L	meq/L	meq/L	meq/L	ppm	meq/L										
5.2	1.7	1.4	0.3	0.07	2.2	0.8	9.2	14.7	9.6	10.4	36.7	25.1	19.1	Gravelly Sandy Loam	26919

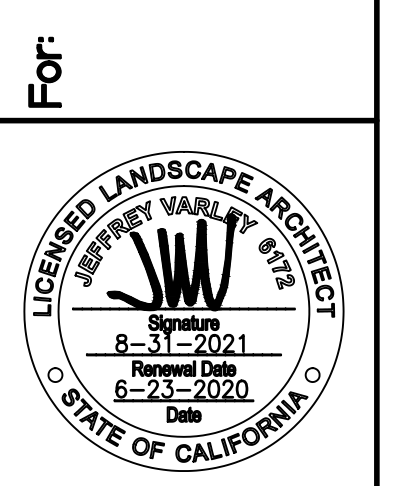
Sufficiency factor (1=Coefficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=proportion field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) & Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m). Boron (B), Sulfate(SO₄) Sodium(Na). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters. Organic percentage determined by Walkley Black or Loss on Ignition.
* LOW - SUFFICIENT - HIGH
Page 4 of 4

Revision

No. Date By Cld. Appr.

Title:
PRELIMINARY LANDSCAPE SOILS REPORT
22330 HATHAWAY AVE.
HAYWARD, CA 94541
COSTCO FUEL FACILITY #823

COSTCO GASOLINE
COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027



Scale:
Horizontal
Vertical
1"=20'

Designed: BS
Drawn: BS
Checked: BS/JMK
Approved: JMK
Date: 4/28/17

18215 72ND AVENUE SOUTH
KENT, WA 98032
(425)251-6222
(425)251-8762 FAX
CIVIL ENGINEERING, LAND PLANNING,
SURVEYING, ENVIRONMENTAL SERVICES



Job Number
6636

Sheet
L3 of 5


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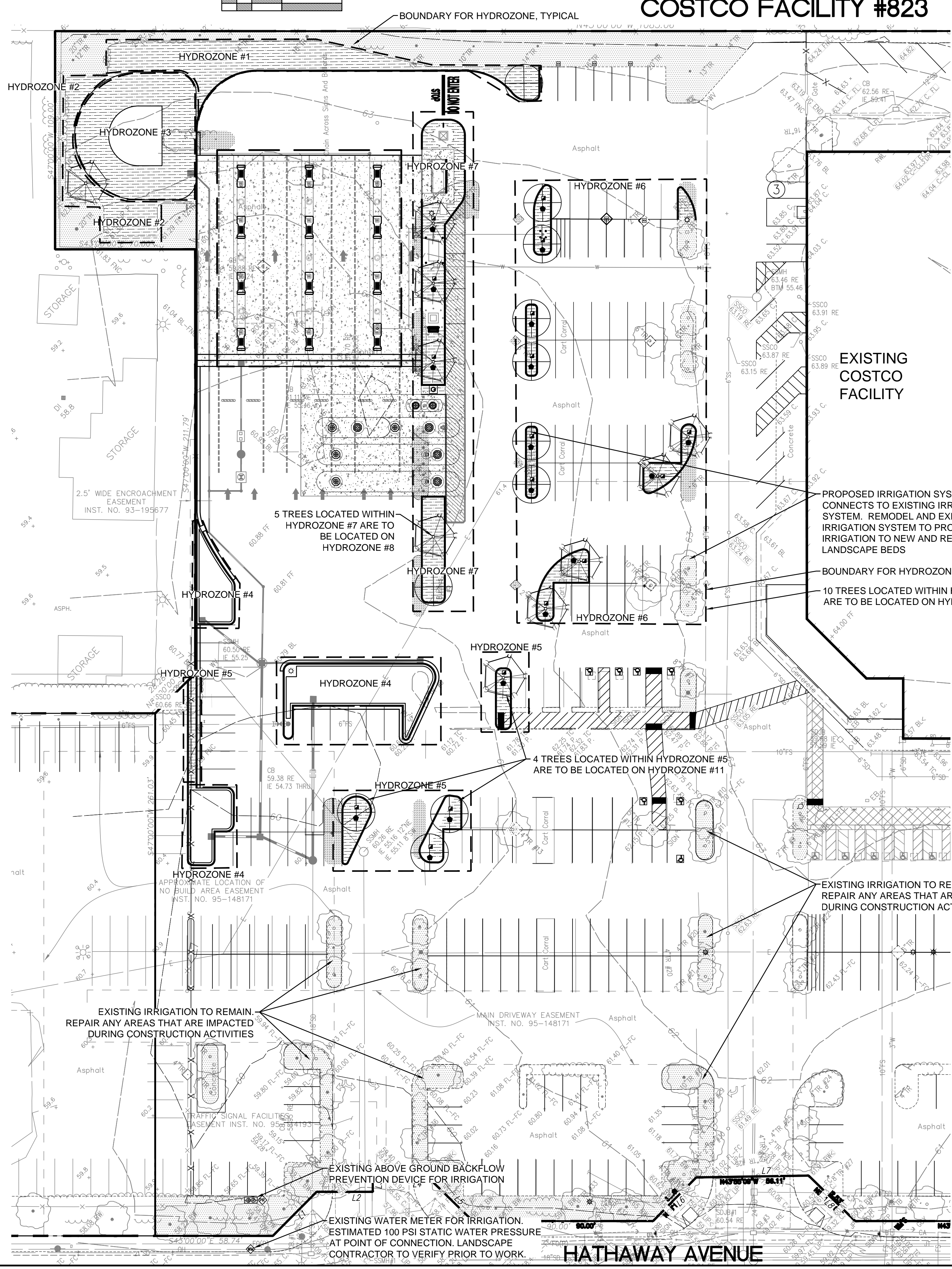
PRELIMINARY IRRIGATION PLAN

COSTCO WHOLESALE FUEL FACILITY

22330 HATHAWAY AVE, HAYWARD, CA 94541

COSTCO FACILITY #823


 6-23-2020
 LANDSCAPE ARCHITECT SIGNATURE and DATE
 I HAVE COMPLIED WITH THE CRITERIA OF THE CITY OF HAYWARD BAY-FRIENDLY
 WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT
 USE OF WATER IN THE LANDSCAPE AND IRRIGATION DESIGN PLAN



MAWA - MAXIMUM APPLIED WATER ALLOWANCE

$$\text{MAWA} = ((44.2)(0.62)) (14,246 \text{ SQ FT} \times 0.45)$$

$$27,404 \times 14,246 = 390,397 \text{ GALLONS PER YEAR}$$

ETWU - ESTIMATED TOTAL WATER USE

HYDROZONE TABLE	PLANT FACTOR	IRRIGATION METHOD	IRRIGATION EFFICIENCY	ETAF	LANDSCAPE AREA	ETWU
HYDROZONE #1	0.3	DRIP	0.81	0.45	2,610 SQ FT	32,181 GALLONS PER YEAR
HYDROZONE #2	0.3	DRIP	0.81	0.45	1,246	1,800
HYDROZONE #3	0.3	DRIP	0.81	0.45	3,368	41,527
HYDROZONE #4	0.3	DRIP	0.81	0.45	2,983	36,780
HYDROZONE #5	0.3	DRIP	0.81	0.45	1,040	12,823
HYDROZONE #6	0.3	DRIP	0.81	0.45	1,746	21,528
HYDROZONE #7	0.3	DRIP	0.81	0.45	1,253	15,449
HYDROZONE #9	0.3	BUBBLER	0.81	0.45	100	1,233
HYDROZONE #10	0.3	BUBBLER	0.81	0.45	200	2,466
HYDROZONE #11	0.3	BUBBLER	0.81	0.45	80	986

TOTAL ESTIMATED WATER USE: 166,773

IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION- TREE WATERING EMITTERS	MIN. PSI	EMITTER SPACING	EMITTER GPM	MAXIMUM LINEAR FT.
■	RAINBIRD RWS-B-C-1401 36" ROOT ZONE WATERING SYSTEM, ONE AT EACH PROPOSED TREE	20	AS SHOWN ON PLAN	.25	N/A
●	RAINBIRD PC-18 PRESSURE COMPENSATING THREADED BUBBLER, INSTALL ONE OF EACH AT EACH TREE. INSTALL ON 12" HEIGHT PVC RISER (24 GALLONS PER HOUR, 0.3 GALLONS PER MINUTE)	20	AS SHOWN ON PLAN	.3	N/A




SYMBOL	DESCRIPTION- SUB-SURFACE DRIP TUBING	MIN. PSI	EMITTER SPACING	EMITTER GPH	MAXIMUM LINEAR FT.
■	NETAFIM LANDSCAPE TECHLINE DRIPLINE COMPONENTS: TO BE USED WITH NETAFIM LT-INSERT-17MM FITTINGS	20	12"	.26	594 @ 45 PSI
■	TLCV26-1210 - SUB-SURFACE DRIP IRRIGATION FOR PLANTING AREAS WITH GROUND COVER, SHRUBS AND TREES	20	12"	.26	594 @ 45 PSI

NO SYMBOL	NETAFIM: 10-CV-01	DRIP SYSTEM OPERATION/PRESSURE INDICATOR STAKES, PROVIDE FOR EACH ZONE
NO SYMBOL	NETAFIM: TLS6	SOIL STAPLES, AT 5 FEET ON CENTER
NO SYMBOL	NETAFIM: TLSOV	DRIPLINE FLUSH VALVE: 1 PER IRRIGATION ZONE. LOCATE AT LOWEST ELEVATION WITHIN EACH ZONE, INSTALL IN 10" VALVE BOX
●	NETAFIM: LVCZ-150-HF	CONTROL ZONE KIT: FLOW 11.0 - 35 GPM, IN VALVE BOX
●	NETAFIM: LVCZS8010075-HF	CONTROL ZONE KIT: FLOW 4.5 - 17.6 GPM, IN VALVE BOX
●	NEW VALVE FOR TREE IRRIGATION, RAINBIRD 100 AND 150 PESB, 1" AND 1-1/2" ELECTRIC REMOTE CONTROL VALVE	
⊗	EXISTING ABOVE-GROUND BACKFLOW PREVENTION DEVICE. LANDSCAPE CONTRACTOR TO VERIFY CONDITION	
⊗	EXISTING WATER METER. LANDSCAPE CONTRACTOR TO VERIFY CONDITION	
⊗	EXISTING PRESSURE REDUCING VALVE. LANDSCAPE CONTRACTOR TO VERIFY CONDITION	

---	MAINLINE - MATCH EXISTING TYPE AND SIZE. OTHERWISE USE, SCH 40 PVC (18" COVER); 1-1/2" SIZE MINIMUM
---	LATERAL - MATCH EXISTING TYPE AND SIZE. OTHERWISE USE 40 PVC (12" COVER); SIZE PER PLAN, 3/4" SIZE MINIMUM
---	SLEEVE - MATCHING EXISTING TYPE AND SIZE. OTHERWISE, USE CLASS 200 PVC; 24" MINIMUM COVER AT VEHICLE CROSSINGS; TWICE THE SIZE OF INSERT PIPE AND/OR WIRES, 64 SIZE MINIMUM, COORDINATE WITH GENERAL AND PAVING CONTRACTORS

SCH 40 PIPE SIZING CHART

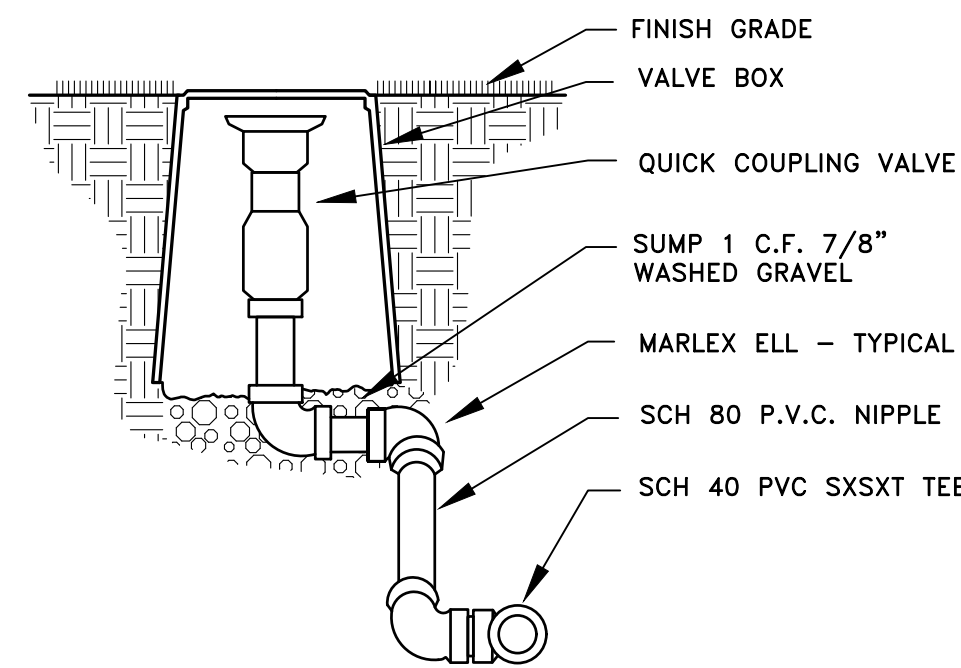
PIPE SIZE	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	GPM (MAX.)
FLOW							
GPM	1-8	8.1-13	13.1-23	23.1-32	32.1-53	53.1-74	

Revision									
No.	Date	By	Ckd.	Appr.	Title:				
					PRELIMINARY IRRIGATION PLAN 22330 HATHAWAY AVE. HAYWARD, CA 94541 COSTCO FUEL FACILITY #823				
									
For:									
COSTCO WHOLESALE 999 LAKE DRIVE ISSAQUAH, WA 98027									
									
Scale:									
Horizontal					Vertical				
					1"=20'				
Designed	BS	Drawn	BS	Checked	BS/JM	Approved	JMV	Date	4/28/17
18215 72ND AVENUE SOUTH KENT, WA 98032 (425)251-6222 (425)251-8782 FAX CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES									
									
Job Number	6636				Sheet	L4 5			
<small>File: P:\060000\6636\preliminary\6636-pl.dwg Date: /time: 5/29/2020 9:25 AM Scale: 0.009888 Xref: ---</small>									

LANDSCAPE IRRIGATION NOTES

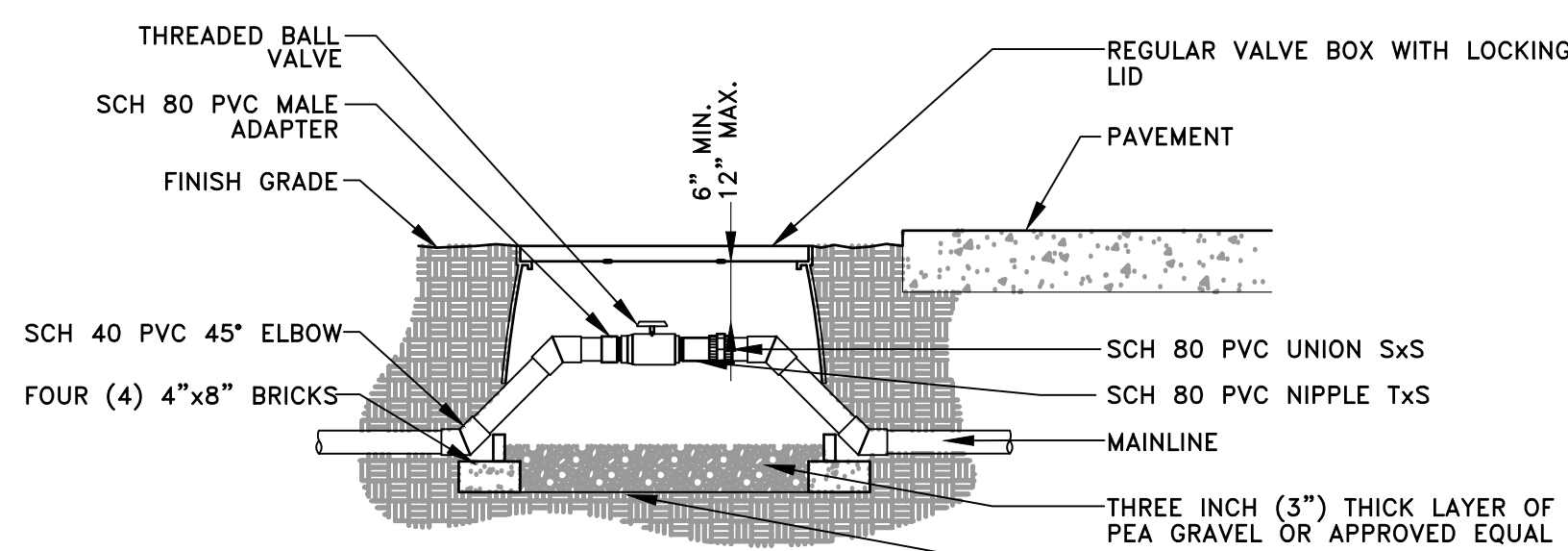
- GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR TO COORDINATE:
 - VERIFICATION OF STATIC WATER PRESSURE AT POINT-OF-CONNECTION (P.O.C.) CONTRACTOR SHALL NOTIFY OWNER AND BARGHAUSEN CONSULTING ENGINEERS, INC., OF ANY VARIATION IN STATIC PRESSURE OVER 5 PSI GREATER/LESS THAN DESIGN PRESSURE.
 - INSTALLATION OF SLEEVING.
- LANDSCAPE CONTRACTOR TO TEST AVAILABLE WATER PRESSURE AND PROVIDE WRITTEN TEST RESULTS TO LANDSCAPE ARCHITECT PRIOR TO BEGINNING ANY WORK.
- ALL WORK PER LOCAL CODE. INSTALLATION PER MANUFACTURER'S WRITTEN SPECIFICATIONS.
- 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 AND LATERALS 12 INCHES BELOW FINISH GRADE. NO ROCK OR DEBRIS TO BE BACKFILLED OVER PIPE.
- IRRIGATION DESIGN SHOWN DIAGRAMATICALLY FOR PLAN CLARITY. PRIOR TO INSTALLATION OF DRIP IRRIGATION, CONTRACTOR IS REQUIRED TO CONTACT LOCAL NETAFIM REPRESENTATIVE FOR TRAINING ON THE INSTALLATION AND RUN TIME MANAGEMENT OF DRIP SYSTEM AND NOTIFY LANDSCAPE ARCHITECT THAT FACTORY TRAINING HAS OCCURRED PRIOR TO INSTALLATION. CONTACT CALIFORNIA NETAFIM LANDSCAPE & TURF REPRESENTATIVE (888)638-2346. PLEASE GIVE REPRESENTATIVE A MINIMUM TWO WEEK NOTICE.
- DRIP TUBING SHALL BE INSTALLED FOUR (4) INCHES BELOW FINAL GRADE. CONTRACTOR RUN EACH ZONE BEFORE COVERING TUBING, TO VERIFY THAT THERE ARE NO CONNECTION LEAKS. TREES TO BE INSTALLED ON A SEPARATE ZONE. SEE IRRIGATION DETAILS FOR ADDITIONAL INFORMATION.
- PROVIDE OWNER WITH TWO (2) SETS "AS-BUILT" DRAWINGS AND (3) SETS OF OPERATOR'S MANUALS UPON COMPLETION. INSTRUCT OWNER AS TO PROPER OPERATION AND WINTERIZATION OF THE IRRIGATION SYSTEM.
- FAMILIARIZE OWNERS FACILITY OPERATOR WITH IRRIGATION SYSTEM FUNCTION, CONTROLLER PROGRAMMING, SYSTEM OPERATION AND MAINTENANCE REQUIREMENTS.
- 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.
- 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.
- 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 INITIAL INSPECTION.
- 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 TO THE ABOVE DATES, OR AS FREEZE/PRECIPITATION CONDITIONS DETERMINE SERVICE NEED.
- PROPOSED IRRIGATION SHOWN IN THIS DRAWING SET IS TO CONNECT TO AN EXISTING ESTABLISHED IRRIGATION SYSTEM. LANDSCAPE CONTRACTOR IS TO VERIFY THAT EXISTING SYSTEM, SUCH AS IRRIGATION CONTROLLER AND MAINLINE, HAVE ENOUGH CAPACITY TO HANDLE THE ADDITIONAL COMPONENTS. LANDSCAPE CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT IF ANY OF THE EXISTING SYSTEM DOES NOT HAVE THE CAPACITY FOR THE PROPOSED ADDITIONS.
- SUBSTITUTION OF IRRIGATION MATERIAL/EQUIPMENT TO BE MADE ONLY UPON WRITTEN APPROVAL OF LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE.
- ALL ZONES TO PASS A MINIMUM DISTRIBUTION UNIFORMITY WATER AUDIT, AS REQUIRED BY THE STATE OF CALIFORNIA'S WATER EFFICIENT LANDSCAPE ORDINANCE, AS REQUIRED BY THE CITY COUNCIL. AN IRRIGATION ASSOCIATION CERTIFIED WATER AUDIT REPORT TO BE PROVIDED TO THE CITY.

PRELIMINARY IRRIGATION NOTES AND DETAILS
COSTCO WHOLESALE FUEL FACILITY
22330 HATHAWAY AVE, HAYWARD, CA 94541
COSTCO FACILITY #823



QUICK COUPLING VALVE DETAIL

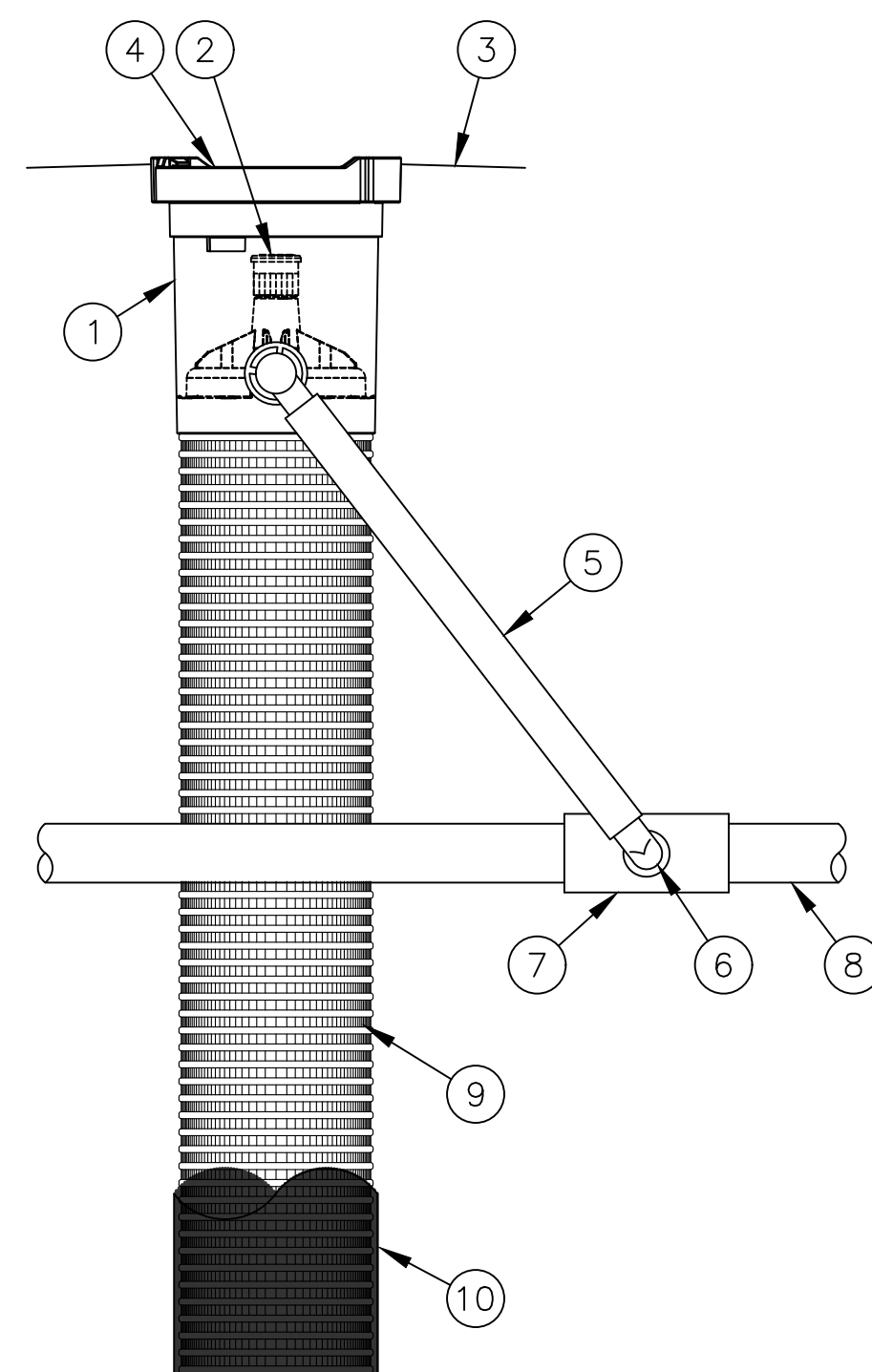
NOT TO SCALE



- NOTE:
- LOCATE VALVE BOXES IN PLANTING AREAS.
 - WRAP VALVE BOX WITH A MINIMUM OF 3 MIL THICK PLASTIC AND SECURE IT USING DUCT TAPE OR ELECTRICAL TAPE.
 - ALL THREADED CONNECTIONS TO BE MADE USING TEFLON TAPE.
 - ALL CHANGES IN ELEVATION SHALL BE MADE USING SCH 40 PVC 45° ELBOWS.

BALL VALVE DETAIL

NOT TO SCALE

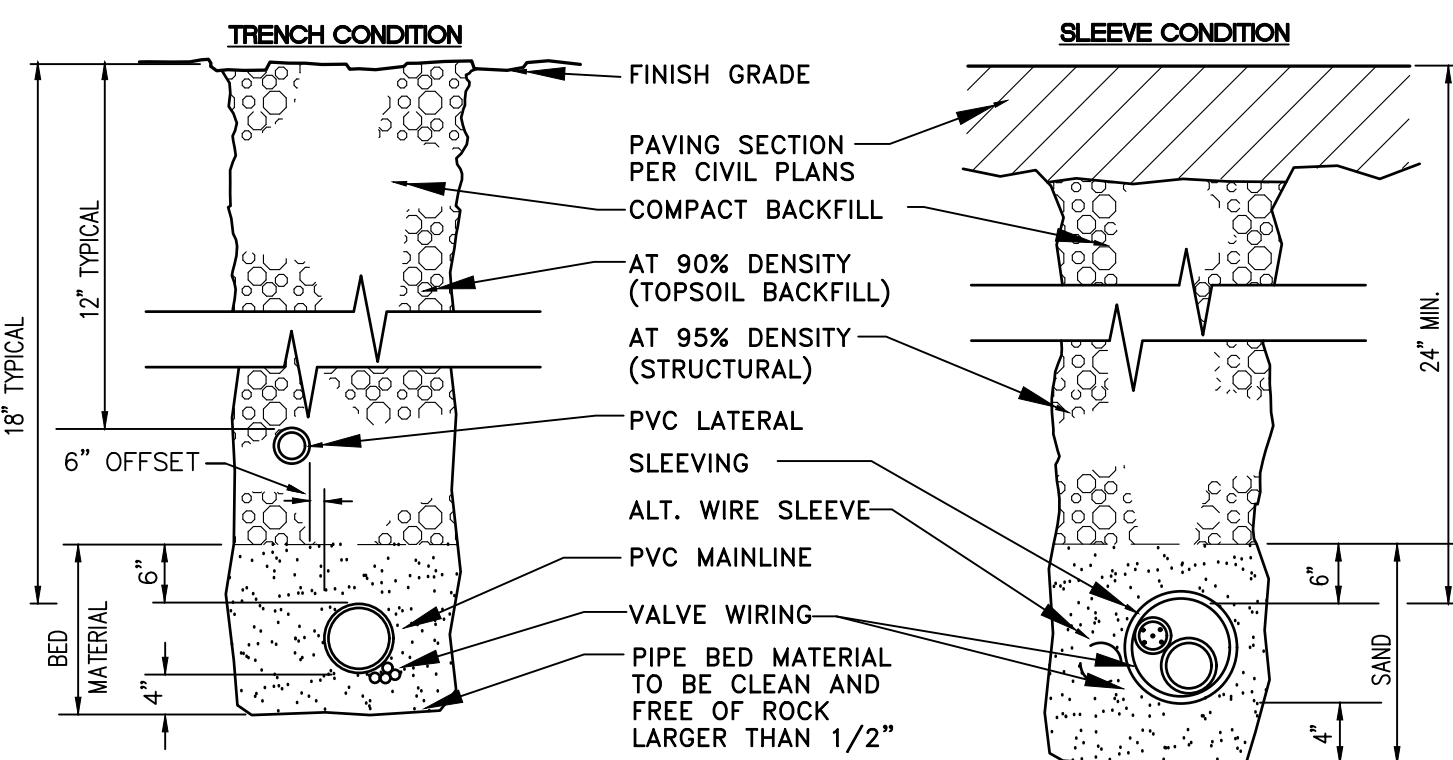


NOTES:

- 4" (10,2 CM) GRATE IS ALSO AVAILABLE IN PURPLE (RWS-GRATE-P).
- INSTALL PRODUCT SO THAT THE GRATE IS EVEN WITH FINISH GRADE OR TOP OF MULCH.
- OPTIONAL SAND SOCK (RWS-SOCK) IS 34" (86,4 CM) IN LENGTH TO COVER MESH BASKET AREA.
- WHEN INSTALLING IN EXTREMELY HARD OR CLAY SOILS, ADD 3/4" (1,9 CM) GRAVEL UNDER AND AROUND THE UNIT TO ALLOW FASTER WATER INFILTRATION AND ROOT PENETRATION.
- ONCE RWS HAS BEEN INSTALLED FILL THE BASKET WITH PEA GRAVEL BEFORE LOCKING LID.

ROOT WATER SYSTEM DETAIL

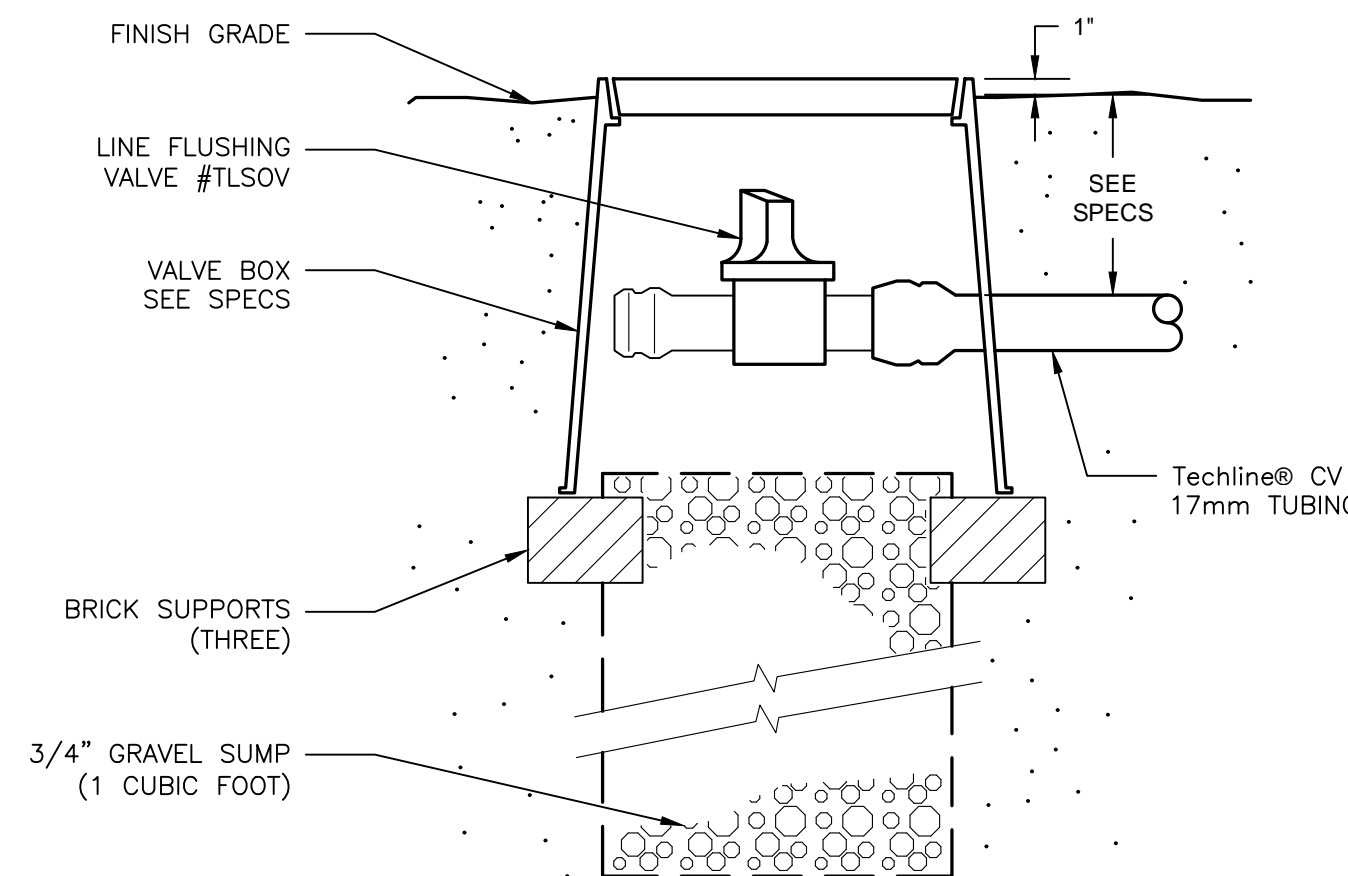
NOT TO SCALE



NOTE:
 SLEEVING MATERIAL SHALL BE PVC CLASS 160(SDR-26). DIMENSIONS ARE MIN. CLEARANCES.
 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 (MODIFIED PROCTOR)

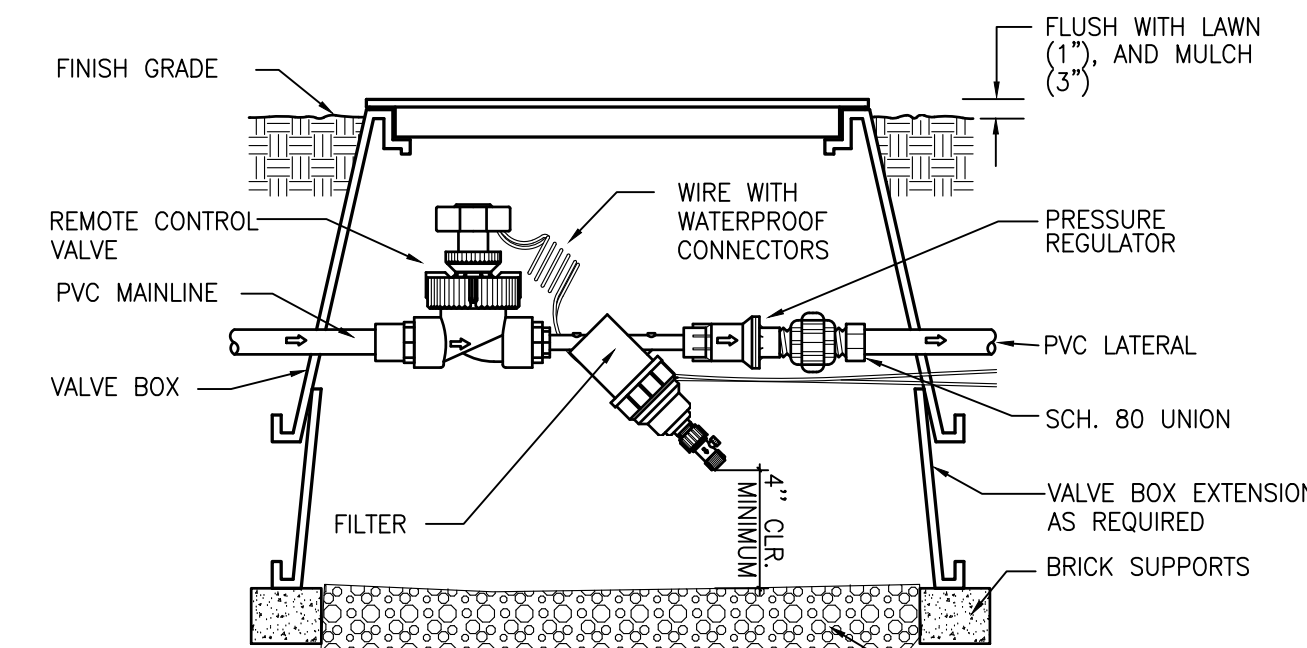
SLEEVE/TRENCHING DETAIL

NOT TO SCALE



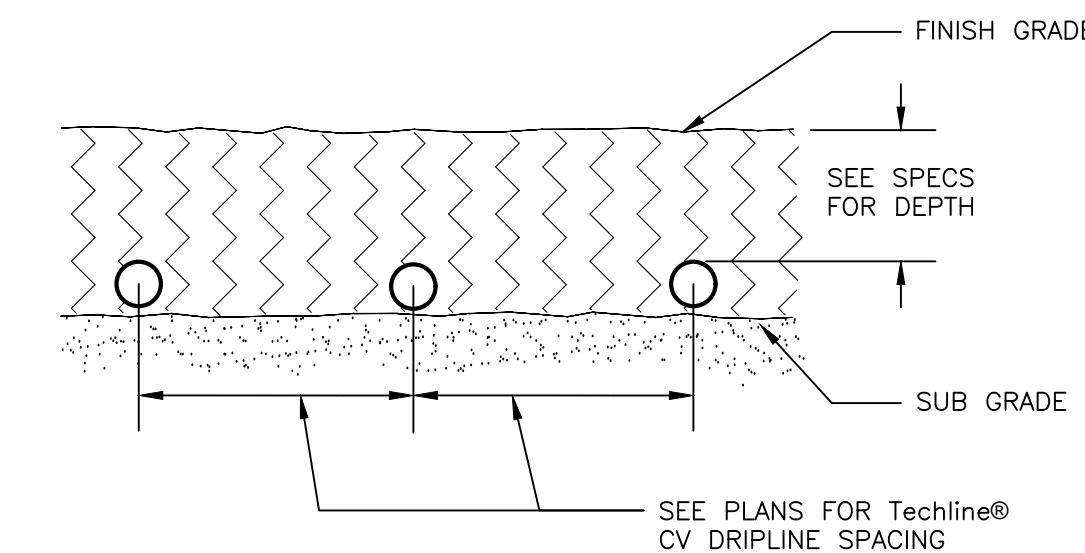
MANUAL LINE FLUSHING VALVE TLISOV PLUMBED TO TUBING

NOT TO SCALE



REMOTE CONTROL VALVE, PRESSURE REGULATOR AND FILTER DETAIL

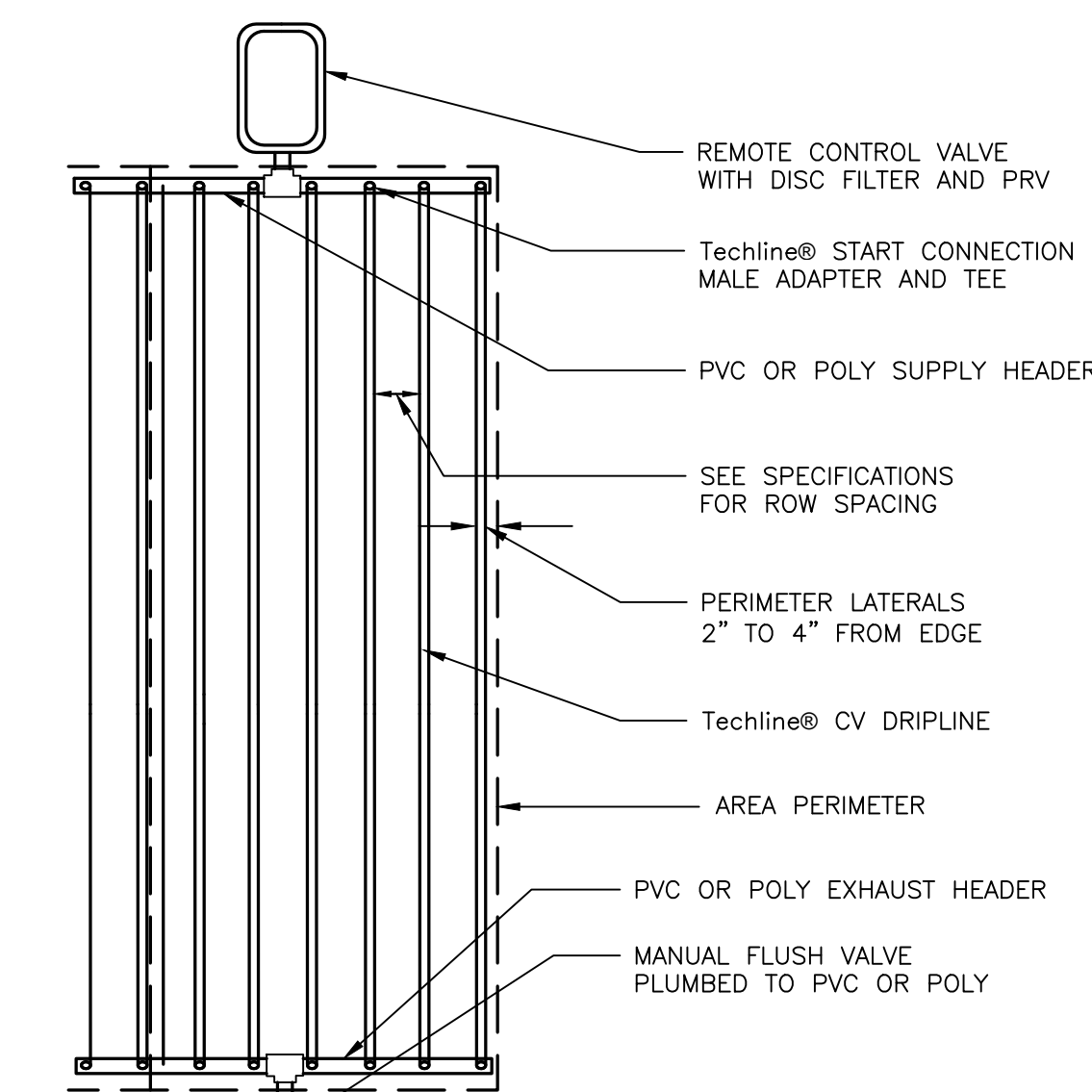
NOT TO SCALE



Techline® CV SUBGRADE INSTALLATION

NOT TO SCALE

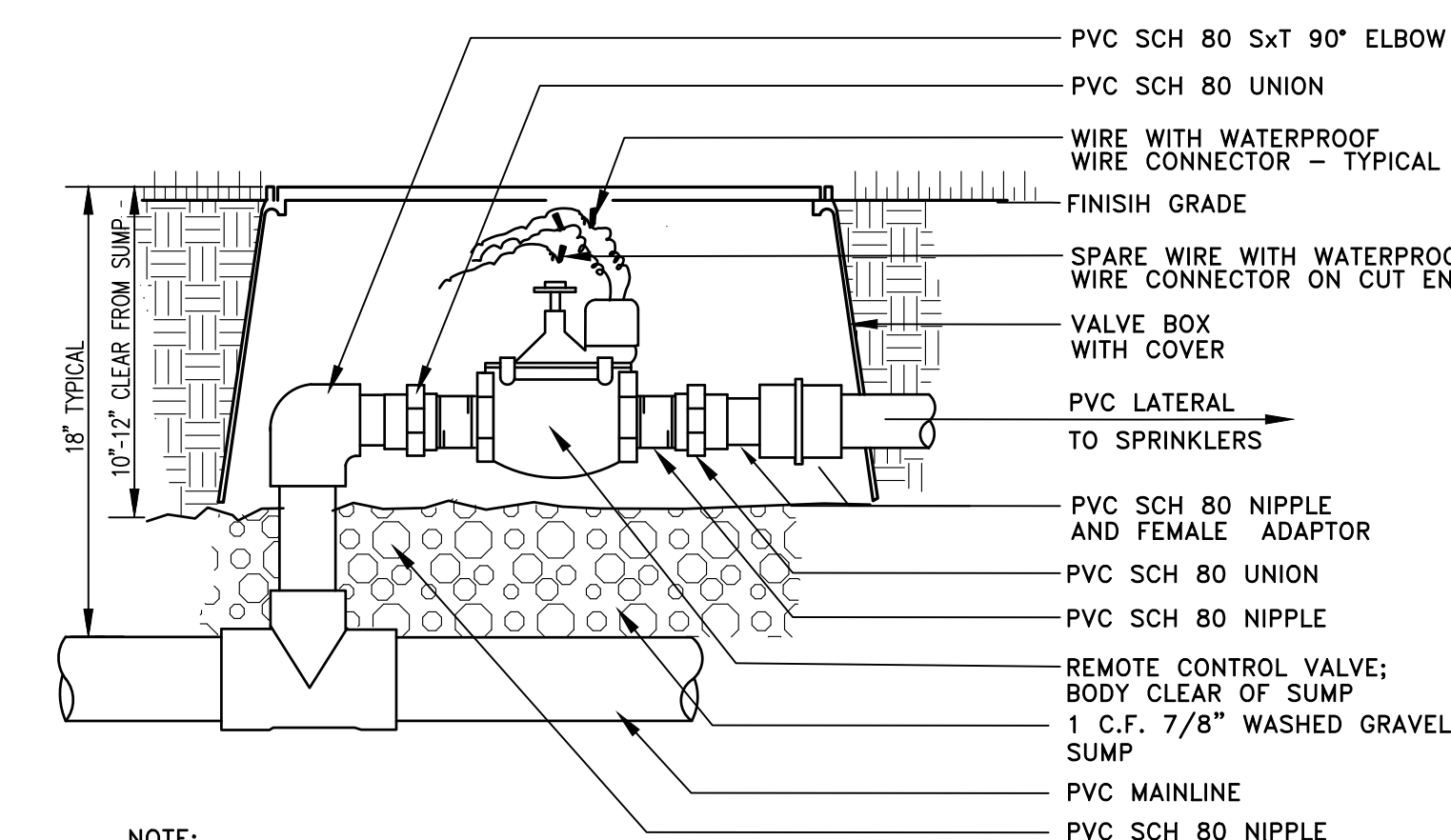
DETAIL - C201



Techline® CV END FEED LAYOUT

NOT TO SCALE

DETAIL - C101



NOTE:
 ONE VALVE PER BOX.
 PROVIDE EXTRA COILS (18") OF EACH WIRE IN VALVE BOX. COMPACT SOIL AROUND VALVE BOX.
 USE TEFLON OR FLOWABLE SEALANT IN ALL THREADED FITTINGS, PER MANUFACTURERS SPEC'S.

REMOTE CONTROL VALVE ASSEMBLY

NOT TO SCALE

Revision
 No. Date By Cld. Appr.

Title:
 PRELIMINARY IRRIGATION NOTES AND DETAILS
 22330 HATHAWAY AVE.
 HAYWARD, CA 94541
COSTCO FUEL FACILITY #823

For:
COSTCO GASOLINE
 COSTCO WHOLESALE
 999 LAKE DRIVE
 ISSAQUAH, WA 98027



Scale:
 Horizontal Vertical
 Designed BS BS
 Drawn BS/AM
 Checked BS/AM
 Approved JMY Date 4/28/17
 1"=20'

18215 72ND AVENUE SOUTH
 KENT, WA 98032
 (425)251-6222 FAX
 (425)251-8752
 CIVIL ENGINEERING, LAND PLANNING,
 SURVEYING, ENVIRONMENTAL SERVICES



Job Number
6636
 Sheet
L5 of 5