



CITY OF CAMPBELL
Community Development Department

June 26, 2015

NOTICE OF PUBLIC HEARING

Notice is hereby given that the Planning Commission of the City of Campbell has set the time of 7:00 p.m., or shortly thereafter, on Tuesday, **July 14, 2015**, in the City Hall Council Chambers, 70 North First Street, Campbell, California, for a Public Hearing to consider the application of Black and Veatch on behalf of First Element Fuel for a Modification (PLN2014-330) to a previously-approved Conditional Use Permit (PLN2008-54) to allow installation of a hydrogen fuel dispensing facility within an existing 24-hour gasoline station (Sunnyoaks Valero) and convenience market with approved beer and wine sales, and a Tree Removal Permit (PLN2015-182) to allow removal of one Palm tree on property located at **2855 S. Winchester Boulevard** the C-2 (General Commercial) Zoning District. Staff is recommending that this project be deemed Categorical Exempt under CEQA.

Interested persons may appear and be heard at this hearing. Please be advised that if you challenge the nature of the above project in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing described in this Notice, or in written correspondence delivered to the City of Campbell Planning Commission at, or prior to, the Public Hearing. Questions may be addressed to the Community Development Department at (408) 866-2140.

Plans and architectural drawings may be viewed at the Planning Division office during normal business hours (8:00 a.m. – 5:00 p.m.) and on the City's 'Public Notices' web page (<http://www.cityofcampbell.com/501/Public-Notices>) under 'Planning Commission'.

Decisions of the Planning Commission may be appealed to the City Council. Appeals must be submitted to the City Clerk in writing within 10 calendar days of an action by the Commission.

In compliance with the Americans with Disabilities Act, listening assistive devices are available for all meetings held in the Council Chambers. If you require accommodation, please contact the Community Development Department at (408) 866-2140, at least one week in advance of the meeting.

PLANNING COMMISSION
CITY OF CAMPBELL
PAUL KERMOYAN
SECRETARY

PLEASE NOTE: When calling about this Notice,
please refer to address: **2855 S. Winchester Boulevard**

Project Location Map

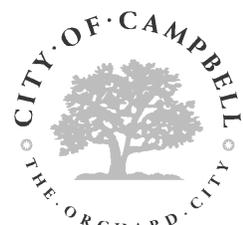
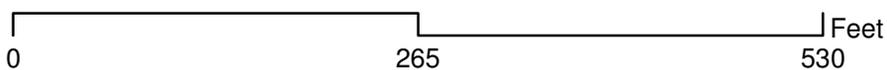


Project Location: 2855 S. Winchester Blvd.

Application Type: CUP Mod.

Planning File No.: PLN2014-330

Description: Hydrogen fueling facility



Community Development Department
Planning Division

PLANNING/ZONING NOTES

PROPERTY SIZE:
 ACRES - 0.419
 SQUARE FEET OF SITE - ± 18,233
 PROJECT AREA (SQUARE FEET) - ± 1288
 GROSS SQUARE FOOTAGE (TO CL OF STREET) : ± 37,088

PROPERTY ZONING: C-2 GENERAL COMMERCIAL
 ZONING DESIGNATION SUBJECT PROPERTY - C2 GENERAL COMMERCIAL
 NORTH PARCEL ZONING CLASS - R1-6 SINGLE FAMILY RESIDENTIAL
 EAST PARCEL ZONING CLASS - C2 GENERAL COMMERCIAL
 WEST PARCEL ZONING CLASS - MT LIGHT INDUSTRIAL

PROPERTY LINES:
 PROPERTY LINE (FRONT) - WINCHESTER BOULEVARD (EAST PROPERTY LINE)
 PROPERTY LINE (REAR) - WESTERN LINE (WEST SUNNYOAKS AVENUE)
 PROPERTY LINE (SIDE) - SOUTHERN LINE (WINCHESTER BLVD)
 PROPERTY LINE (SIDE STREET) - NORTHERN WEST SUNNYOAKS AVENUE

REQUIRED SETBACKS:
 SETBACK (FRONT) - 10'
 SETBACK (REAR INTERIOR) - 10'
 SETBACK (SIDE INTERIOR) - MINIMUM OF 5' OR 1/2 THE HEIGHT OF THE BUILDING WALL ADJACENT TO THE SIDE PROPERTY LINE (WHICHEVER IS GREATER)
 SETBACK (SIDE OR REAR ABUTTING A PUBLIC STREET) - 10'
 SETBACK STATEMENT: PROPOSED LOCATION IS COMPLIANT WITH SETBACK REQUIREMENTS

PARKING:
 PARKING GENERATION RATE - IN ADDITION TO FUELING SPACES, 1 SPACE FOR EACH 200 SQ. FT. OF CONVENIENCE MARKET AREA OR NOT LESS THEN 2 SPACES IF NO CONVENIENCE MARKET.
 REQUIRED NUMBER OF PARKING SPACES - 7
 EXISTING NUMBER OF PARKING SPACES - 8
 NUMBER OF PARKING SPACES TO BE REMOVED WITHBY PROJECT AS SITE PLANNED - ZERO SPACES TO BE REMOVED
 NUMBER OF PARKING SPACES TOTAL AFTER PROJECT - 8
 NUMBER OF SURPLUS PARKING SPACES - 1
 PARKING STATEMENT: EXISTING PARKING TO REMAIN. COMPLIANT WITH CHAPTER 21.28 OF ZONING CODE. NO CHANGES TO EXISTING PARKING, NUMBER, ACCESS, OR LAYOUT/DESIGN ARE PROPOSED WITH THIS PROJECT.

LANDSCAPING:
 EXISTING LANDSCAPING (SQ. FT.) : ± 1000 SQ FT
 SQ FT OF LANDSCAPING WITH "PROJECT" : ± 800 SQ FT

DEVELOPMENT DATA	SQUARE FEET	PERCENT OF SITE
BUILDING COVER	± 1,675	9.19%
LANDSCAPE COVER	± 1,000	5.48%
PAVING COVER	± 15,558	85.33%
FLOOR AREA RATIO: Total Bldg	± 0.00187	0.10%
S.F. Divided by net lot size	± 0.00187	0.10%
TOTAL AREA DISTRIBUTED	0	0.00%
COMPULSIO & EQUIPMENT AREA	± 1,672.57	0.00%
DISPENSER	0	0.00%
COMPULSIO ACCESS	± 200.28	0.00%
TRENCHING	± 266.61	0.00%
LANDSCAPING	± 1,311.28	0.00%
CURB CUTS	± 1,397.52	0.00%
	0	0.00%

ENTITLEMENT(S) EXISTING:
 MOST RECENT CUP INCLUDES: CUP PL N2008-54 (RES. 3879)

ENTITLEMENT(S) PROPOSED:
 MODIFICATION TO EXISTING CUP
 REVIEW BY CITY SITE AND ARCHITECTURAL REVIEW
 COMMITTEE
 PLANNING COMMISSION APPROVAL

LIGHTING NOTE
 PROPOSED LIGHTING SHALL MATCH EXISTING LIGHTING IN TERMS OF DESIGN, MATERIALS & COLOR.

OPERATIONAL STATEMENT
 THE FIRST ELEMENT HYDROGEN REFUELING STATION WILL BE SERVICED BY A TWO-TANK FUELING TRUCK. BY THE YEAR 2016, THE TANK-TRUCK WILL REFUEL ON-SITE APPROXIMATELY 6 TIMES A WEEK. BY 2016, APPROXIMATELY 43 CUSTOMER TRIPS A DAY ARE ANTICIPATED. THIS FACILITY WILL OPERATE 24/7. THERE WILL BE NO ON-SITE EMPLOYEES. HOWEVER EXISTING GAS STATION PERSONNEL WILL BE AVAILABLE TO ASSIST CUSTOMERS WITH THE REFUELING PROCESS. THE FACILITY WILL BE OPEN FOR CUSTOMERS AND TO THE ERAM (ENTERPRISE REMOTE ACCESS MONITORING) SYSTEM. THE ERAM SYSTEM WILL MONITOR THE FACILITY'S ACTIVITY VIA ON-SITE SURVEILLANCE EQUIPMENT. A 1-800 NUMBER WILL BE POSTED ONSITE TO REACH A LIVE PERSON 24/7.

PROJECT NO:	182622
DRAWN BY:	SPJ
CHECKED BY:	NMB

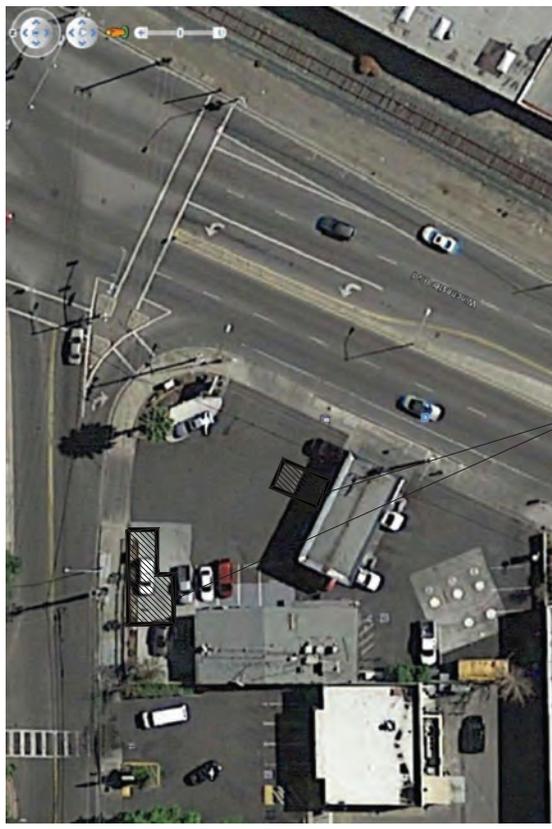
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2	04/08/15	RESUBMIT FOR ZONING	
1	03/23/15	RESUBMIT FOR ZONING	
0	11/28/14	ISSUED FOR ZONING	
REV	DATE	DESCRIPTION	

IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THE NAME APPEARS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

CA-FE1004
 N CAMPBELL
 2855 WINCHESTER BOULVARD
 CAMPBELL, CA 95070

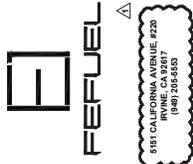
SHEET TITLE
ZONING NOTES

SHEET NUMBER
ZN-1



PROPOSED SITE LOCATION

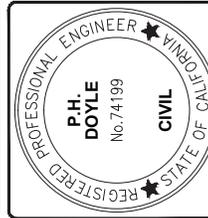
AERIAL PHOTO
 NO SCALE



BLACK & VEATCH
10880 GRANDVIEW DRIVE
OVERLAND PARK, KS 66210
(913) 865-2000

PROJECT NO: 182822
DRAWN BY: SPJ
CHECKED BY: NMB

REV	DATE	DESCRIPTION
3	08/17/15	REISSUED FOR ZONING
2	04/01/15	REISSUED FOR ZONING
1	03/23/15	REISSUED FOR ZONING
0	11/26/14	ISSUED FOR ZONING

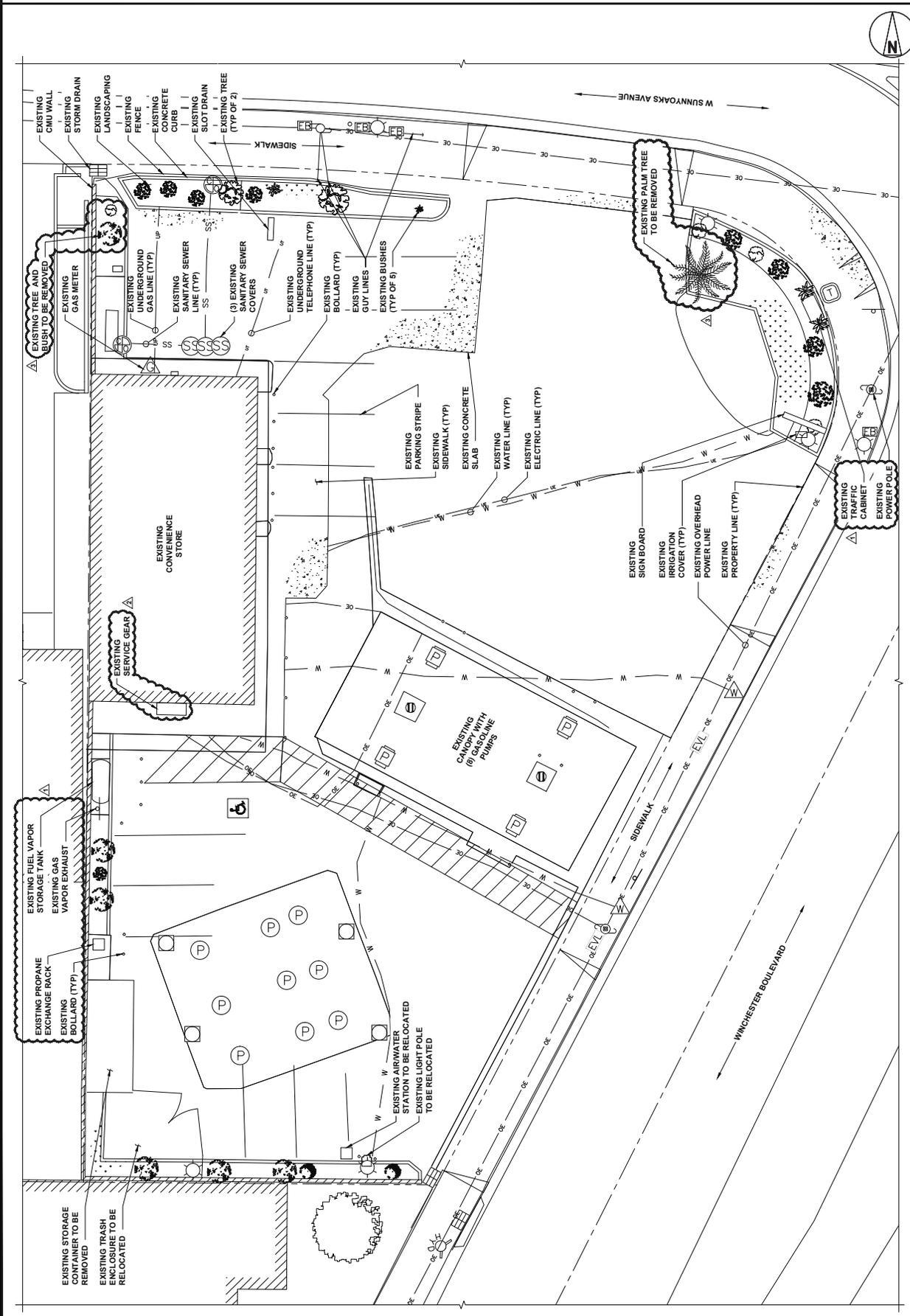


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CAMPBELL, CA 95070

SHEET TITLE
EXISTING SITE PLAN

SHEET NUMBER
Z-3



EXISTING SITE PLAN



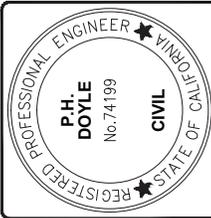
515 CALIFORNIA AVENUE #220
IRVINE, CA 92617
(949) 255-6552



BLACK & VEATCH
1088 GRANDVIEW DRIVE
OVERLAND PARK, KS 66210
(913) 485-3800

PROJECT NO: 182622
DRAWN BY: SPJ
CHECKED BY: NMB

REV	DATE	DESCRIPTION
3	08/17/18	REISSUED FOR ZONING
2	04/09/18	REISSUED FOR ZONING
1	03/29/18	REISSUED FOR ZONING
0	11/28/14	ISSUED FOR ZONING

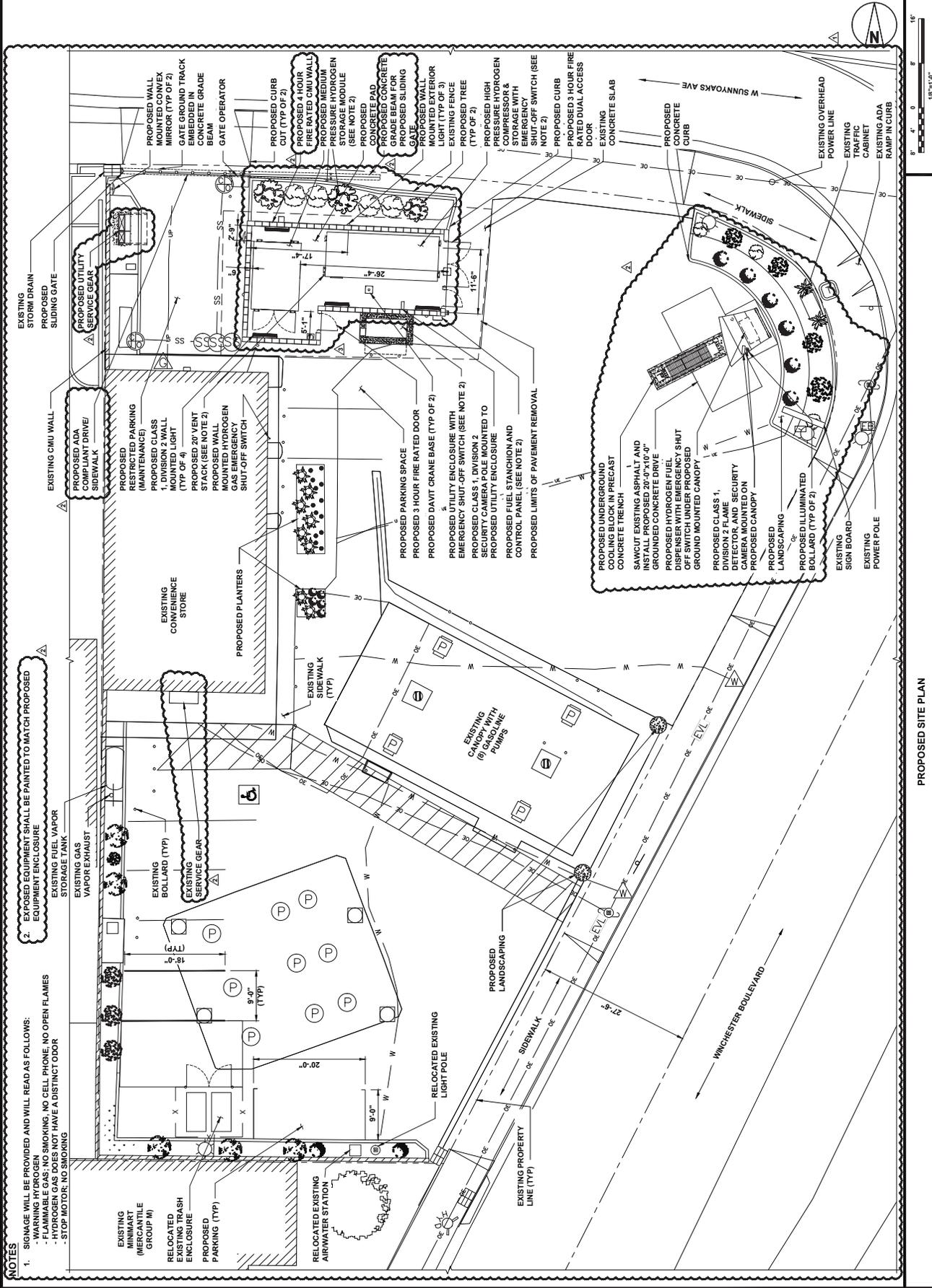


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SHEET TITLE
PROPOSED SITE PLAN

SHEET NUMBER
Z-4

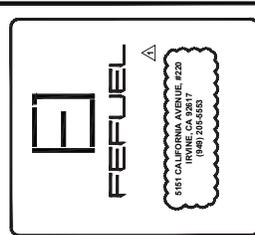


NOTES

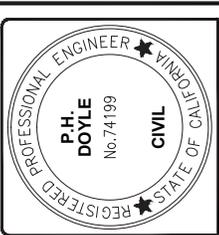
- SIGNAGE WILL BE PROVIDED AND WILL READ AS FOLLOWS:
 - WARNING HYDROGEN
 - WARNING GAS, SMOKING, NO CELL PHONE, NO OPEN FLAMES
 - HYDROGEN GAS, NO FLAME, NO DISTRACT ODOR
 - STOP MOTOR, NO SMOKING
- EXPOSED EQUIPMENT SHALL BE PAINTED TO MATCH PROPOSED EQUIPMENT ENCLOSURE

PROPOSED SITE PLAN





PROJECT NO:	182622	
DRAWN BY:	SPJ	
CHECKED BY:	NMB	
REV	DATE	DESCRIPTION
3	08/17/15	REISSUED FOR ZONING
2	08/05/15	REISSUED FOR ZONING
1	03/25/15	REISSUED FOR ZONING
0	11/28/14	ISSUED FOR ZONING



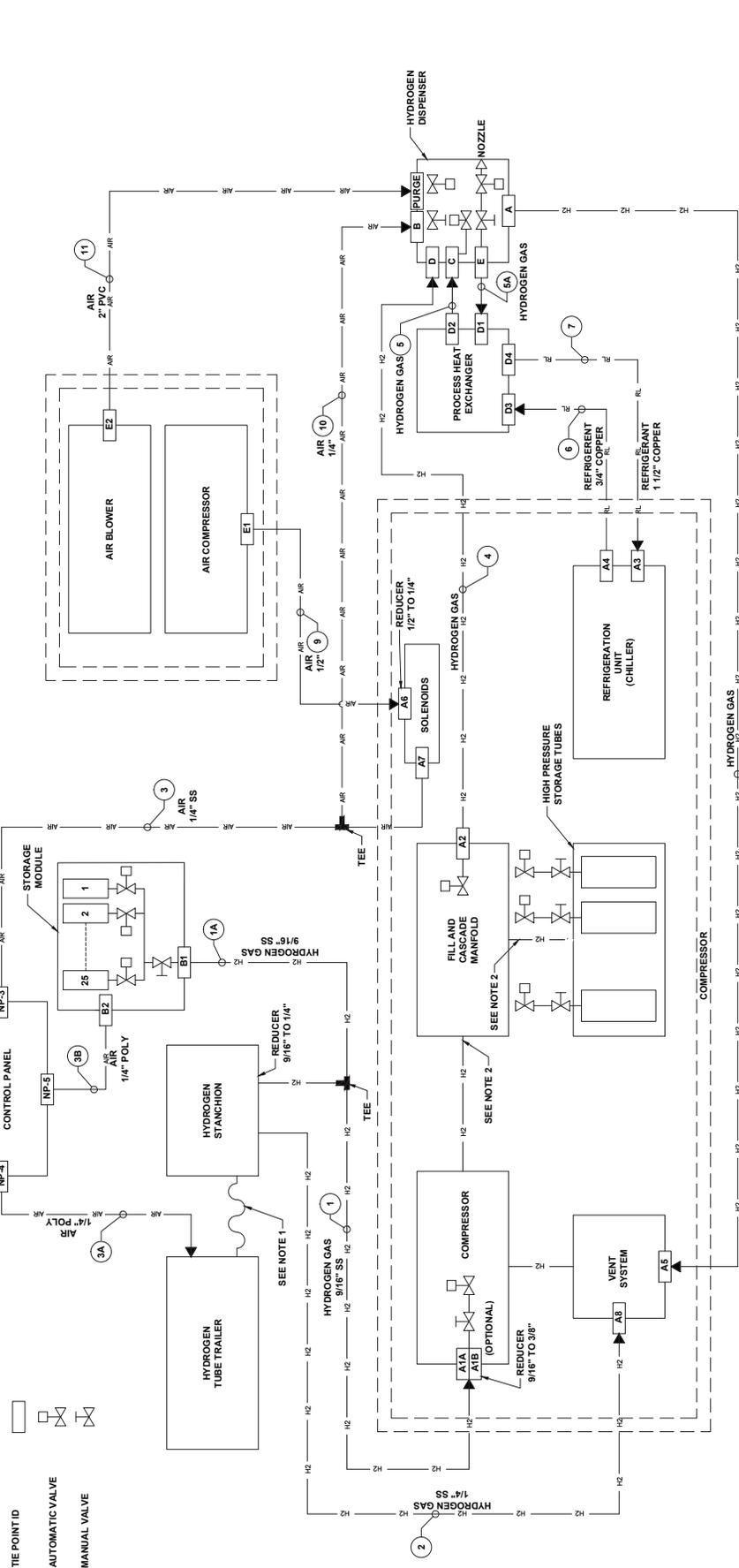
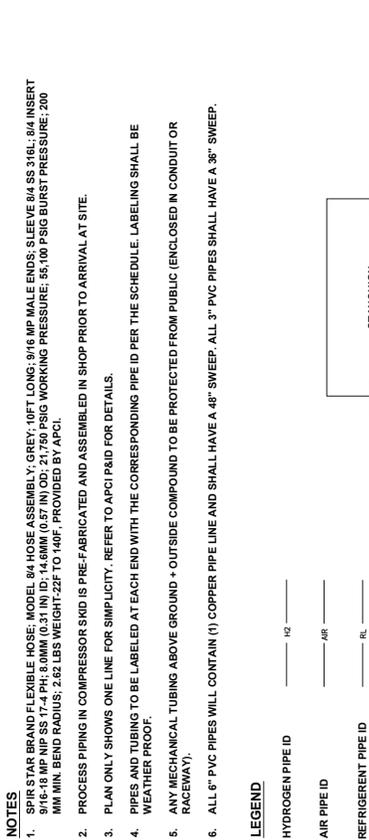
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CAMPBELL, CA 95070

SHEET TITLE
MECHANICAL PIPING
DIAGRAM

SHEET NUMBER
Z-4.1

NO.	DESCRIPTION	QUANTITY	UNIT
1	SPR STAR BRAND FLEXIBLE HOSE, MODEL 84 HOSE ASSEMBLY, GREY; 10FT LONG; 9/16 MP MALE ENDS; SLEEVE 84 SS 316L; 8/4 INSERT 9/16-18 MP NP SS 17-4 PH; 8.0MM (0.31 IN) ID; 14.6MM (0.57 IN) OD; 21750 PSIG WORKING PRESSURE; 55,100 PSIG BURST PRESSURE; 200 MM MIN. BEND RADIUS; 2.82 LBS WEIGHT/2FT TO 140F, PROVIDED BY APCL.	1	LINE
2	PROCESS PIPING IN COMPRESSOR SKID IS PRE-FABRICATED AND ASSEMBLED IN SHOP PRIOR TO ARRIVAL AT SITE.	1	LINE
3	PLAN ONLY SHOWS ONE LINE FOR SIMPLICITY. REFER TO APCL P&ID FOR DETAILS.	1	LINE
4	PIPES AND TUBING TO BE LABELED AT EACH END WITH THE CORRESPONDING PIPE ID PER THE SCHEDULE. LABELING SHALL BE WEATHER PROOF.	1	LINE
5	ANY MECHANICAL TUBING ABOVE GROUND + OUTSIDE COMPUND TO BE PROTECTED FROM PUBLIC (ENCLOSED IN CONDUIT OR RACEWAY).	1	LINE
6	ALL 6" PVC PIPES WILL CONTAIN (1) COPPER PIPE LINE AND SHALL HAVE A 48" SWEEP. ALL 3" PVC PIPES SHALL HAVE A 36" SWEEP.	1	LINE





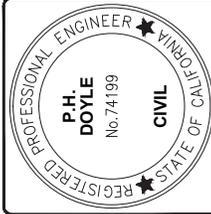
515 CALIFORNIA AVENUE #220
IRVINE, CA 92617
(949) 255-5550



BLACK & VEATCH
10850 GRANDVIEW DRIVE
OVERLAND PARK, KS 66210
(913) 865-3000

PROJECT NO. 182622
DRAWN BY: SPJ
CHECKED BY: NMB

REV	DATE	DESCRIPTION
3	08/17/15	REISSUED FOR ZONING
2	04/01/15	REISSUED FOR ZONING
1	03/29/15	REISSUED FOR ZONING
0	11/26/14	ISSUED FOR ZONING

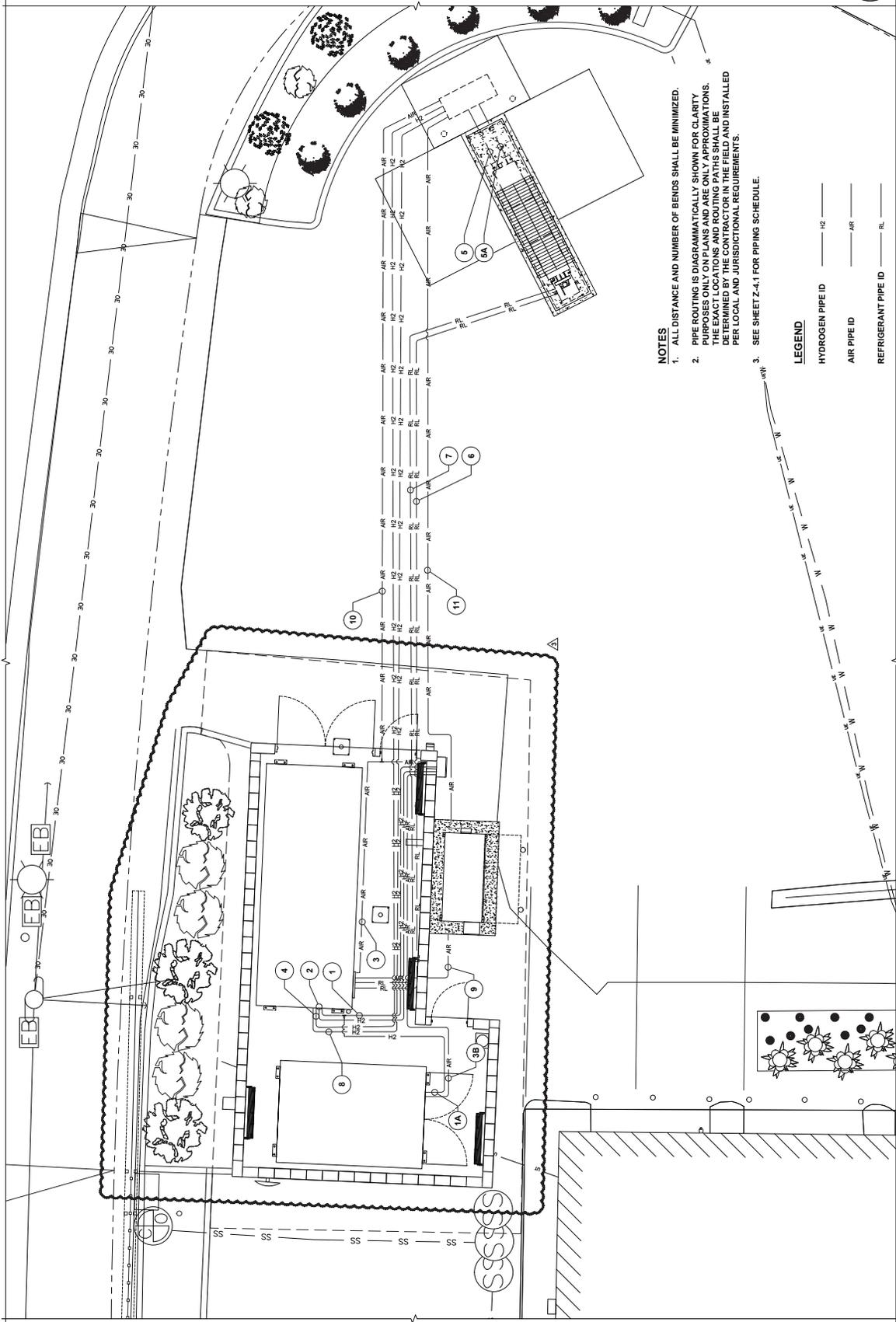


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SHEET TITLE
PIPING PLAN

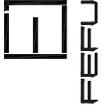
SHEET NUMBER
Z-4.2



- NOTES**
1. ALL DISTANCE AND NUMBER OF BENDS SHALL BE MINIMIZED.
 2. PIPE ROUTING IS DIAGRAMMATICALLY SHOWN FOR CLARITY. PURPOSES ONLY ON PLANS AND ARE ONLY APPROXIMATIONS. THE EXACT LOCATIONS AND ROUTING PATHS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD AND INSTALLED PER LOCAL AND JURISDICTIONAL REQUIREMENTS.
 3. SEE SHEET Z-4.1 FOR PIPING SCHEDULE.

- LEGEND**
- HYDROGEN PIPE ID — H2
 - AIR PIPE ID — AIR
 - REFRIGERANT PIPE ID — RL

PIPING PLAN



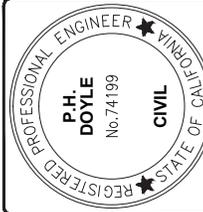
515 CALIFORNIA AVENUE #220
IRVINE, CA 92617
(949) 255-5553



10880 GRANDVIEW DRIVE
OVERLAND PARK, KS 66210
(913) 485-2000

PROJECT NO: 182622
DRAWN BY: SPJ
CHECKED BY: NMB

REV	DATE	DESCRIPTION
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2	04/09/15	REISSUED FOR ZONING
1	03/20/15	REISSUED FOR ZONING
0	11/26/14	ISSUED FOR ZONING

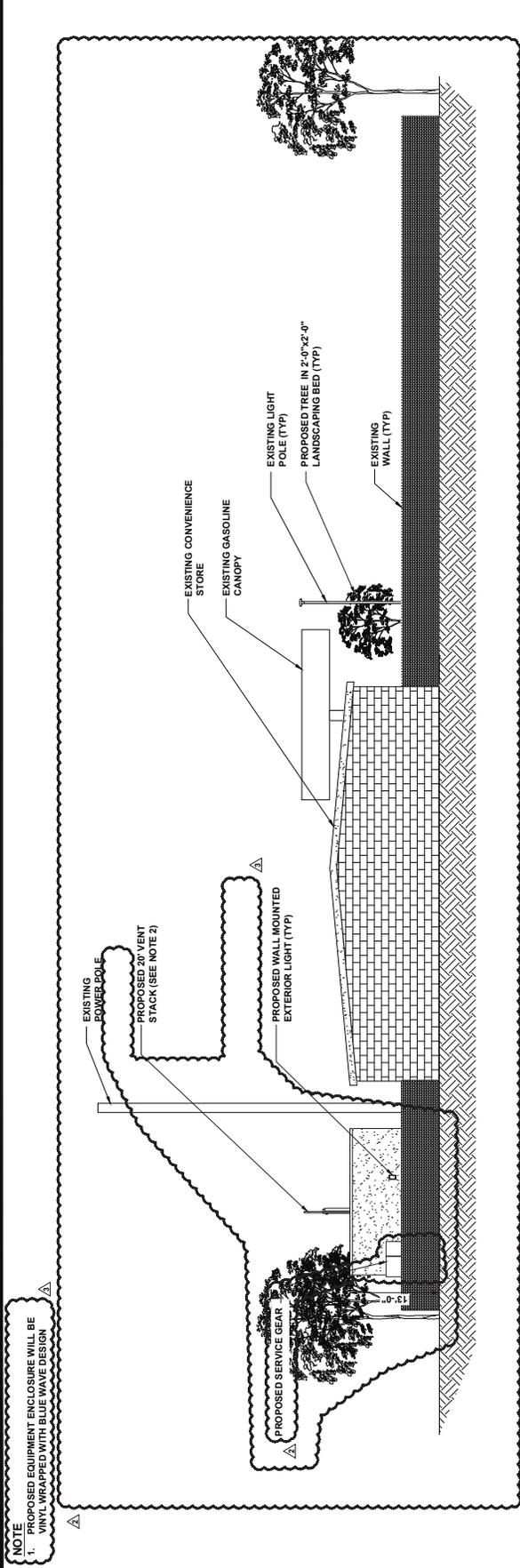


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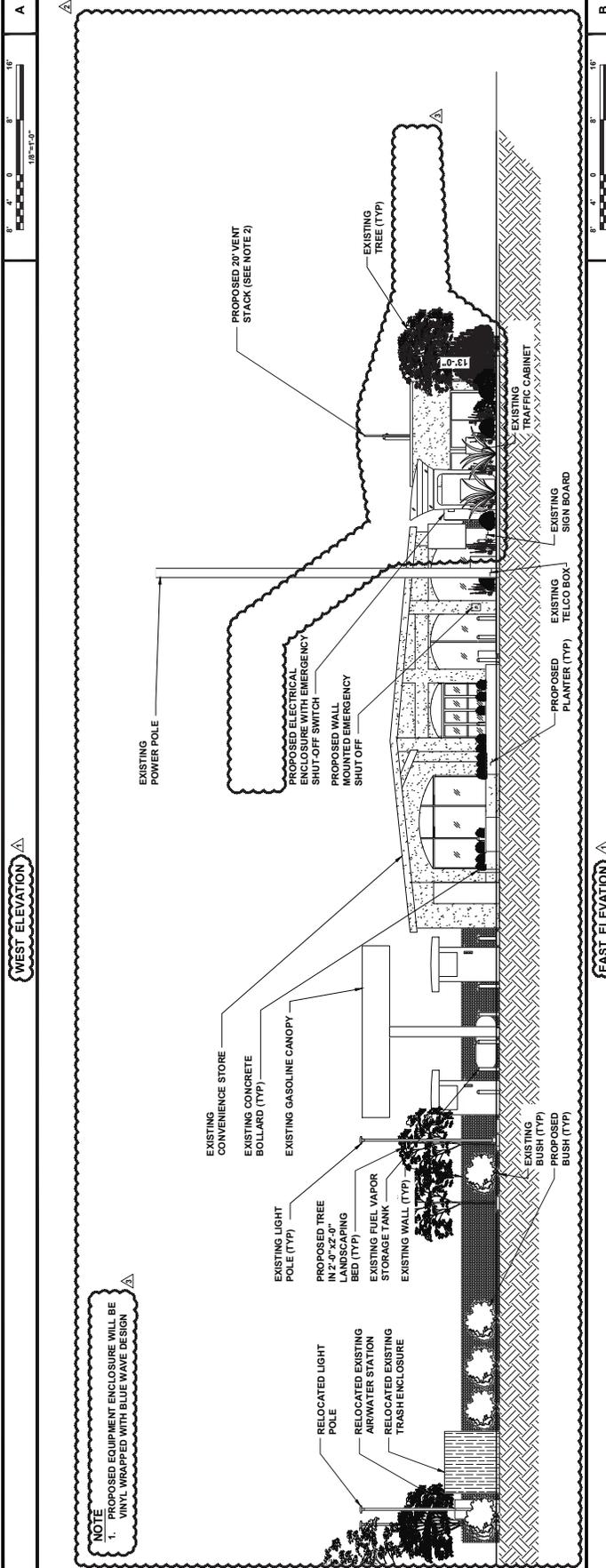
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N CAMPBELL
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CAMPBELL, CA 95070

SHEET TITLE
SITE ELEVATIONS

SHEET NUMBER
Z-6



NOTE
1. PROPOSED EQUIPMENT ENCLOSURE WILL BE VINYL WRAPPED WITH BLUE WAVE DESIGN



NOTE
1. PROPOSED EQUIPMENT ENCLOSURE WILL BE VINYL WRAPPED WITH BLUE WAVE DESIGN



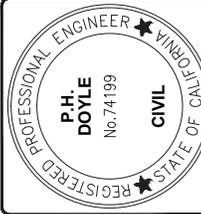
PEFUEL
 515 CALIFORNIA AVENUE #220
 IRVINE, CA 92617
 (949) 251-5552



BLACK & VEATCH
 10850 GRANDVIEW DRIVE
 OVERLAND PARK, KS 66210
 (913) 485-5000

PROJECT NO: 182622
 DRAWN BY: SPJ
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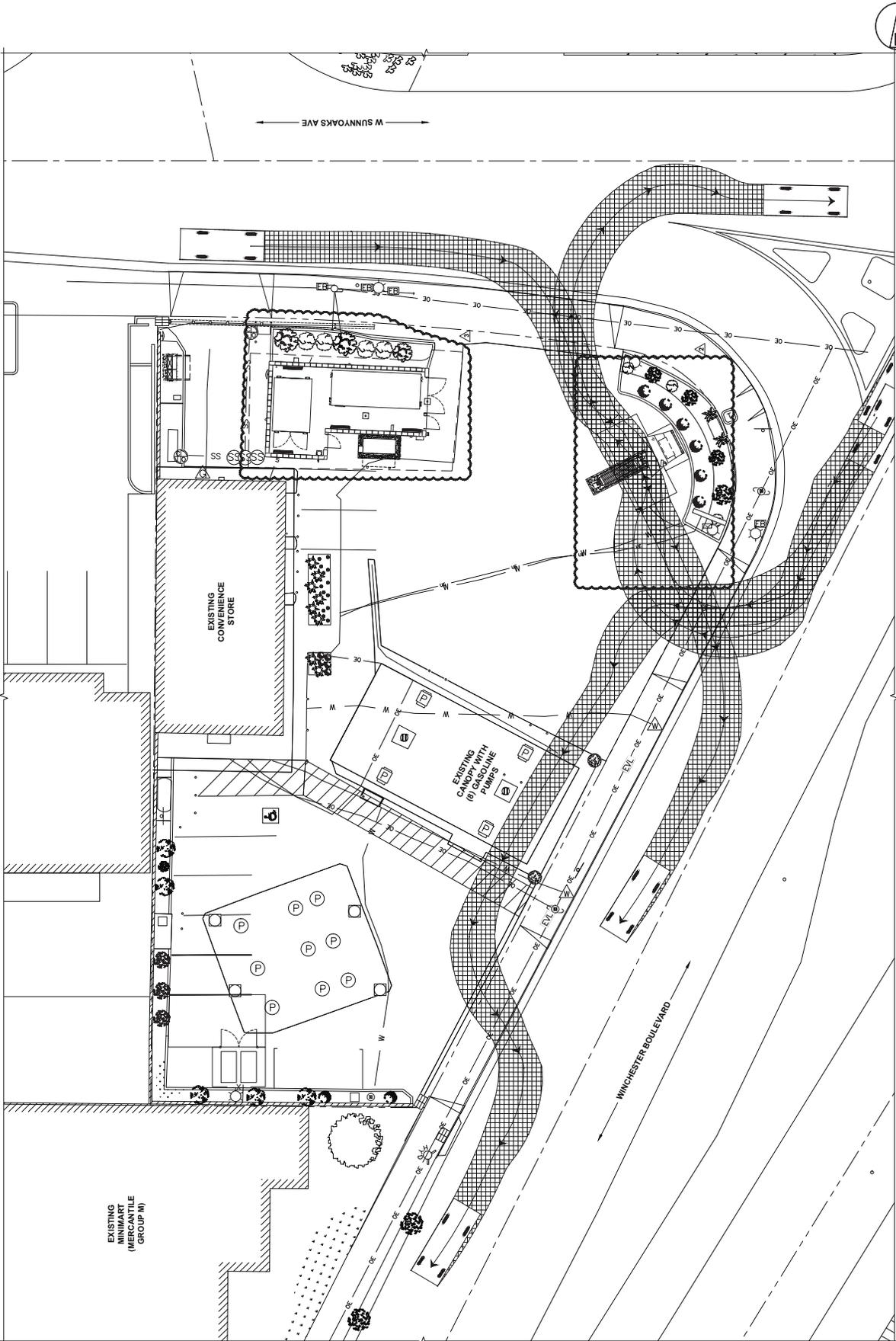


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SHEET TITLE
SITE CIRCULATION PLAN

SHEET NUMBER
Z-6.1



SITE CIRCULATION PLAN

A



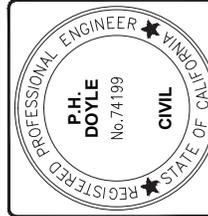
PEFUEL
 5157 CALIFORNIA AVENUE #220
 IRVINE, CA 92617
 (949) 255-5553



BLACK & VEATCH
 10880 GRANDVIEW DRIVE
 OVERLAND PARK, KS 66210
 (913) 485-2000

PROJECT NO: 182622
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 CHECKED BY: NMB

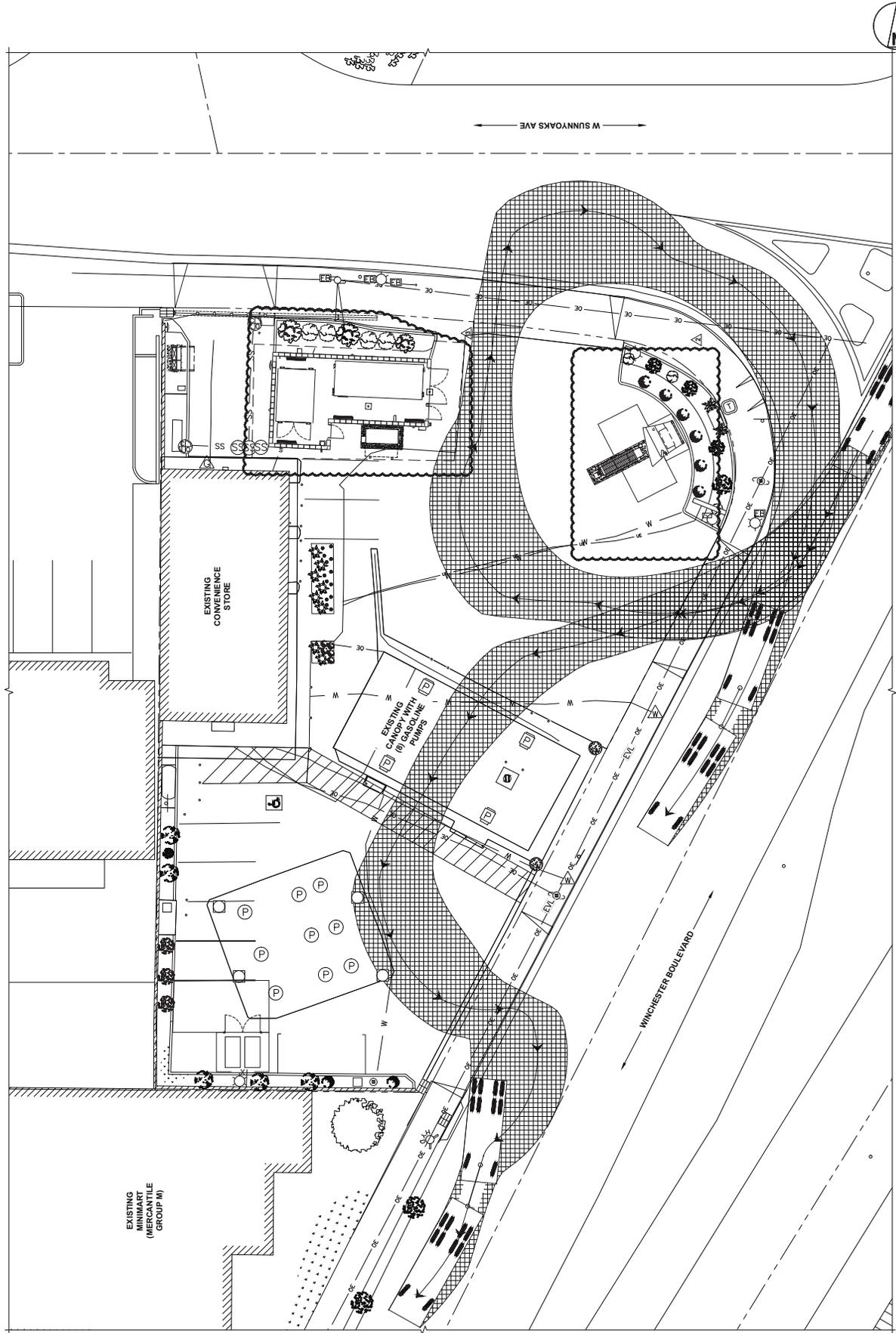
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1	03/23/15	REISSUED FOR ZONING
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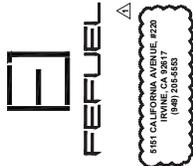
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 2855 WINCHESTER BOULEVARD
 CAMPBELL, CA 95070

SHEET TITLE
TRUCK ROUTE



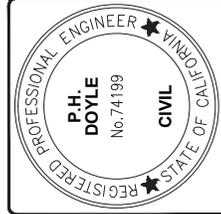
12' 6" 4" 0" 12' 20'
 3/32"=1'-0"
 TRUCK ROUTE
 A



BLACK & VEATCH
1080 GRANDVIEW DRIVE
OVERLAND PARK, KS 66210
(913) 385-3000

PROJECT NO: 182622
DRAWN BY: SPJ
CHECKED BY: NMB

REV	DATE	DESCRIPTION
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2	04/09/15	REISSUED FOR ZONING
1	03/29/15	REISSUED FOR ZONING
0	11/28/14	ISSUED FOR ZONING



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CAMPBELL, CA 95070

SHEET TITLE
SYSTEM DESIGN, CODES
& S STANDARDS

SHEET NUMBER
Z-7

- NEPA 2-HYDROGEN TECHNOLOGIES CODE:**
- ALL-ENCOMPASSING REQUIREMENTS OF HYDROGEN TECHNOLOGIES DEVELOPED BY NATIONAL FIRE PROTECTION ASSOCIATION
 - LARGELY EXTRACTED FROM OTHER NFPA CODES AND STANDARDS SUCH AS NFPA 52: VEHICULAR GASEOUS FUEL SYSTEMS CODE, NFPA 55: COMPRESSED GASES AND CRYOGENIC FLUIDS CODE, AND NFPA 853: STANDARD FOR THE INSTALLATION OF STATIONARY FUEL CELL POWER SYSTEMS.
 - NFPA 2 IS THE ONLY EXISTING INDUSTRY STANDARD COVERING THE ISSUES OF HYDROGEN PERTINENT TO THIS PROJECT.
 - AMENDMENTS WERE ACCEPTED IN JULY, 2014 TO INCORPORATE AND CORRELATE NFPA 2 WITHIN THE 2013 CALIFORNIA BUILDING CODE AND 2013 CALIFORNIA FIRE CODE.
 - EQUIPMENT, CONSTRUCTION, INSTALLATION, OPERATION, AND MAINTENANCE OF THE HYDROGEN REFUELING STATION PROJECT PROPOSED BY FIRSTLEMAN FUEL MEETS OR EXCEEDS THE FIRE PROTECTION STANDARDS SET FORTH IN NFPA 2.
- NATIONALLY RECOGNIZED TESTING LABS (NRTL) THIRD PARTY CERTIFICATION:**
- PROVIDED BY INTERTEK IN THE FORM OF A LIMITED PRODUCTION CERTIFICATION

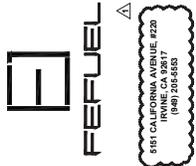
- CODES & STANDARDS:**
- EQUIPMENT INCORPORATES THE LATEST EDITION OF THE FOLLOWING CODES (WHERE APPLICABLE):
 - ASME BOILER AND PRESSURE VESSEL CODE SECTION 8 (15,000 PSI STEEL AND COMPOSITE STORAGE VESSELS)
 - ASME B31.3 PROCESS PIPING CODE
 - NFPA 70: NATIONAL ELECTRICAL CODE
 - NFPA 496: STANDARD FOR PURGED AND PRESSURIZED ENCLOSURES
 - NFPA 497M MANUAL FOR CLASSIFICATION OF GASES, VAPORS, AND DUSTS FOR ELECTRICAL EQUIPMENT IN HAZARDOUS (CLASSIFIED) LOCATIONS
 - NFPA 2: HYDROGEN TECHNOLOGIES CODE
 - SAE J2600 (COMPRESSED HYDROGEN SURFACE VEHICLE FUELING CONNECTION DEVICES)
 - SAE J2601 (FUELING PROTOCOLS FOR LIGHT DUTY GASEOUS HYDROGEN SURFACE VEHICLES)
 - SAE J2799 (70 MPa COMPRESSED HYDROGEN SURFACE VEHICLE REFUELING CONNECTION DEVICE AND OPTIONAL VEHICLE TO STATION COMMUNICATION)
 - DOT-SP 14576 (7,500 PSI ALUMINUM AND COMPOSITE STORAGE VESSELS)
 - ISA 12.12.01: NONINCENDIVE ELECTRICAL EQUIPMENT FOR USE IN HAZARDOUS (CLASSIFIED) LOCATIONS
 - UL1203: EXPLOSION-PROOF ELECTRICAL EQUIPMENT FOR USE IN HAZARDOUS (CLASSIFIED) LOCATIONS
 - UL 913: INTRINSICALLY SAFE APPARATUS FOR USE IN HAZARDOUS (CLASSIFIED) LOCATIONS
 - UL 508A: INDUSTRIAL CONTROL EQUIPMENT
 - UL 73: MOTOR-OPERATED APPLIANCES

MAJOR EQUIPMENT:

- QUANTITY**
- ONE (8' X 20' X 12' HIGH) CONTAINERIZED HYDROGEN FUEL STATION WITH INTEGRATED CONTROL SYSTEM, CONSISTING OF:
- 1 GASEOUS HIGH-PRESSURE HYDROGEN STORAGE VESSELS; 15,000 PSIG MAXIMUM ALLOWABLE WORKING PRESSURE, 15 KG OF HYDROGEN CAPACITY EACH
 - 1 40-HP BOOSTER COMPRESSOR WITH INTEGRATED COOLING SYSTEM
 - 1 CASCADE PANEL
 - 1 REFRIGERATION UNIT (ELECTRIC, 15 HP, COMMERCIAL UNIT MODIFIED FOR HYDROGEN SERVICE)
 - 1 INTEGRATED ESD
 - 1 ONE (8' X 4' X 8' HIGH) NON-CLASSIFIED UTILITY ISLAND ENCLOSURE, CONSISTING OF:
 - 1 AIR COMPRESSOR
 - 1 FIRE ALARM PANEL
 - 1 E-STOP PANEL
 - 1 POWER DISTRIBUTION
 - 1 LIGHTING CONTROL
 - 1 BREAKERS
 - 1 POWER SUPPLY
 - 1 DISPENSER PURGE
 - 1 ONE HIGH-PRESSURE HEAT EXCHANGER
 - 1 ONE AUTOMATED DUAL-HS5(H7) (3500/700 BAR) GASEOUS HYDROGEN DISPENSER, WITH ENTERPRISE REMOTE ACCESS MONITORING (ERAM) SYSTEM AND INTEGRATED ESD
 - 1 ONE (8' X 12' X 8' HIGH) GROUND STORAGE MODULE, 250 KG TOTAL HYDROGEN STORAGE AT 7,500 PSIG
 - 1 ONE GASEOUS HYDROGEN SUPPLY SYSTEM CONNECTION, CONSISTING OF:
 - 1 TUBE TRAILER DISCHARGE STANCHION
 - 1 TELEMETRY REMOTE MONITORING SYSTEM

CONTROLS:

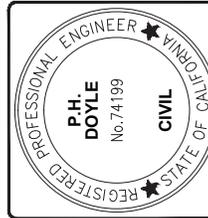
- ALL CONTROL VALVES FAIL IN THE SAFE DIRECTION (CLOSED) AFTER LOSS OF UTILITY POWER OR INSTRUMENT SUPPLY.
- HOSE OVER-PRESSURE DETECTION WITH AUTOMATIC SHUTOFF AND ALARM.
- HOSE LEAK DETECTION WITH AUTOMATIC SHUTOFF AND ALARM.
- LOCAL (ON DISPENSER AND ON COMPRESSOR) AND REMOTE (EMERGENCY STOP SWITCHES) LOCATED AND INSTALLED BY FIRSTLEMAN FUEL (RED/PALM BUTTONS) THAT CAN BE OPERATED BY THE VEHICLE DRIVER OR OTHERS TO STOP THE FILLING PROCESS.
- REDUNDANT AUTOMATIC SHUTOFF VALVES THAT WILL CLOSE AND STOP THE FILLING PROCESS IN AN EMERGENCY.
- ALL SYSTEM ALARMS AND SHUTDOWNS ARE DISPLAYED ON THE CONTROL PANEL.
- FACE CRITICAL ALARMS ARE HARD WIRED IN ADDITION TO BEING CONNECTED THROUGH THE PLC.
- COMPRESSOR WILL AUTOMATICALLY RETURN TO LAST OPERATING CONDITION AFTER RETURN OF POWER IF NO OTHER ALARMS ARE PRESENT.
- AUTOMATIC RESTART OF THE COMPRESSOR WILL NOT OCCUR AFTER ABNORMAL-OR "ALARM CONDITION" SHUT DOWN TO ENSURE SAFETY OF ONSITE PERSONNEL.



BLACK & VEATCH
 10880 GRANDVIEW DRIVE
 OVERLAND PARK, KS 66210
 (913) 485-2000

PROJECT NO: 182822
 DRAWN BY: SPJ
 CHECKED BY: NMB

REV	DATE	DESCRIPTION
3	08/17/18	REISSUED FOR ZONING
2	04/03/18	REISSUED FOR ZONING
1	03/29/18	REISSUED FOR ZONING
0	11/28/14	ISSUED FOR ZONING

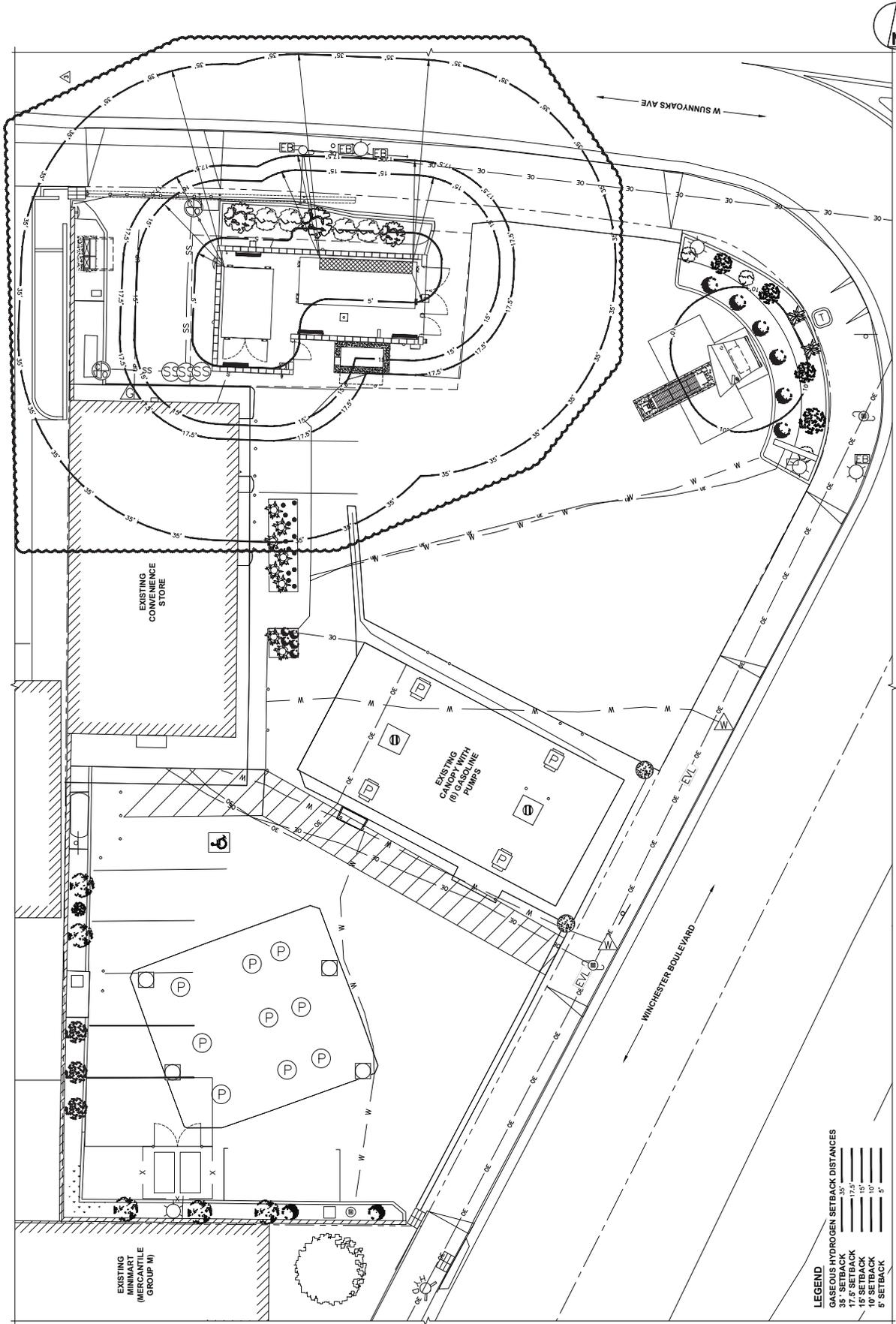


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SHEET TITLE
 NFPA 2 SETBACKS

SHEET NUMBER
 Z-8

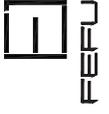


NFPA 2 SETBACKS

LEGEND

GASEOUS HYDROGEN SETBACK DISTANCES

35' SETBACK	—————
17.5' SETBACK	—————
15' SETBACK	—————
10' SETBACK	—————
5' SETBACK	—————



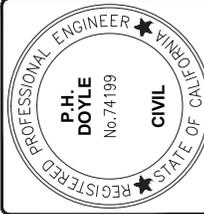
515 CALIFORNIA AVENUE #220
IRVINE, CA 92617
(949) 255-5553



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10860 GRANDVIEW DRIVE
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3	06/17/15	REISSUED FOR ZONING
2	04/09/15	REISSUED FOR ZONING
1	03/29/15	REISSUED FOR ZONING
0	11/26/14	ISSUED FOR ZONING

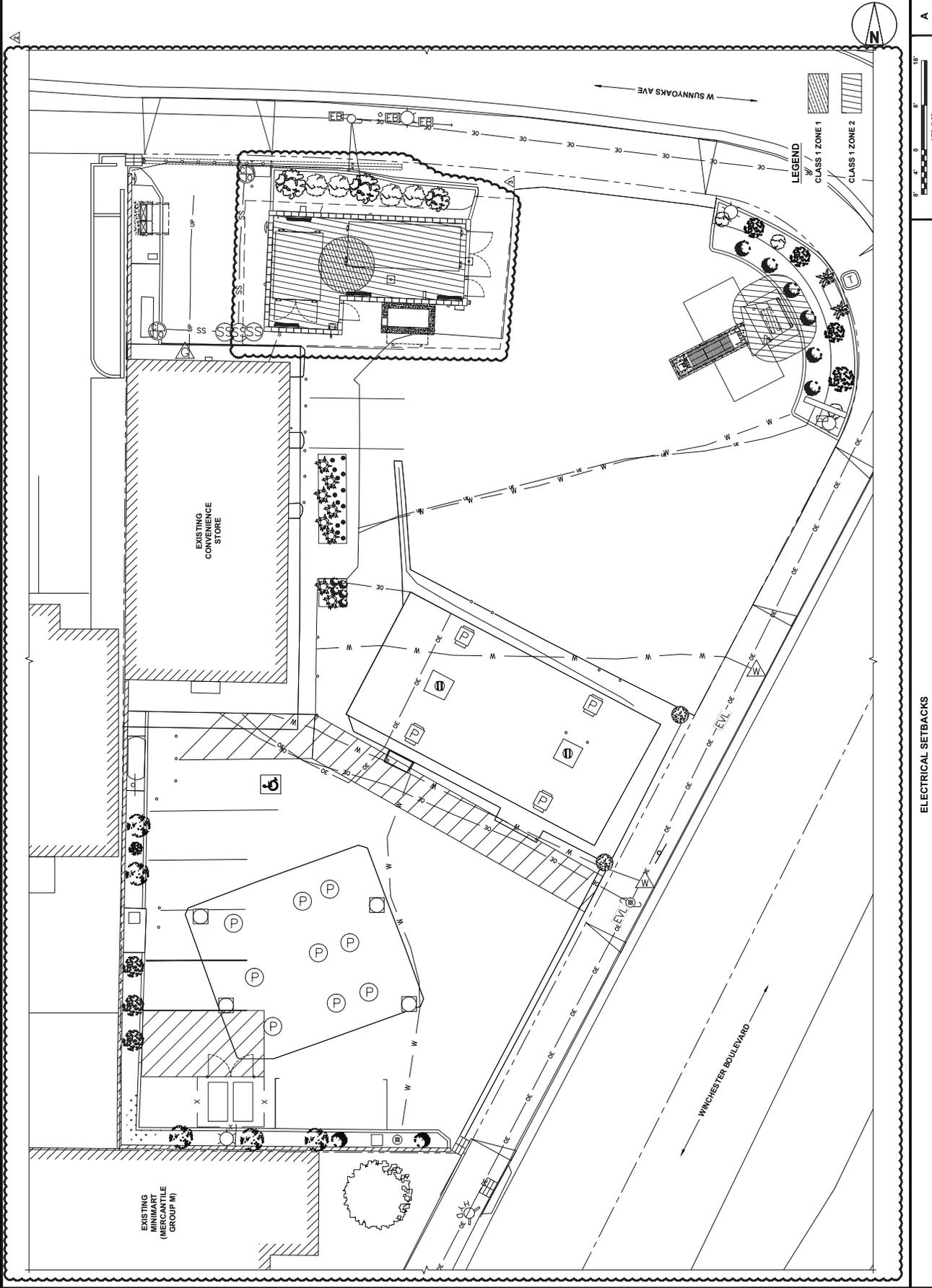


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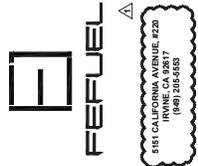
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SHEET TITLE
ELECTRICAL SETBACKS

SHEET NUMBER
Z-9



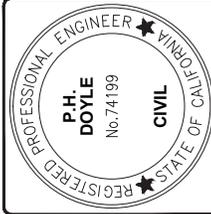
ELECTRICAL SETBACKS



BLACK & VEATCH
10880 GRANDVIEW DRIVE
OVERLAND PARK, KS 66210
(913) 455-3000

PROJECT NO: 182622
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REV	DATE	DESCRIPTION
3	08/17/15	REISSUED FOR ZONING
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1	03/25/15	REISSUED FOR ZONING
0	11/26/14	ISSUED FOR ZONING



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SHEET TITLE
SETBACK SCHEDULE

SHEET NUMBER
Z-10

NFPA 2 Hydrogen Technology, Second Edition, 2011 Edition.

Table 7.3.2.3.1.2(a) Minimum distance from Outdoor (Gr-2) Systems to Enclosures (Et) (Bulk Storage and Transfer of Road Connection)	Pressure Pipe Diameter Exposure	Minimum Separation (ft)		Notes
		Class 1 Zone 1	Class 1 Zone 2	
1. All lines	35	17.5	12	See Alternative Means and Methods (AMM)
2. Exposed above ground piping serving the system	15	0	37	
3. Building and Structures	15	0	N/A	
4. Combustible Construction	15	0	75	
5. Non-combustible non-rated construction	5	0	11	
6. Fire-rated construction with 2 hrs	35	17.5	37	
7. Gas-tight building of fire-rated or non-fire-rated construction (doors, windows and penetrations)	15	0	70	
8. Gas-tight building of fire-rated or non-fire-rated construction (doors, windows and penetrations)	35	35	50	
9. Air intakes (HVAC, compressors, other)	5	5	N/A	
10. Fire barrier walls or structures used to enclose the bulk system from exposures	15	0	16	
11. Gas-tight building of fire-rated or non-fire-rated construction (doors, windows and penetrations)	15	15	18	
12. Unclassified Electrical equipment	35	0	N/A	
13. UL listed (overhead) including electrical power, building services or hazardous material piping	15	0	7	
14. Ignition sources such as open flames and welding	15	0	10	
15. Flammable gas storage systems, including other hydrogen systems, above ground	15	0	N/A	
16. Non-Bulk	15	0	84	
17. Bulk	15	0	71	
18. Above ground vents or exposed piping and components of flammable gas storage systems, including other hydrogen systems, below ground gaseous or liquid	15	0	N/A	
19. Hazardous material (other than flammable gases) storage below ground. Physical hazard material or hazardous material	15	0	N/A	
20. Hazardous material storage (other than flammable gases) above ground. Physical hazard material or hazardous material	15	0	N/A	
21. Ordinary combustibles, including flammable solids such as ordinary lumber, exterior paper and combustible waste and vegetable or other than that found in marine and land-based areas	15	0	N/A	
22. Heavy timber, steel or other non-combustible solids	15	0	N/A	

Table 10.3.1.16.1 Electrical Installation Area Classification

	Class 1 Zone 1		Class 1 Zone 2	
	Class 1 Zone 1	Class 1 Zone 2	Class 1 Zone 1	Class 1 Zone 2
1. Areas containing compressors and ancillary equipment	N/A	N/A	>15	>15
2. Outdoor dispensing equipment enclosure interior. Up to support structure connection to the ground	N/A	N/A	N/A	N/A
3. Outdoor dispensing equipment enclosure exterior	N/A	N/A	>5	>5
4. Outdoor discharge from relief valves or vents	3ft	18ft	>15	>15
5. Discharge from relief valves within 15 degrees of the line of discharge	15ft	N/A	>15	>15

Table 10.3.2.3.1.3 Separation Distances for Outdoor Gaseous Hydrogen Dispensing Systems

	Required Separation (ft)	
	Class 1 Zone 1	Class 1 Zone 2
1. Dispensing equipment to nearest important building or fire of adjoining property that can be built upon or limit on source	10	85
2. Dispensing equipment to nearest utility, street or public sidewalk	10	13
3. Dispensing equipment to nearest air or any rail road main track	10	N/A
4. Point of transfer to any important building other than buildings of Type I or Type II construction with 2-hour fire-rated exterior walls	10	N/A
5. Point of transfer to buildings of Type I or Type II construction with 2-hour fire-rated exterior walls	No Limit	85
6. Point of transfer to storage containers	3	N/A



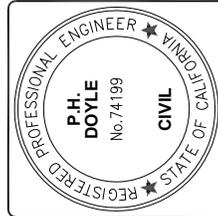
PEFUEL
 6101 CALIFORNIA AVENUE #220
 IRVINE, CA 92617
 (949) 256-8552



BLACK & VEATCH
 1088 GRANDVIEW DRIVE
 OVERLAND PARK, KS 66210
 (913) 253-2000

PROJECT NO. 182622
 DRAWN BY: SFJ
 CHECKED BY: NMB

REV	DATE	DESCRIPTION
3	08/17/15	REVISED FOR ZONING
2	08/07/15	REVISED FOR ZONING
1	08/07/15	REVISED FOR ZONING
0	11/26/14	ISSUED FOR ZONING



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SHEET TITLE
 ALTERNATIVE MEANS
 AND METHODS

SHEET NUMBER
Z-11

- 3) PUBLIC SAFETY**

 - THE ENTIRE SITE IS SECURED BY GATES AND AN 8" WALL.
 - THE CLOSEST PAVED HIGHWAY LANE IS MORE THAN 17.5' AWAY FROM THE STORAGE TANKS PROTECTING MOTORISTS.
 - FLAME DETECTORS POINTING AT THE DISPENSER SHUT OFF FUEL SUPPLY TO THE DISPENSER IN THE EVENT OF A FIRE.
 - SIGNAGE INSTALLED ON COMPOUND WALLS INDICATING HAZARD ASSOCIATED WITH THE FUEL.
- 4) MINIMIZE RISK TO FIRST RESPONDERS**

 - ONSITE FIRST RESPONDER TRAINING IN THE FIRST FEW WEEKS AFTER CONSTRUCTION OR COMMISSIONING.
 - LIMITED NEED FOR A FIRST RESPONDER TO ENTER THE COMPOUND IN THE CASE OF FIRE.
 - ESD PUSH BUTTONS LOCATED OUTSIDE THE COMPOUND TO THAT SHUT OFF THE FLOW OF FUEL. LOCATION SHOWN ON SHEET Z-4
 - THE REDUCED SETBACK DISTANCE ON THE NORTHERN PROPERTY LINE WOULD NOT IMPACT FIRST RESPONDERS.
 - ONSITE KNOX-BOX
 - RESPONSE FROM SUNNY OAKS AVENUE WILL BE MAINTAINED AS THERE IS MORE THAN 20' OF CLEARANCE FOR FIRE TRUCKS.
- 5) MINIMIZE THE POSSIBILITY OF EVENT**

 - EQUIPMENT DESIGNED TO APPLICABLE CODES AND STANDARDS. SEE SHEET Z-7
 - FIRSTELEMMENT IS DEDICATED TO THE SUPPORT AND MAINTENANCE UNTIL THE EQUIPMENT END OF LIFE.
 - STATION EQUIPMENT DESIGNED BY AIR PRODUCTS AND CHEMICALS INC, THE WORLD LEADER IN HYDROGEN REFUELING AND A \$29 BILLION CORPORATION.
 - EQUIPMENT DESIGNED WITH HAZOP ANALYSIS.
 - PREVENTATIVE MAINTENANCE WILL BE CONDUCTED ON A SCHEDULED MONTHLY BASIS. PART OF THIS MAINTENANCE ACTIVITY INCLUDES CHECKING THE INTEGRITY OF THE HYDROGEN CONNECTIONS AND CHECKING FOR LEAKS.
 - STATION HYDROGEN INVENTORY WILL BE AUDITED TO DETECT FOR LOSS OF HYDROGEN.
 - STATION WILL CALL FIRSTELEMMENT SERVICE CENTER AT THE ONSET OF ANY ABNORMAL CONDITION. SERVICE PERSONNEL WILL BE DISPATCHED IN APPROPRIATE TIME DEPENDING ON SEVERITY OF THE CONDITION.

- NFPA 2 HYDROGEN SYSTEM DISTANCES TO EXPOSURES**
 ALL PRESCRIBED NFPA 2 EXPOSURE DISTANCES ARE MET FOR THE PROPOSED HYDROGEN FUELING STATION, EXCEPT EXPOSURE TO THE NORTHERN PROPERTY LINE
- NORTHERN PROPERTY LINE EXPOSURE**
 WITH A 2 HOUR RATED FIRE WALL AS PROPOSED FOR THIS PROJECT, NFPA 2 CALLS FOR A 17.5' MINIMUM EXPOSURE DISTANCE TO A PLOT LINE. THE SETBACK PROPOSED HERE IS 12' FROM THE NORTH PLOT LINE.
- JUSTIFICATION FOR REDUCED SETBACK ON NORTHERN PROPERTY LINE**
 STRATEGY IS TO EQUALLY:
- MINIMIZE THE HAZARD POTENTIAL.
 - MAINTAIN EXIT PATHS (NOT DISRUPT, IMPEDE OR HINDER THE CURRENT EXIT PATHS)
 - ENSURE THAT PUBLIC SAFETY IS MAINTAINED
 - MINIMIZE RISK TO FIRST RESPONDERS (FIRE DEPARTMENT)
 - MINIMIZE THE POSSIBILITY OF AN EVENT



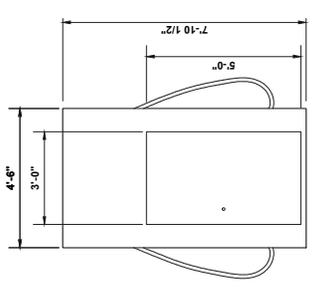
- 1) MINIMIZING THE HAZARD**

 - ENERGY CONTENT - THE MAXIMUM AMOUNT OF HEAT STORED AT THE HYDROGEN FUELING STATION WILL BE THE EQUIVALENT OF 300 GALLONS OF GASOLINE (9.9 MWHRS). A TYPICAL GASOLINE STATION STORES UP TO 30,000 GALLONS OF GASOLINE WITH A HEAT ENERGY VALUE OF 990 MWHRS. THE HYDROGEN ENERGY CONTENT ADDED TO THE STATION IS APPROXIMATELY 1% OF THE TOTAL ENERGY CONTENT.
 - INHERENT PROPERTIES OF HYDROGEN - IT IS 16.7 TIMES LIGHTER THAN AIR. IT DISSIPATES IN AIR RAPIDLY. THE STATION IS DESIGNED WITHOUT A ROOF TO AVOID THE ACCUMULATION OF ANY GAS. THERE ARE 8 FOOT WALLS AROUND THE STATION TO PREVENT THE HYDROGEN FROM COMING INTO CONTACT WITH THE PUBLIC. NOTE: HYDROGEN IS STORED AT AMBIENT TEMPERATURE.
 - GROUNDING - ALL EQUIPMENT IS GROUNDED AND BONDED
 - LOCATION - THE DISTANCE FROM THE HYDROGEN STORAGE TANK TO THE LOT LINE IS SLIGHTLY SHORTER THAN THOSE IN NFPA 2. 17.5'. THE PROPERTY LINE TO THE NORTH HAS AN EXPOSURE DISTANCE OF 12'. THE NEXT 5.5' AND BEYOND 35' IS A NON-BUILDABLE PUBLIC RIGHT OF WAY. THE COMPOUND IS CONSTRUCTED OF 2-HOUR FIRE RATED WALLS. THESE 8" WALLS DEFLECT ANY LEAKED HYDROGEN UPWARDS AND WILL PROTECT THE PUBLIC BY CONTAINING ANY FIRE AWAY FROM BYSTANDERS.
- 2) MAINTAIN EXIT PATHS**

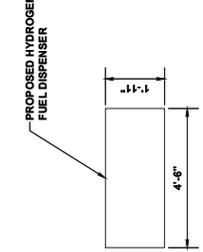
 - IN THE CASE OF AN EVENT AT THE HYDROGEN FUELING STATION THERE ARE MULTIPLE EXIT PATHS. NONE OF THESE PATHS ARE IMPACTED BY THE REDUCED SETBACK ON THE NORTH SIDE OF THE FUELING STATION OR THE NEW COMPOUND

NOTES

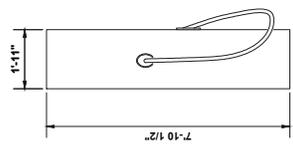
1. DISPENSER SHOULD BE INSTALLED ON SITE.
2. ALL DIMENSIONS SHOWN UNLESS OTHERWISE NOTED.
3. CLEAR FLOOR SPACE REQUIRED 30"x48" MINIMUM.



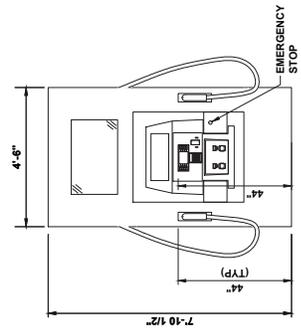
REAR VIEW



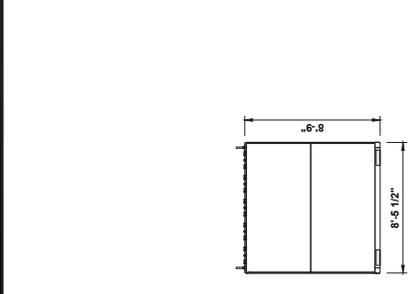
PLAN VIEW



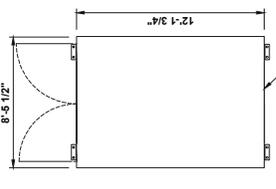
LEFT VIEW



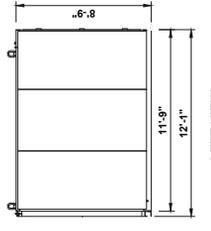
FRONT VIEW



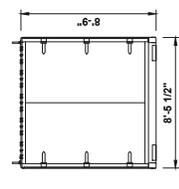
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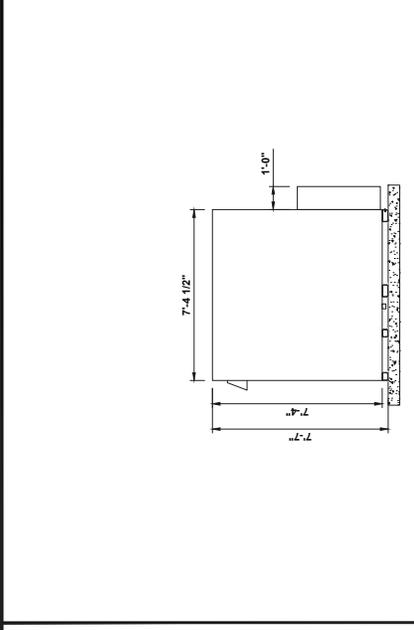
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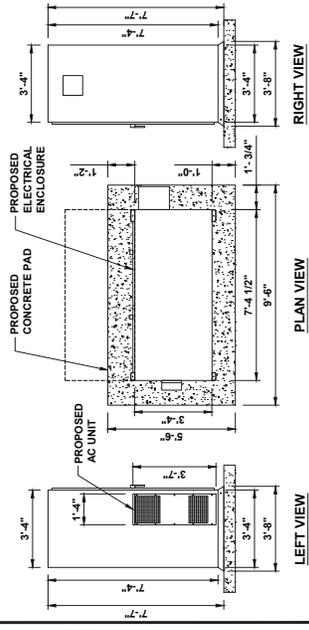
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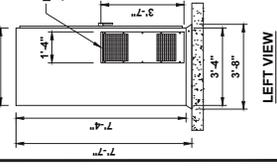
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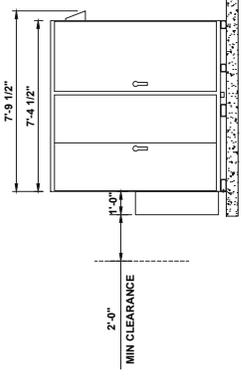
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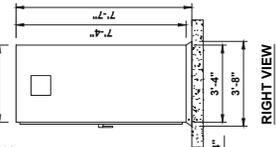
PLAN VIEW



LEFT VIEW



FRONT VIEW



RIGHT VIEW

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REV	DATE	DESCRIPTION
3	08/17/15	REISSUED FOR ZONING
2	04/01/15	REISSUED FOR ZONING
1	03/23/15	REISSUED FOR ZONING
0	11/28/14	ISSUED FOR ZONING

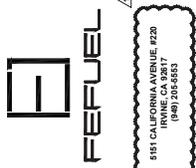
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SHEET TITLE
EQUIPMENT DETAILS

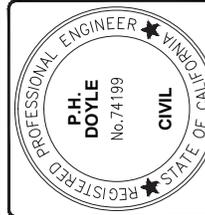
SHEET NUMBER
Z-12

HYDROGEN FUEL DISPENSER	MEDIUM PRESSURE STORAGE MODULE	ELECTRICAL ENCLOSURE	C
NO SCALE	NO SCALE	NO SCALE	



PROJECT NO: 182622
 DRAWN BY: SPJ
 CHECKED BY: NMB

REV	DATE	DESCRIPTION
3	06/17/15	RESUB FOR ZONING
2	04/08/15	RESUB FOR ZONING
1	02/03/15	RESUB FOR ZONING
0	11/25/14	ISSUED FOR ZONING

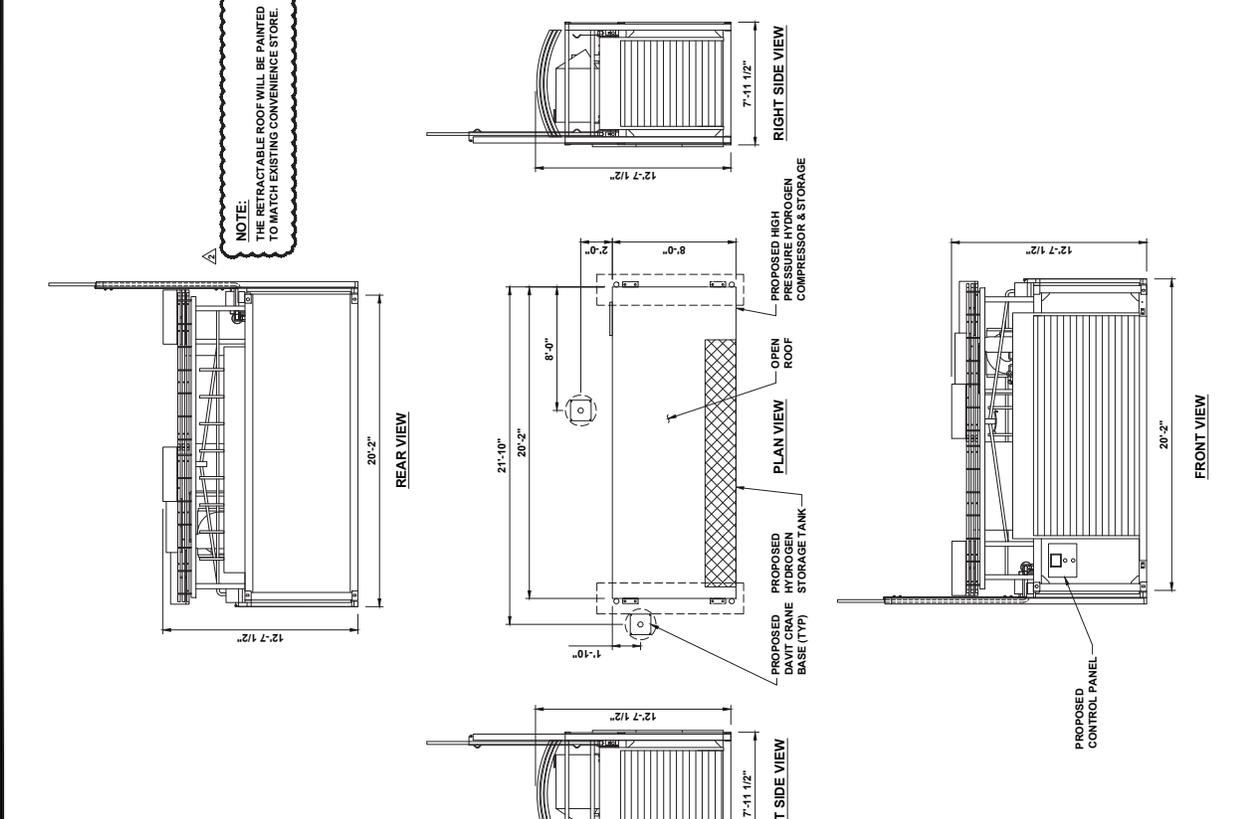
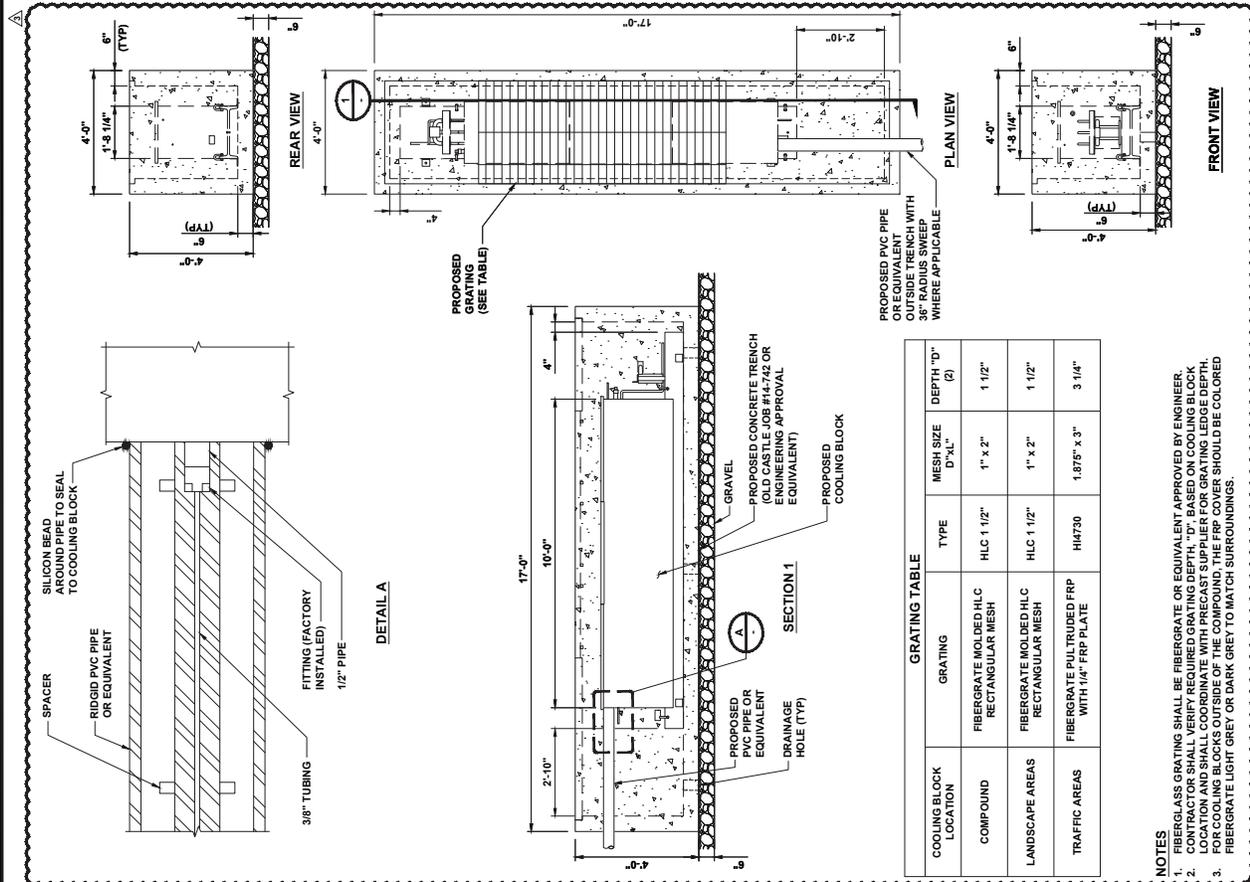


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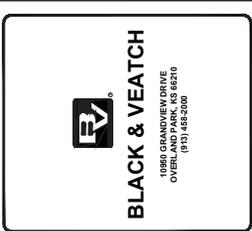
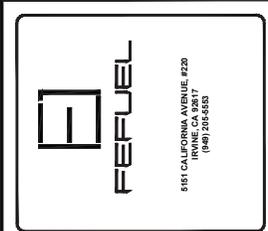
CA-FE1004
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 2865 WINCHESTER BOULEVARD
 CAMPBELL, CA 95070

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
Z-13

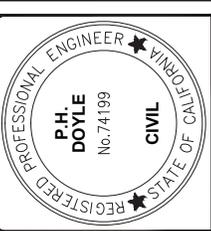


NO SCALE
 COOLING BLOCK IN CONCRETE TRENCH
 HIGH PRESSURE HYDROGEN COMPRESSOR AND STORAGE
 NO SCALE



PROJECT NO.	182622
DRAWN BY:	SPJ
CHECKED BY:	NMB

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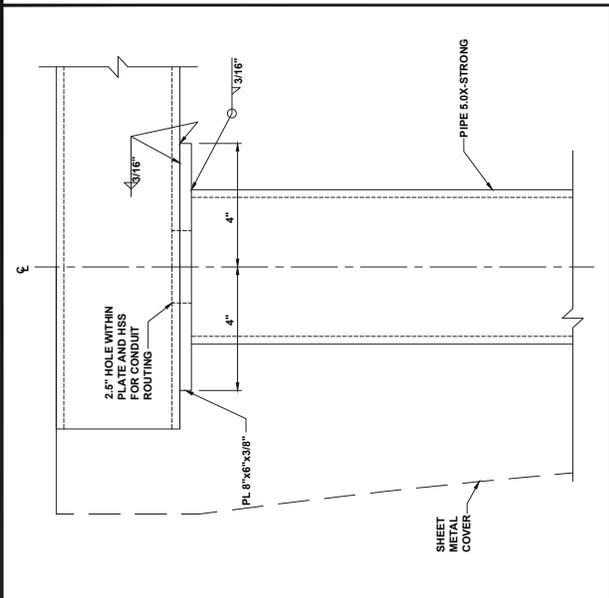


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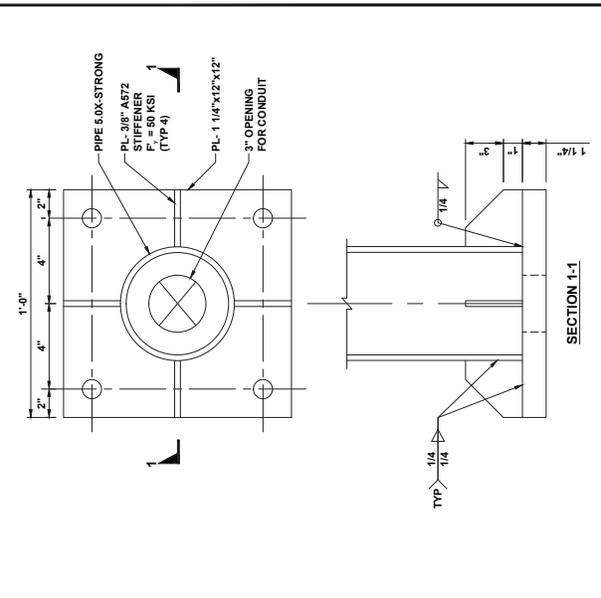
CA-FE1004
N CAMPBELL
2855 WINCHESTER BOULEVARD
CAMPBELL, CA 95070

SHEET TITLE
EQUIPMENT DETAILS

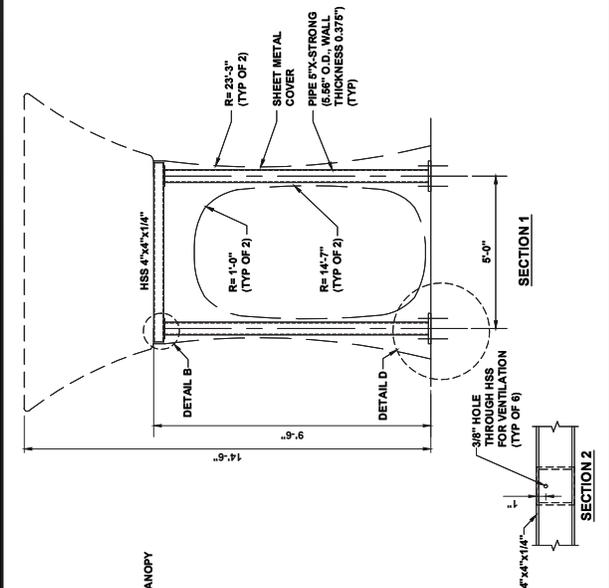
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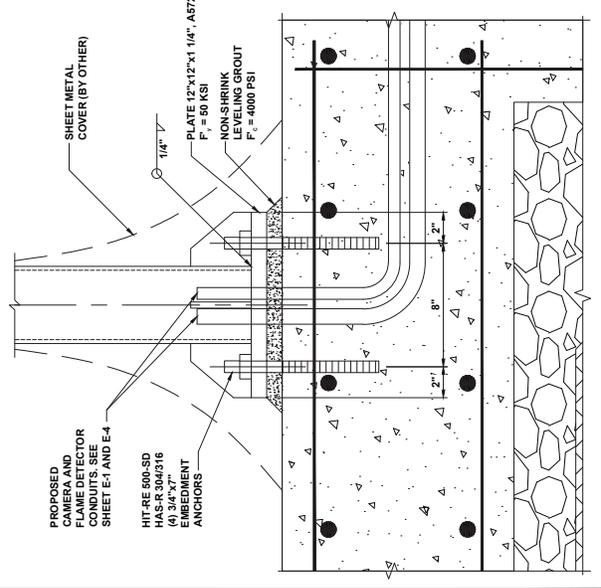
CANOPY TOP CONNECTION DETAIL



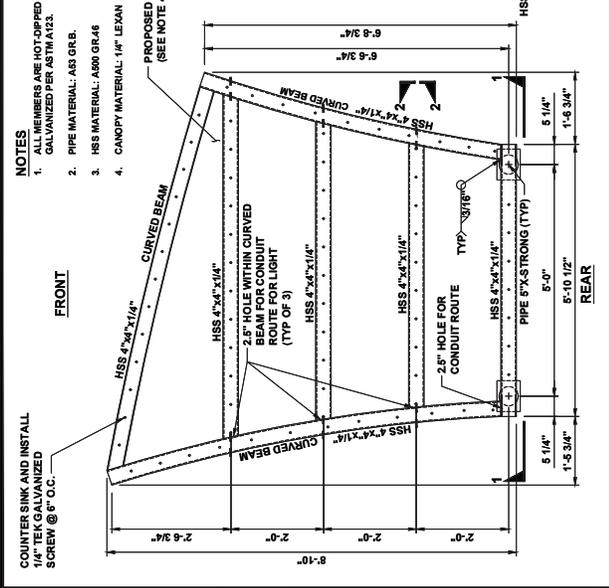
DISPENSER CANOPY BASE PLATE DETAILS



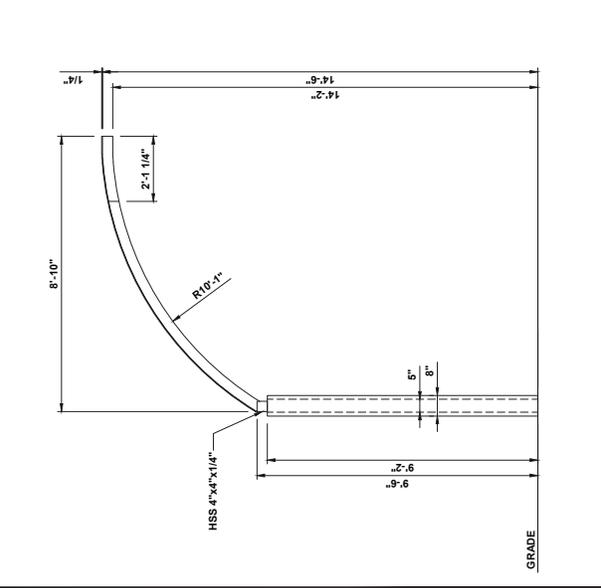
CANOPY DETAIL



CANOPY BASE PLATE DETAIL



CANOPY SIDE VIEW



CANOPY DETAIL

NOTES
1. ALL MEMBERS ARE HOT-DIPPED GALVANIZED PER ASTM A123.
2. PIPE MATERIAL: A53 GR.B.
3. HSS MATERIAL: A500 GR.46
4. CANOPY MATERIAL: 1/4\"/>

COUNTER SINK AND INSTALL 1/4\"/>

FRONT

REAR

GRADE