# Site Plan

Owner/Architect: Sam Adams
210-452-1541
smadasam@gmail.com
2622 123rd Ave SE, Bellevue, WA 98005

Site Address:
3508 96th Ave SE
Mercer Island, WA 98040

**SITE ADDRESS:**
3508 96TH AVE SE
MERCER ISLAND, WA 98040

**PARCEL #:**
4139300045

**LEGAL DESCRIPTION:**
LAKEMONT ADD UNREC LOT "1" MERCER ISLAND SHORT PLAT NO 90-08-19
REC NO 9101109002 SD SHORT PLAT DAF -- POR OF GOVT LOT 5 OF STR
07-24-05 - LOTS 9 & 10 OF LAKEMONT ADD UNREC PLAT - LESS ST HWY

**ZONING:**
R—9.6
MIN FRONT SETBACK: 20'-0"
MIN REAR SETBACK: 25'-0"
MIN SIDE SETBACK: 5'-0" / 15'-0" 2 SIDES
VARIABLE SIDE SETBACK: 7.5' (15' < HEIGHT <= 25') / 10' (25' < HEIGHT <= 30')
MAX BLDS HEIGHT: 30' TO RIDGE
MAX LOT COVERAGE: 40.00% (W/ < 15% LOT SLOPE)
MAX GROSS FLOOR AREA (GFA) : 40% OR 45% W/ ADU

**FIRE AREA SUMMARY:**
1ST FLOOR AREA: 640 SF.
2ND FLOOR AREA: 640 SF.
3RD FLOOR AREA: 640 SF.
BASEMENT AREA: 640 SF.
SHED AREA: 320 SF.
TOTAL FIRE AREA: 2,880 SF.

**LOT SLOPE CALCULATIONS:**
ELEVATION DIFFERENCE: 6 FT.
DISTANCE BETWEEN HIGH AND LOW POINTS: 164 FT.
LOT SLOPE: 3.7%

**LOT COVERAGE CALCULATIONS:**
NET LOT AREA: 11,900 SF.
ALLOWED LOT COVERAGE: 4,760 SF. / 40%
MAIN STRUCTURE ROOF AREA: 640 SF.
CAR PORT: 920 SF.
VEHICULAR USE: 2,376 SF.
TOTAL LOT COVERAGE: 3,936 SF. / 33%

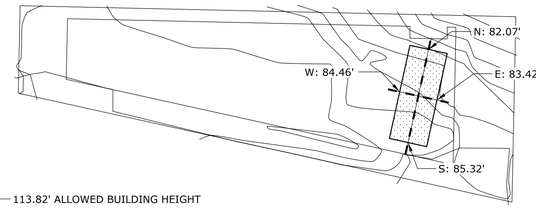
**HARDSCAPE CALCULATIONS:**
NET LOT AREA: 11,900 SF.
AREA BORROWED FROM LOT COVERAGE: 824 SF. / 7%
TOTAL ALLOWED HARDSCAPE AREA: 1,904 SF. / 16%
UNCOVERED PATIOS: 240 SF.
WALKWAYS: 213 SF.
STAIRS: 44 SF.
RETAINING WALL: 9 SF
TOTAL HARDSCAPE AREA: 506 SF. / 4%

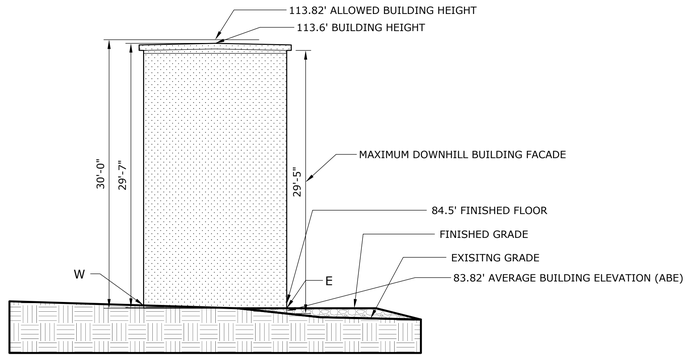
**GROSS FLOOR AREA (GFA) CALCULATIONS:**
LOT AREA: 11,900 SF.
ALLOWED GFA: 4,760 SF. / 40%
1F: 640 SF.
2F: 640 SF.
3F: 640 SF.
BASEMENT: 640 SF.
STAIRCASE MOD.: 38 SF.
BASEMENT MOD: 640 SF. (100% BELOW GRADE)
ACCESSORY BUILDINGS (2X 20' CONTAINERS): 320 SF.
TOTAL GFA: 2,202 SF. / 19%

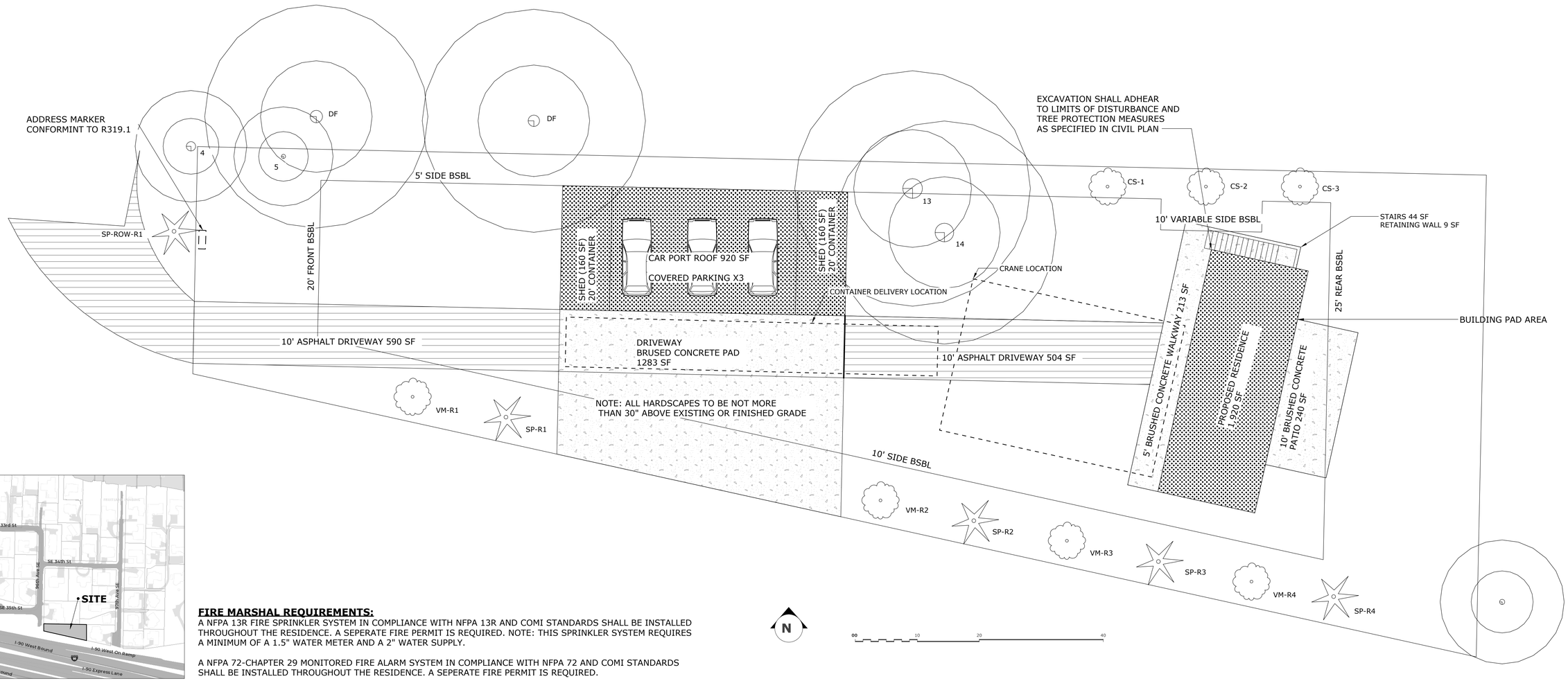
**PROJECT CONTACTS**

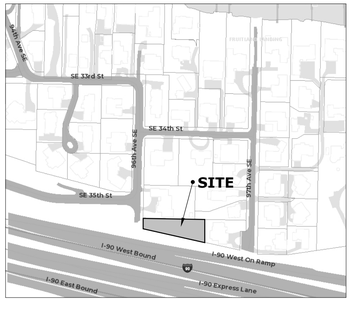
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|---|---|
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| Arborist | Haywood – Arborist & Horticulturist, LLC |
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| Container Manufacturing | Giant Containers |
| | Andrew Lockwood |
| | alockwood@giantcontainers.com |
| | 416-256-7110 x104 |

**BUILDING HEIGHT CALCULATIONS:**
NAVD 88 PER GPS OBSERVATIONS
SITE TEMP. BENCHMARK: PK NAIL W/ RED WASHER
BENCHMARK LOCATION: 44.9'W & 43.O'N OF NW PROPERTY CORNER
BENCHMARK ELEVATION: 80.78'
MIDPOINT ELEVATIONS: E. 83.42 FT, W. 84.46 FT, N. 82.07 FT, S. 85.32 FT
WALL SEGMENT LENGHTS: E. 40 FT, W. 40 FT, N. 16 FT, S. 16 FT
AVERAGE BUILDING ELEVATION: 83.82 FT




**FIRE MARSHAL REQUIREMENTS:**
A NFPA 13R FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13R AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPERATE FIRE PERMIT IS REQUIRED. NOTE: THIS SPRINKLER SYSTEM REQUIRES A MINIMUM OF A 1.5" WATER METER AND A 2" WATER SUPPLY.

A NFPA 72-CHAPTER 29 MONITORED FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPERATE FIRE PERMIT IS REQUIRED.

# TOPOGRAPHIC & BOUNDARY SURVEY

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## SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN SEPTEMBER & OCTOBER OF 2024. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 4139300045
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 11,900 S.F. (0.27 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
8. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 3-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

## LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING NO. 20211115002418)

LOT 1, CITY OF MERCER ISLAND SHORT PLAT NO. 90-08-19, RECORDED UNDER KING COUNTY RECORDING NO. 9101109002, RECORDS OF KING COUNTY WASHINGTON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

## BASIS OF BEARINGS

ACCEPTED THE BEARING OF N 01°13'12" E, BETWEEN MONUMENTS FOUND IN CASE ALONG THE CENTERLINE OF 97TH AVE SE, PER REFERENCE NO. 1.

## REFERENCES

R1. MERCER ISLAND SHORT PLAT NO. 90-08-19, VOL. 77, PG. 293, RECORDS OF KING COUNTY, WASHINGTON.

## VERTICAL DATUM

NAVD 88 PER GPS OBSERVATIONS

SITE TEMP. BENCHMARK
DESCRIPTION: PK NAIL W/ RED WASHER
LOCATION: 44.9'W & 43.0'N OF NW PROPERTY CORNER
ELEVATION: 80.78'

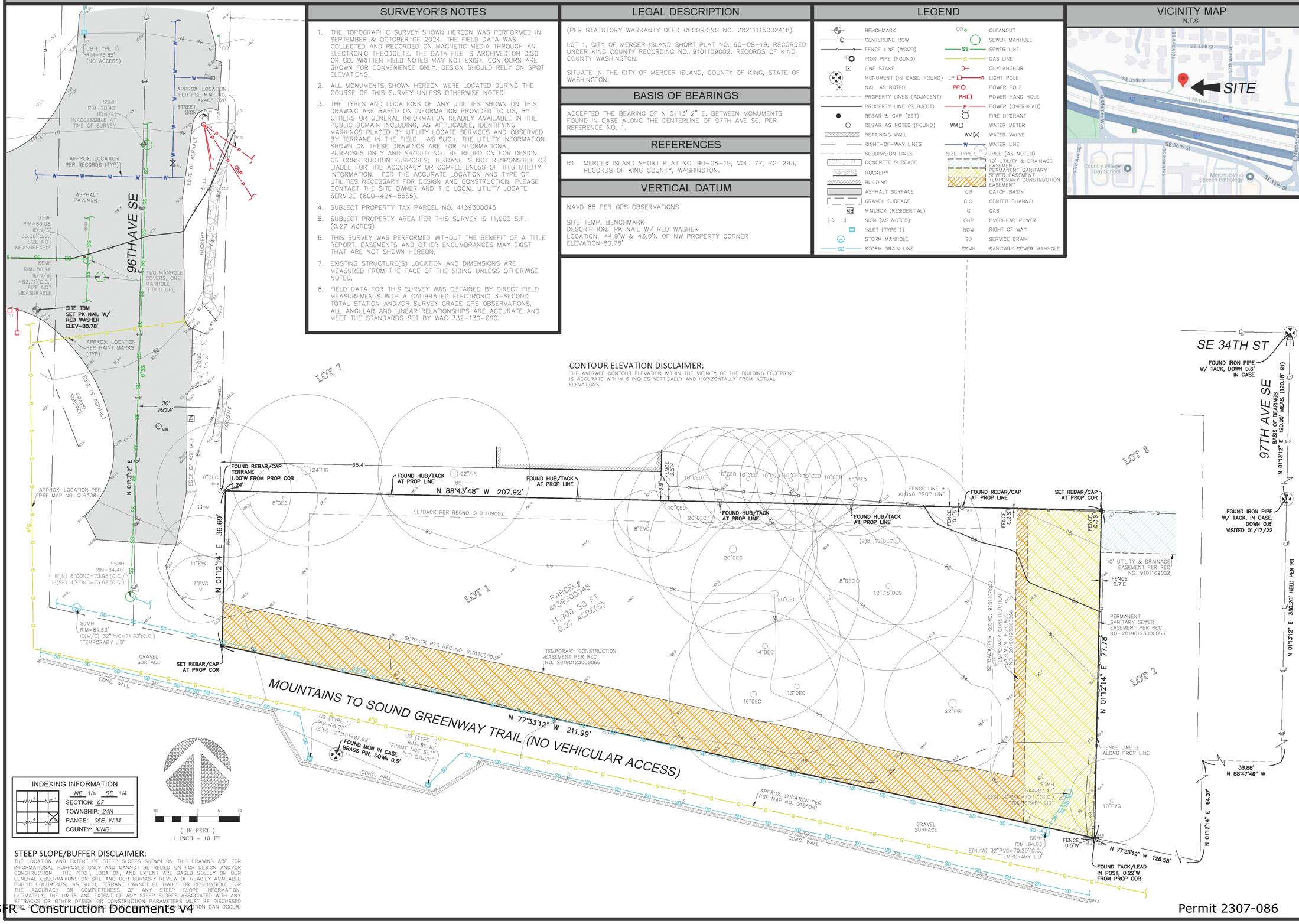
## LEGEND

- BENCHMARK
- CENTERLINE ROW
- FENCE LINE (WOOD)
- IRON PIPE (FOUND)
- LINE STAKE
- MONUMENT (IN CASE, FOUND)
- NAIL AS NOTED
- PROPERTY LINES (ADJACENT)
- PROPERTY LINE (SUBJECT)
- REBAR & CAP (SET)
- REBAR AS NOTED (FOUND)
- RETAINING WALL
- RIGHT-OF-WAY LINES
- SUBDIVISION LINES
- CONCRETE SURFACE
- ROCKERY
- BUILDING
- ASPHALT SURFACE
- GRAVEL SURFACE
- MB MAILBOX (RESIDENTIAL)
- SIGN (AS NOTED)
- INLET (TYPE 1)
- STORM MANHOLE
- SD STORM DRAIN LINE
- CO CLEANOUT
- SEWER MANHOLE
- SS SEWER LINE
- G GAS LINE
- GUY ANCHOR
- LP LIGHT POLE
- PP POWER POLE
- PH POWER HAND HOLE
- P POWER (OVERHEAD)
- FIRE HYDRANT
- WM WATER METER
- WV WATER VALVE
- W WATER LINE
- SIZE TYPE TREE (AS NOTED)
- 10' UTILITY & DRAINAGE EASEMENT
- PERMANENT SANITARY SEWER EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT
- CB CATCH BASIN
- C.C. CENTER CHANNEL
- G GAS
- OHP OVERHEAD POWER
- ROW RIGHT OF WAY
- SD SERVICE DRAIN
- SSMH SANITARY SEWER MANHOLE

## VICINITY MAP

N.T.S.




INDEXING INFORMATION
NE 1/4 SE 1/4
SECTION: 07
TOWNSHIP: 24N
RANGE: 05E, W.M.
COUNTY: KING

10 0 5 10
( IN FEET )
1 INCH = 10 FT.

STEEP SLOPE/BUFFER DISCLAIMER:
THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND AGREED UPON BY THE LOCAL JURISDICTION BEFORE CONSTRUCTION CAN OCCUR.

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 4139300045

3508 96TH AVE SE
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MERCER ISLAND, WA 98040

TERRANE
11235 SE 6th St, Suite 130
Bellevue, WA 98004
p: 425-458-4488 | e: info@terrane.net

| | |
|---|---|
| JOB NUMBER: | 241644 |
| DATE: | 09/26/24 |
| DRAFTED BY: | MHR/LSA |
| CHECKED BY: | TMM/RLS |
| SCALE: | 1"= 10' |
| REVISION HISTORY | |
| 10/03/24 | CONTOUR DISCLAIMER |
| 10/31/24 | ADD TOPO |
| | |
| | |
| | |
| SHEET NUMBER | |
| 1 OF 1 | |

# General Notes

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**CODES:**
DESIGN IS IN ACCORDANCE WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC), AND WASHINGTON STATE ENERGY CODE (WSEC) AS AMENDED BY THE LOCAL BUILDING DEPARTMENT.

FIRE (PRE-PERMIT FEEDBACK):
ALL NEW SINGLE FAMILY/ADU REQUIRE A MINIMUM OF A NFPA 13D SPRINKLER SYSTEM. AN EXTERIOR BELL IS REQUIRED TO BE INSTALLED AND MUST ACTIVATE UPON WATER FLOW. INTERIOR SMOKE DETECTORS OR SOUNDERS MUST ALSO BE INTERCONNECTED WITH THE WATER FLOW SWITCH.

FIRE ALARM (NFPA 72) MAY BE REQURIED DUE TO ACCESS, GRADE, AND TRUNAROUND. THIS MAY BE A CODE ALTERNITIAVE.

VAPOR BARRIERS / GROUND COVERS:
AN APPROVED VAPOR BARRIER SHALL BE PROPERLY INSTALLED IN FLOOR DECKS, IN ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, AND AT EXTERIOR WALLS INSETSTAPLED BATT WITH A PERM RATING LESS THAN ONE MAY BE INSTALLED IF THE VAPOR BARRIER IS TO THE WARM SIDE, STAPLES SHALL SE PLACED NOT MORE THAN 8-INCHES AND GAPS BETWEEN THE FACING AND THE FRAMING SHALL NOT EXCEED

A GROUND COVER OF 6 MIL (0006') BLACK POLYETHYLENE OF EQUIVALENT SHALL BE LAID OVER THE GROUND IN ALL CRAWL SPACES. THE GROUND COVER SHALL BE OVERLAPPED ONE FOOT AT EACH JOINT AND SHALL EXTEND TO THE FOUNDATION WALL.

LANDINGS AT DOORS:
R311.3 FLOORS AND LANDINGS AT EXTERIOR DOORS. THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL BE NOT LESS THAN THE DOOR SERVED. EVERY LANDING SHALL HAVE A DIMENSION OF NOT LESS THAN 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL. THE SLOPE AT EXTERIOR LANDNGS SHALL NOT EXCEED UNIT VERTICAL IN 12 UNIT HORIZONTAL (2 PERCENT).

R312.1 GUARDS FALL PROTECTION:
R312.1.1 WHERE REQUIRED. GUARDS SHALL BE PROVIDED FOR THOSE PORTIONS OF OPEN-SIDED WALING SURFACES, INCLUDING STAIRS, RAMPS, AND LANDINGS, THAT ARE LOCATED MORE THAN 30 INCHES MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36 INCHES HORIZONTALLY TO THE EDGE OF THE OPENING SIDE. INSECT SCREENING SHALL NOT BE CONSIDERED AS A GUARD.

R312.12 HEIGHT. REQUIRED GUARDS AT OPEN SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES, OR LANDINGS, SHALL BE NOT LESS THAN 36 INCHES IN HEIGHT AS MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE NOSINGS.

R312.2 WINDOW FALL PROTECTION:
R3122.1 WINDOWSILLS. IN DUELLING UNITS. WHERE THE TOP OF THE SILL OF AN OPERABLE WINDOW OPENING IS LOCATED LESS THAN 24 INCHES ABOVE THE FINISHED FLOOR AND GREATER THAN 12 INCHES ABOVE THE FINISHED GRADE OR OTHER SURFACE BELOW ON THE EXTERIOR OF THE BUILDING, THE OPERABLE WINDOW SHALL COMPLY WITH ONE OF THE FOLLOWING:
I. OPERABLE WINDOWS WITH OPENINGS THAT WILL NOT ALLOW A 4 INCHES DIAMETER SPHERE TO PASS THROUGH THE OPENING WHERE THE OPENING IS IN ITS LARGEST OPENED POSITION.
2. OPERABLE WINDOWS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICE THAT COMPLY WITH ASTM 2090

R314 SMOKE ALARMS:
R314.2.3 NEW ATTACHED GARAGES. A HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES AND HUMIDITY SHALL BE INSTALLED IN NEW GARAGES THAT ARE ATTACHED TO OR LOCATED UNDER NEW AND EXISTING DWELLINGS. HEAT DETECTORS AND HEAT ALARMS SHALL BE INSTALLED IN A CENTRAL LOCATION AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

R314.3 LOCATIONS. SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
1. IN EACH SLEEPING ROOM
2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
1. 2. 3. ON EACH ADDITIONAL STOY OF THE DWELLING, INCLUDING BASEMENT AND HABITABLE ATTICS. IN DWELLINGS, OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT A INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL.
3. 4. SMOKE ALARMS SHALL BE INSTALLED NOT LESS THAN 3 FEET HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM REQUIRED BY SECTION R314.3

R314.6 POWER SOURCE. SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM A COMMERICAL SOURCE AND, WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION.

R3I4.5 COMBINATION ALARMS
COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL BE PERMITTED TO BE USED IN LIEU OF SMOKE ALARMS.

R315 CARBON MONOXIDE ALARMS:
R315.2.1 NEW CONSTRUCTION. FOR NEW CONSTRUCTION, CARBON MONOXIDE ALARMS SHALL BE PROVIDED IN DUELLING UNITS WHERE EITHER OR BOTH OF THE FOLLOWING CONDITION EXIST.
1. THE DWELLING UNIT CONTAINS A FUEL FIRED APPLIANCE.
2. THE DWELLING UNIT 14,45 AN ATTACHED GARAGE WITH AN OPENING THAT COMMUNICATES WITH THE DUELLING UNIT.

R315.5 INTERCONNECTIVITY:
WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT IN ACCORDANCE WITH SECTION R315.3, THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING UNIT. PHYSICAL INTERCONNECTION OF THE CARBON MONOXIED ALARMS SHALL NOT BE REQUIRED WHERE LISTED WIRELESS ALARMS ARE INSTALLED AND ALL ALARMS SOUND UPON ACTIVATION OF ONE ALARM.

R315.6 POWER SOURCE. CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM A COMMERICAL SOURCE AND, WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BhATTERY. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTIGNG SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION.

R311.6 HALLWAYS:
THE WIDTH OF HALLWAYS SHALL BE NOT LESS THAN 3 FEET.

M1502.4 CLOTHES DRYER:
DRYER EXHAUST DUCTS SHALL CONFORM TO THE REQUIREMENT SECTION M1502.4.1 THROUGH M1502.4.1

R302.5 DWELLING-GARAGE OPENING AND PENETRATION PROTECTION

R302.5.1 OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSE SHALL NOT BE PERMITED. OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1 3/8 INCHES IN THICKNESS, SOLID OR HONEYCOMB-CORE STEEL DOORS NOT LESS THAN 1 3/8 THICK, OR 20 MINUTE FIRE RATED DOOR, EQUIPPED WITH A SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE.

R302.5.2 DUCT PENETRATION. DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL NOT HAVE OPENING INTO THE GARAGE.

SEPERATION FROM THE RESIDENCE AND THE ATTICS - NOT LESS THAN 1/2 INCH GYPSUM BOARD OR EQUIVALENT APPLIED TO THE GARAGE SIDE

SEPERATION FROM HABITABLE ROOMS ABOVE THE GARAGE - NOT LESS THAN 5/8 INCH TYPE X GYPSUM BOARD OR EQUIVELANT

SEPERATION FROM STRUCTURE(S) SUPPORTING FLOOR/CEILING ASSEMBLIES USED FOR SEPERATION REQUIRED BY THIS SECTION - NOT LESS THAN 1/2 INC GYPSUM BOARD OR EQUIVELANT

GARAGES LOCATED LESS THAN 3 FEET FROM A DWELLING UINT ON THE SAME LOT - NOT LESS THAN 1/2 INC GYPSUM BOARD OR EQUIVALENT APPLIED TO THE INTERIOR SIDE OF EXTERIOR WALLS THAT ARE WITHIN THIS AREA

R311.7 STAIRWAYS:
R311.1.8 HANDRAILS:
HANDRAILS SHALL BE PROVIDED ON NOT LESS THAN ONE SIDE OF EACH CONTINUOUS RN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS.

R311.7.8.1 HANDRAIL HEIGHT MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES AND NOT MORE THAN 38 INCHES.

R311.7.82 CONTINUITY. HANDRAILS FOR STAIRWAYS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1.5 INCHES BETWEEN THE WALL AND THE HANDRAILS.

R311.7.1 STAIR WIDTH:
STAIRWAYS SHALL NOT BE LESS THAN 36 INCHES IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. THE CLEAR WIDTH OF STAIRWAYS AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL NOT BE LESS THAN 31-1/2" WHERE THE HANDRAIL IS INSTALLED ON ONE SIDE AND 21' WHERE HANDRAILS ARE INSTALLED ON BOTHE SIDES.

R311.7.5.1 RISERS:
THE RISER HEIGHT SHALL BE NOT MORE THAN 7 3/4 INCHES. THE RISER TO BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH.

OPEN RISERS ARE PERMITTED PROVIDED THAT THE OPENING LOCATE MORE THAN 30 INCHES, AS MEASURED VERTICALLY, TO THE FLOOR OR GRADE BELOW DO NOT PERMIT THE PASSAGE OF 4 INCHES DIAMETER SPHERE.

R311.7.5.2 TREADS:
THE TREAD DEPTH SHALL BE NOT LESS THAN 10 INCHES. THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH

R311.7.9 ILLUMINATION:
STAIRWAYS SHALL BE PROVIDED WITH ILLUMINATION IN ACCORDANCE WITH SECTION R303.7

R308-SAFETY GLAZING:
R308.4 HAZARDOUS LOCATIONS. THE LOCATIONS SPECIFIED IN SECTIONS R308.4.1 TO R308.4.7 SHALL BE CONSIDERED TO BE SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSE OF GLAZING.

R308.4.1 GLAZING IN DOORS. GLAZING IN FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BIFOLD DOORS SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.

R308.4.2 GLAZING ADJACENT TO DOORS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR SHALL BE CONSIDERED A HAZARDOUS LOCATION WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE AND IT MEETS EITHER OF THE FOLLOWING CONDITIONS:

I. WHERE THE GLAZING IS WITHIN 24 INCHES OF EITHER SIDE OF THE DOOR IN THE PLANE OF THE DOOR IN A CLOSED POSITION.

2. WHERE THE GLAZING IS ON A WALL LESS THAN 180 DEGREES FROM THE PLANDE OF THE DOOR IN A CLOSED POSITION AND WITHIN 24 INCHES OF THE HINGE SIDE OF AN IN-SWINGING DOOR

R308.4.3 GLAZING IN WINDOWS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION:

1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET

2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES ABOVE THE FLOOR

3. THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES ABOVE THE FLOOR

4. ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING

R308.4.5 GLAZING AND WET SURFACES. GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEM ROOMS, BATHTUBS, SHOWERS AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION. THIS SHALL APPLY TO SINGLE GLAZING AND EACH PANE IN MULTIPLE GLAZING.

R308.4.6 GLAZING ADJACENT TO STAIRS AND RAMPS. GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACES OF STAIRWAYS, LANDINGS, BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION

R308.4.7 GLAZING ADJACENT TO THE BOTTOM STAIR LANDING AT THE BOTTOM OF THE STAIRWAY WHEN THE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN A 60 INCHES HORIZONTAL ARCH LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.

R310 EMERGENCY ESCAPE AND RESCUE OPENINGS:
R310.1 EMERGENCY ESCAPE AND RESCUE OPENING REQUIRED.

BASEMENT, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE NOT LESS THAN ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE BASEMENTS CONTAIN ONE OR MORE SLEEPING ROOMS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE REQUIRED IN EACH SLEEPING ROOM. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY, OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.

R310.2.1 MINIMUM OPENING AREA. EMERGENCY AND ESCAPE RESCUE OPENING SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5.7 SQUARE FEET. THE NET CLEAR OPENING DIMENSIONS REQUIRED BY THIS SECTION SHALL BE OBTAINED BY THE NORMAL OPERATION OF THE EMERGENCY ESCAPE AND RESCUE OPENING FROM THE INSIDE. THE NET CLEAR HEIGHT OPENING SHALL BE NOT LESS THAN 24 INCHES AND THE NET CLEAR WIDTH SHALL BE NOT LESS THAN 20 INCHES.

R310.2.2 WINDOW SILL HEIGHT. WHERE A WINDOW IS PROVIDED AS THE EMERGENCY ESCAPE AND RESCUE OPENING, IT SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR.

R310.2.3 WINDOW WELLS. THE HORIZONTAL AREA OF THE WINDOW WELL SHALL BE NOT LESS THAN 9 SQUARE FEET, WITH THE HORIZONTAL PROJECTION AND WIDTH OF NOT LESS THAN 36 INCHES. THE AREA OF THE WINDOW WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED.

R311 MEANS OF EGRESS:
R311.2 EGRESS DOOR - NOT LESS THAN ONE EGRESS DOOR SHALL BE PROVIDED FOR EACH DUELLING UNIT. THE EGRESS DOOR SHALL BE SIDE-HINGED, AND SHALL PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETUEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES. THE CLEAR HEIGHT OF THE DOOR OPENING SHALL BE NOT LESS THAN 18 INCHES IN HEIGHT MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP.

R325 MEZZANINES:
R325.2 THE CLEAR HEIGHT ABOVE AND BELOW MEZZANINE FLOOR CONSTRUCTION SHALL BE NOT LESS THAN 1 FEET.

R325.5 MEZZANINES SHALL BE OPEN AND NOT OBSTRUCTED TO THE ROOM IN WHICH THEY ARE LOCATED EXCEPT FOR WALLS NOT MORE THAN 42 INCHES IN HEIGHT, COLUMNS, AND POSTS.

**DESIGN NARRATIVE**
THIS BUILDING CONSISTS OF 6 PREFABRICATED CONTAINER MODULES STACKED 2 CONTAINERS WIDE AND 3 FLOORS TALL. AT A HIGH LEVEL, THIS BUILDING IS STRUCTURALLY A STEEL BUILDING, SO IT IS DESIGNED AND ENGINEERED USING COMMON MATERIALS AND TECHNIQUES FOUND IN STEEL BUILDING CONSTRUCTION. THE OVERALL STRUCTURAL DESIGN IS COVERED IN DETAIL IN THE STRUCTURAL PLAN SHEETS PREPARED BY SSF ATTACHED TO THE END OF THIS DOCUMENT (NOTED WITH PAGE NUMBERS PREFIXED WITH AN S) ALONG WITH THE SUPPLEMENTAL CALCULATION PACKET INCLUDED WITH THE APPLICATION. SSF'S STRUCTURAL DESIGN, OBSERVATIONS, AND QA PROCESS, AS OUTLINED IN THE STRUCTURAL PLAN, IS LARGELY BASED ON THEIR MANY YEARS OF ENGINEERING DESIGN AND CONSTRUCTION ADMINISTRATION EXPERIENCE OF WITH STEEL FRAMED COMMERCIAL BUILDINGS, WHICH THIS BUILDING MOST CLOSELY RESEMBLES. IN ADDITION, THE DESIGN HAS BEEN REVISED TO CONFORM TO SECTION 3115 OF IBC 2021,"INTERMODAL SHIPPING CONTAINERS."

THE INTERMODAL CONTAINER MODULES ARE CUSTOM, PURPOSE-DESIGNED, AND MANUFACTURED IN A STEEL FACTORY OVERSEAS ALONG WITH THE REST OF THE STRUCTURAL STEEL AND GLAZING MATERIALS USED IN THE BUILDING. THE 6 CONTAINER MODULES MUST ALSO BE ENGINEERED, TESTED, AND CERTIFIED TO MEET ISO AND CSC STANDARDS FOR INTERMODAL SHIPPING CONTAINERS IN THEIR FINAL DESIGN IN ORDER TO BE HANDLED AT PORTS AND LOADED ON TO INTERMODAL CONTAINER SHIPS. REQUIREMENTS FOR TESTING AND CERTIFYING INTERMODAL SHIPPING CONTAINERS IS COVERED IN THE "INTERNATIONAL CONVENTION FOR SAFE CONTAINERS, 1972 (CSC)' AND ISO 1496-1 TESTING REQUIREMENTS. THIS MEANS THAT EVERY MODULE IN THIS BUILDING WILL BE PHYSICALLY TESTED WITH THE ACTUAL DESIGN LOADS BY A CERTIFIED "DELEGATED APPROVAL AUTHORITY," TYPICALLY LLOYD'S REGISTRAR (LR), TO THE ISO AND CSC STANDARDS. THIS COMPREHENSIVE ISO TESTING COVERS PHYSICAL DIMENSIONS, STACKING LOADS, LIFTING FORCES AT THE CORNERS, LONGITUDINAL RESTRAINT STATIC LOADS, WALL, ROOF, FLOOR STRENGTH, RIGIDITY, AND SO ON. THIS ISO TESTING ONE ASPECT OF SSF'S OVERARCHING QUALITY ASSURANCE AND VERIFICATION PROGRAM IN COMPLIANCE WITH SECTION 3115.8 OF IBC 2021.

AFTER EACH CONTAINER SUCCESSFULLY COMPLETES THE ISO TESTING, THE DELEGATED APPROVAL AUTHORITY PRODUCES A REPORT OF THE RESULT AND ISSUES A CSC PLATE WHICH IS PERMANENTLY ATTACHED TO THE MODULE (WHICH CONFORMS TO IBC 2021 3115.3). THE CSC CERTIFICATION AND PLATE IS REQUIRED BY PORTS AND SHIPS TO HANDLE INTERMODAL MODULES. AFTER THEY ARE MANUFACTURED AND CERTIFIED, THEY ARE SHIPPED TO THE SITE IN THEIR FINAL DESIGN. THE ACT OF BEING HANDLED AND SHIPPED AT PORTS IS ALSO IN ITSELF A PRACTICAL STRUCTURAL TEST OF THE MODULES AS THEY MAY BE HANDLED, STACKED AND SHIPPED TO THEIR MAXIMUM CSC CERTIFIED SPECIFICATION. THE"APPROVAL AUTHORITY" AND MANUFACTURER ARE HIGHLY MOTIVATED TEST AND MANUFACTURE THE CONTAINERS CORRECTLY TO AVOID LIABILITY FOR MISHAPS AT PORTS OR AT SEA.

ONCE THE MODULES ARE ON SITE, THEY ARE STACKED TOGETHER WITH A CRANE AND ASSEMBLED TOGETHER WITH THE OTHER STEEL MEMBERS AS OUTLINED IN THE STRUCTURAL PLANS.

**BASIC PROCESS OVERVIEW**

1. DESIGN / PERMITTING: PRODUCE CONSTRUCTION DOCUMENTS APPLY FOR BUILDING PERMIT WITH CITY
    a. DEFERRED SUBMITTALS: PREENGINEERED CAR PORT ROOF, BALCOLNIES
2. CITY ISSUES BUILDING PERMIT WITH CONDITIONS.
3. [CONCURRENT] SUBMIT DEFERRED FINAL CAR PORT ROOF AND BALCOLNY DEIGNS TO CITY
4. [CONCURRENT] MANUFACTURE MODULES (~3-4 MONTHS)
    a. PRODUCE DETAILED SHOP DRAWINGS FOR FACTORY
    b. SHOP DRAWINGS TO BE APPROVED BY SSF
    c. SHOP DRAWINGS SUBMITED TO CITY FOR REVIEW AND APPROVAL
    d. FACTORY BEGINS MANUFACTURING
    e. MODULES ARE TESTED AND CERTIFIED BY THE CSC APPROVAL AUTHORITY, GET ISSUED CSC PLATES
    f. TEST RESULTS SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL
    g. MODULES, STRUCTURAL STEEL, AND GLAZING ARE SHIPPED TO SITE FRAMED INSULATED WITH DOORS AND GLAZING INSTALLED
5. [CONCURRENT] SITE PREPARATION (~3-4 MONTHS)
    a. CLEAR AND GRADE SITE
    b. UTILITY CONSTRUCTION
    c. FOUNDATIONS
6. INSTALL MODULES: (WEEK)
    a. MODULES ARRIVE TO SITE, INSPECTED, AND STAGED
    b. MODULES INSTALLED ONE BY ONE WITH A CRANE ALONG WITH STAIRS
    c. MODULE AND STRUCTURAL STEEL MEMBERS WELDED TOGETHER, INSPECTED.
    d. GAPS BETWEEN CONTAINERS SEALED
7. BALCONIES AND ROOF INSTALLED, INSPECTED
8. BASEMENT WINDOW AND DOOR INSTALLED. BUILDING IS WATER TIGHT.
9. [CONCURRENT] INTERIOR BUILD OUT
    a. ELECTRICAL, PLUMBING, HVAC, SHEETROCK, CASEWORK, FIXTURES, APPLIANCES, ETC.
10. [CONCURRENT] CAR PORT ROOF INSTALLED
10. [CONCURRENT] LANDSCAPING, INSTALLING REPLACEMENT TREES, DRIVEWAYS, ETC.
11. FINAL INSPECTION, COMPLETE PERMIT

**MICC 17.14.010 SECTION 107.4.2 DEFERRED SUBMITTALS**, FOR THE PURPOSES OF THIS SECTION, DEFERRED SUBMITTALS ARE DEFINED AS THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF THE APPLICATION AND THAT ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD. DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE THE PRIOR APPROVAL OF THE BUILDING OFFICIAL. THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHALL INDICATE THE LIST OF DEFERRED SUBMITTALS ON THE CONSTRUCTION DOCUMENTS FOR REVIEW BY THE BUILDING OFFICIAL. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. THE BUILDING OFFICIAL IS AUTHORIZED TO CHARGE AN ADDITIONAL PLAN REVIEW FEE TO EVALUATE DEFERRED SUBMITTALS UNDER THE PROVISIONS OF THIS SECTION.

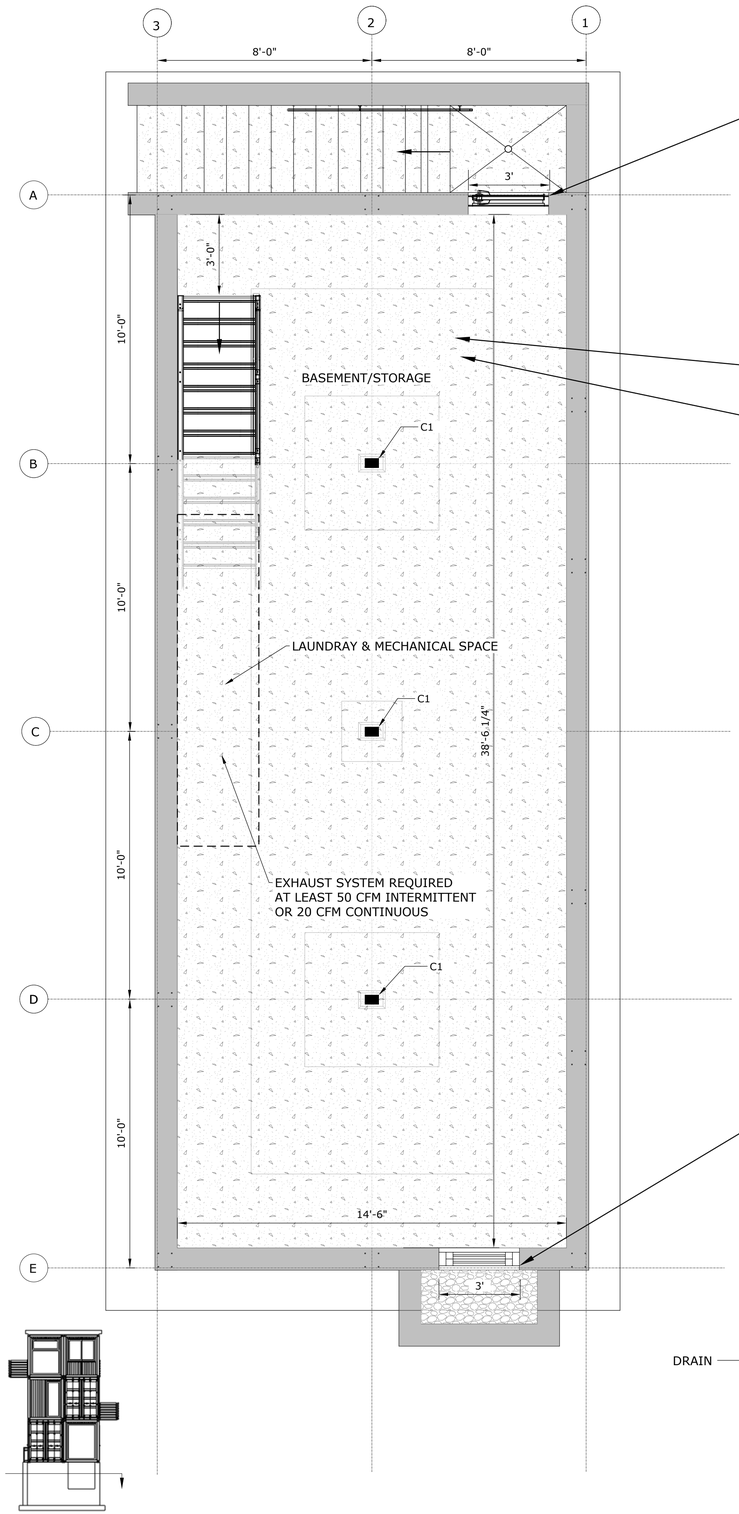
NOTE: THIS APPLICATION HAS DEFERRED SUBMITTALS FOR THE FINAL PREENGINEERED CAR PORT ROOF, BALCONIES, AND THE FINAL DETAILED SHOP DRAWINGS FOR THE PREFABRICATED SHIPPING CONTAINER MODULES.

# Floor Plans - Basement & 1F

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## BASEMENT

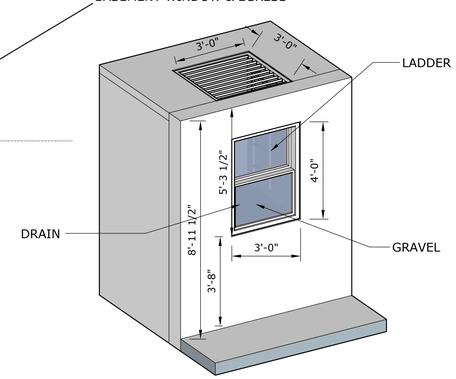


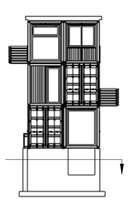

BASEMENT DOOR & EGRESS

CARBON MONOXIDE OR
COMBO SMOKE & CARBON MONOXIDE
ALARM REQUIRED

SMOKE ALARM REQUIRED

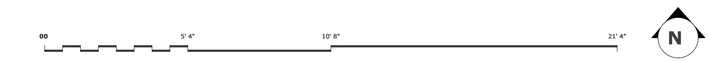
BASEMENT WINDOW & EGRESS



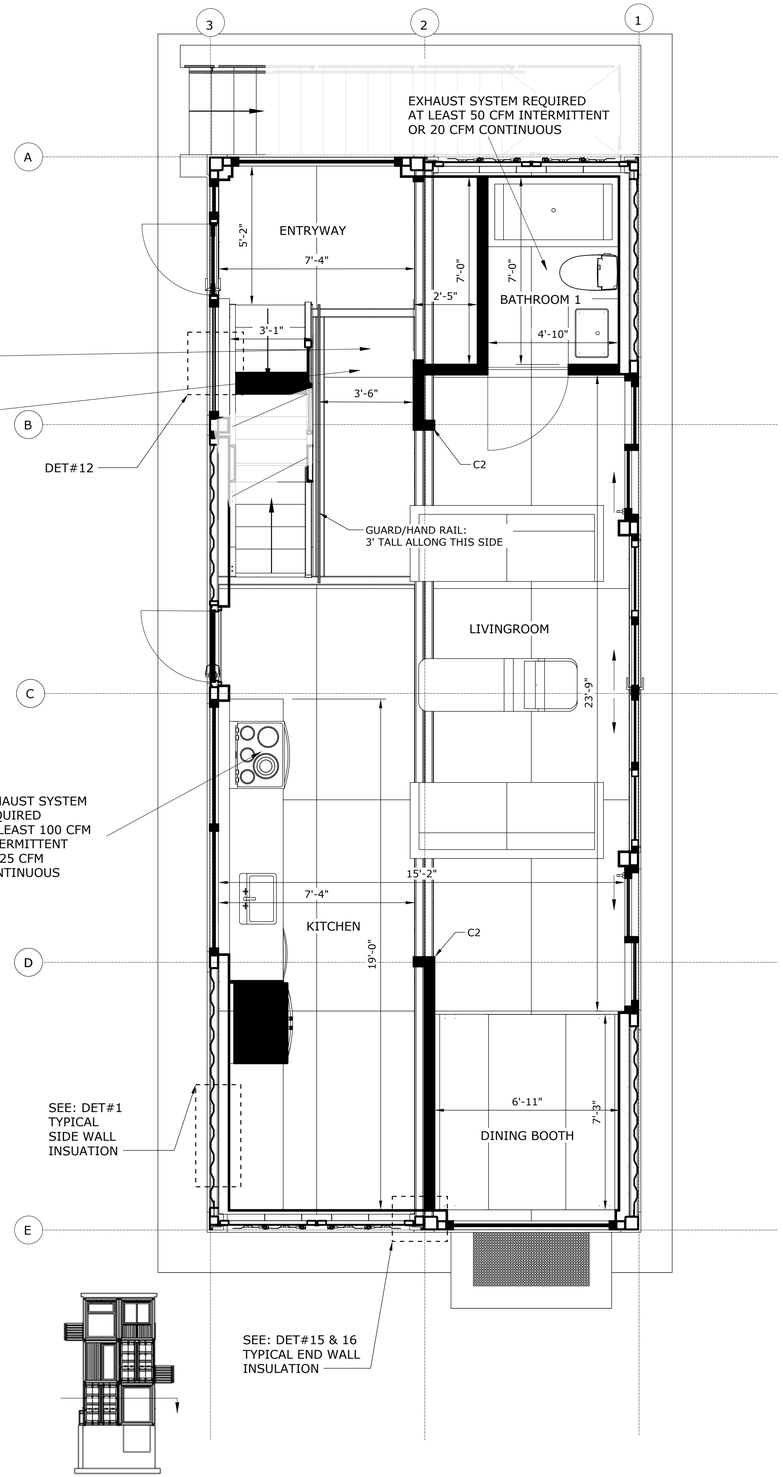



NOTE: THE 3'-2" WIDTH FOR ALL STAIRS IS CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT

CONTAINER FLOOR NOTES: ALL CONTAINER MODULE FLOORS ARE TYPICAL CONTAINER FLOORS AND MEET THOSE STANDARDS. THE FLOOR IS 1.1" THICK MARINE GRADE PLYWOOD SUPPORTED UNDERNEATH BY 5" X 1.75" STEEL C-CHANNELS 12" OC. REFER TO "TYPICAL CONTAINER DETAILS" SHEET WHICH HAS EVEN MORE DETAIL ON THE FLOOR STRUCTURE AND HOW THE PANELS ARE ATTACHED TO THE C-CHANNELS. THE STRUCTURAL PLANS ALSO HAVE DETAILS ON 5/S5.2. FLOORS ARE DESIGNED TO BE DRIVEN OVER WITH LOADED FORKLIFTS. AS PART OF THE CSC CERTIFCATOIN, FLOORS ARE TESTED WITH ISO 1496-6.9, 6019 LBS PER WHEEL (7.3"X3.9") OVER ENTIRE FLOOR AREA, AND ARE CERTIFIED TO A 250 PSF LIVE LOAD RATING.




## 1ST FLOOR

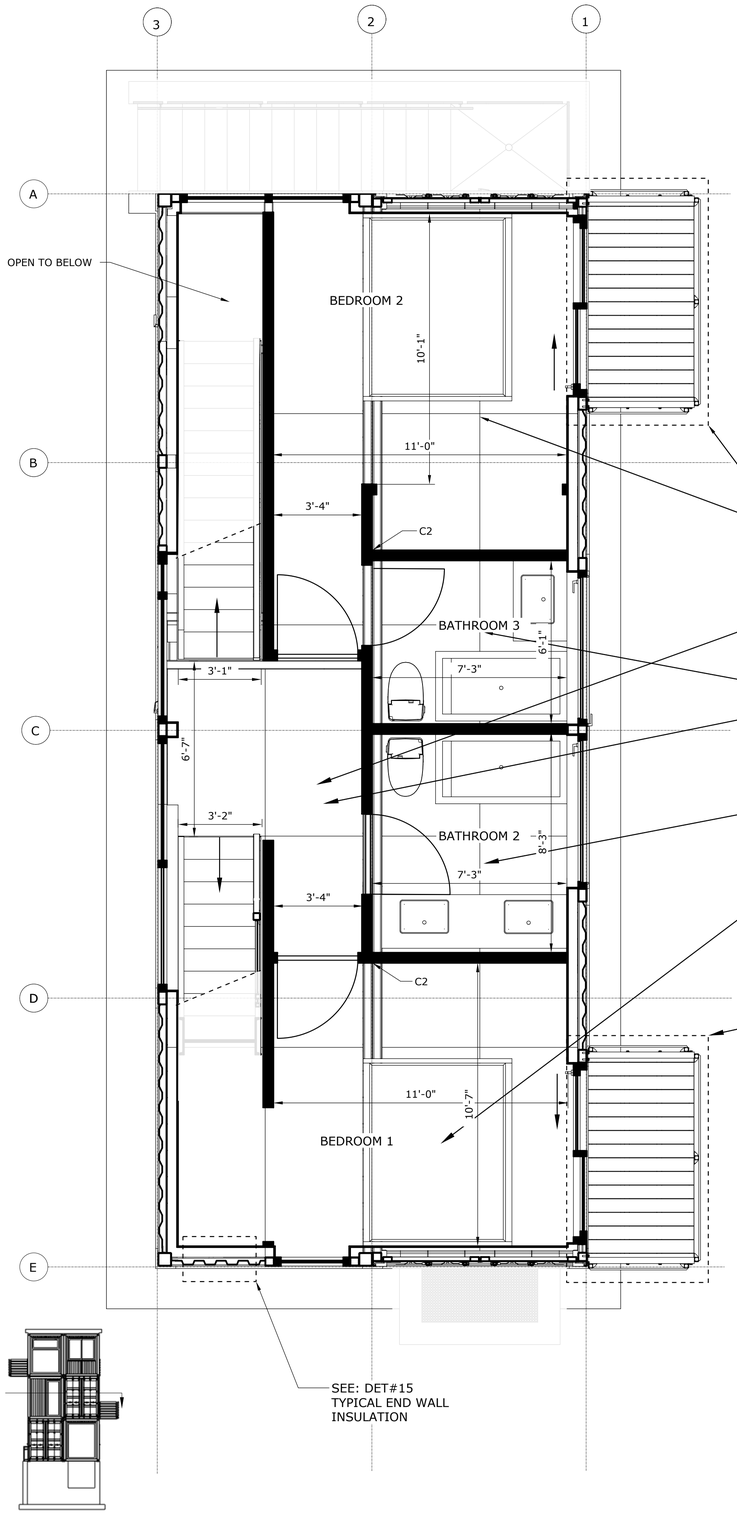


# Floor Plans - 2F & 3F

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## 2ND FLOOR




BASEMENT DOOR & EGRESS

CARBON MONOXIDE OR
COMBO SMOKE & CARBON MONOXIDE
ALARM REQUIRED

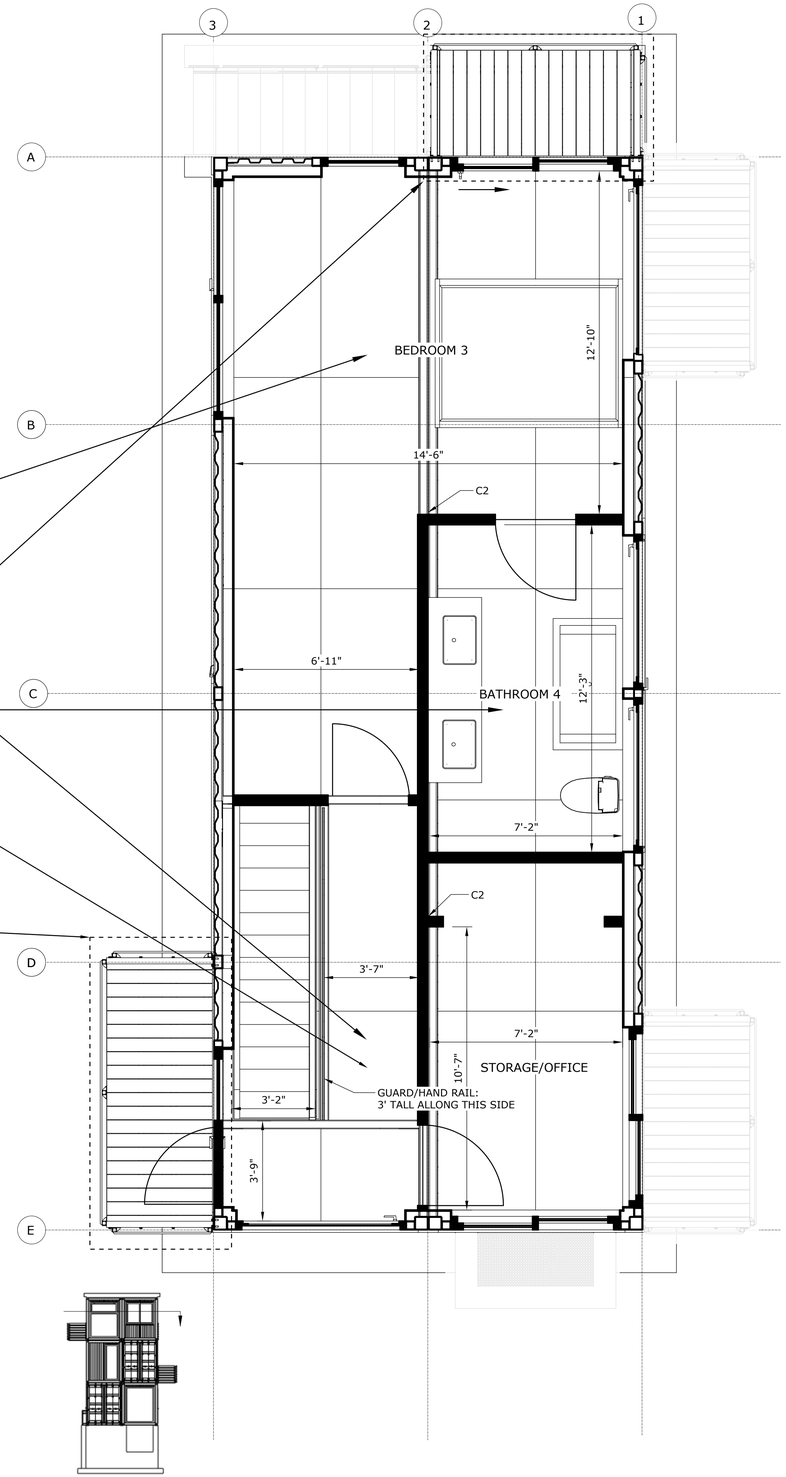
SMOKE ALARM REQUIRED

EXHAUST SYSTEM REQUIRED
AT LEAST 50 CFM INTERMITTENT
OR 20 CFM CONTINUOUS

PREENGINEERED BALCONIES

DEFERRED SUBMITAL WILL
CONTAIN FINAL DESIGN

## 3RD FLOOR




NOTE: THE 3'-2" WIDTH FOR ALL STAIRS IS CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT

CONTAINER FLOOR NOTES: ALL CONTAINER MODULE FLOORS ARE TYPICAL CONTAINER FLOORS AND MEET THOSE STANDARDS. THE FLOOR IS 1.1" THICK MARINE GRADE PLYWOOD SUPPORTED UNDERNEATH BY 5" X 1.75" STEEL C-CHANNELS 12" OC. REFER TO "TYPICAL CONTAINER DETAILS" SHEET WHICH HAS EVEN MORE DETAIL ON THE FLOOR STRUCTURE AND HOW THE PANELS ARE ATTACHED TO THE C-CHANNELS. THE STRUCTURAL PLANS ALSO HAVE DETAILS ON 5/S5.2. FLOORS ARE DESIGNED TO BE DRIVEN OVER WITH LOADED FORKLIFTS. AS PART OF THE CSC CERTIFCATOIN, FLOORS ARE TESTED WITH ISO 1496-6.9, 6019 LBS PER WHEEL (7.3"X3.9") OVER ENTIRE FLOOR AREA, AND ARE CERTIFIED TO A 250 PSF LIVE LOAD RATING.

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# STAIR DESIGN
# (USED FOR ALL FLOORS)

**NOTES:**
This house contains 4 sets of staircases: 3 steel stairs inside the building, and 1 concrete stairs outside leading to the basement. All 4 of staircases have the same dimensions and the interior stairs have the exact same design. The handrail side of the stairs is always opposite the exterior wall. All interior stairs have closed risers except the first floor stairs on the east side of the building. Interior stairs are constructed out of typical steel c and square channels and are mounted into the containers' structure at the container factory with the exception of the basement stairs which are mounted on site. Interior stair treads and risers are made from marine grade plywood. The exterior stairs are made of cast concrete as specified in the structural sheets.

**STAIR CODE SUMMARY: IRC 2018 – Section R311.7**
**REQUIREMENTS VS ACTUAL:**

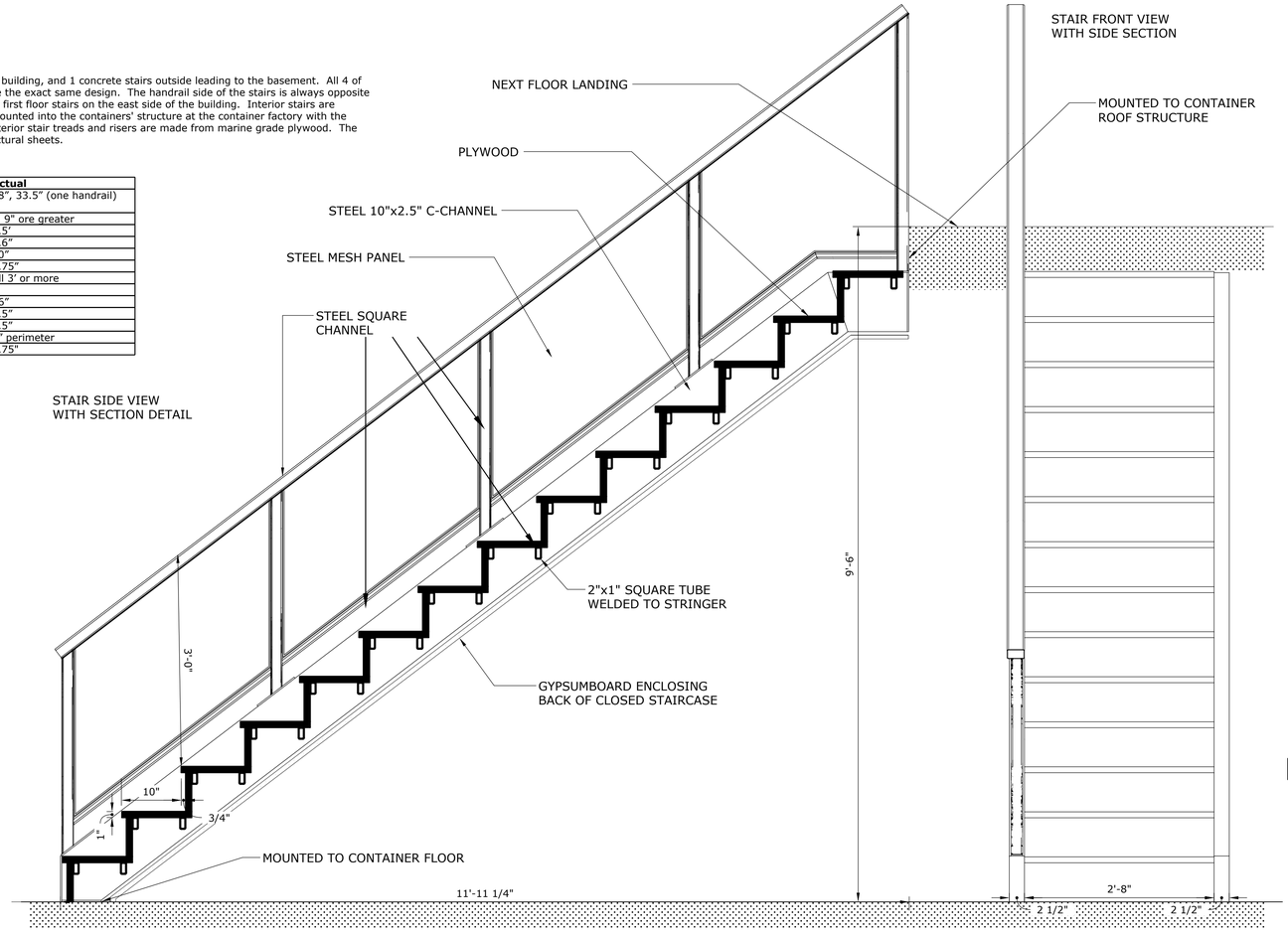
| | IRC2018 Requirement | Actual |
|---|---|---|
| **Width** | 36", 31.5" (one handrail) (min) | 38", 33.5" (one handrail) |
| **Headroom** | 6' 8" (min) | 6' 9" ore greater |
| **Vertical Rise** | 12' 7" (max) | 9.5" |
| **Riser Height** | 7.75" (max) | 7.6" |
| **Tread Depth** | 10" | 10" |
| **Nosing Projection** | 0.75" – 1.25" | 0.75" |
| **Landings** | 3' (min) | All 3' or more |
| **Handrail Sides** | 1 (min) | 1 |
| **Handrail Height** | 34" – 38" | 36" |
| **Handrail Projection** | 4.5" (max) | 3.5" |
| **Handrail Wall Gap** | 1.5" (min) | 1.5" |
| **Handrail Grip Size** | 4" - 6" perimeter | 4" perimeter |
| **Open Riser Opening** | 4" (max) | 3.75" |

**R311.7 Stairways.**
**R311.7.1 Width.**
Stairways shall be not less than 36 inches (914 mm) in **clear width** at all points above the permitted handrail height and below the required headroom height. The clear width of stairways at and below the handrail height, including treads and landings, shall be not less than 31 1/2 inches (787 mm) where a handrail is installed **on one side** and 27 inches (698 mm) where handrails are installed on both sides.
**R311.7.2 Headroom.**
The **headroom** in stairways shall be not less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.
**R311.7.3 Vertical rise.**
A flight of stairs shall not have a **vertical rise** larger than 151 inches (3835 mm) between floor levels or landings.
**R311.7.5.1 Risers.**
The **riser height** shall be not more than 7 3/4 inches (196 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. At open risers, openings located more than 30 inches (762 mm), as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter (102 mm) sphere.
**R311.7.5.2 Treads.**
The **tread depth** shall be not less than 10 inches (254 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8inch (9.5 mm).
**R311.7.5.3 Nosings.**
Nosings at treads, landings and floors of stairways shall have a radius of curvature at the nosing not greater than 9/16inch (14 mm) or a bevel not greater than 1/2inch (12.7 mm). A **nosing projection** not less than 3/4inch (19 mm) and not more than 11/4inches (32 mm) shall be provided on stairways. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8inch (9.5 mm) within a stairway.
**R311.7.6 Landings for stairways.**
There shall be a floor or landing at the top and bottom of each stairway. The width perpendicular to the direction of travel shall be not less than the width of the flight served. For landings of shapes other than square or rectangular, the depth at the walk line and the total area shall be not less than that of a quarter circle with a radius equal to the required landing width. Where the stairway has a straight run, the depth in the direction of travel shall be not less than 36 inches (914 mm).
**R311.7.8 Handrails.**
Handrails shall be provided on not less than one side of each flight of stairs with four or more risers.
**R311.7.8.1Height.**
Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).
**R311.7.8.2 Handrail projection.**
Handrails shall not project more than 4 1/2inches (114 mm) on either side of the stairway.
**R311.7.8.3 Handrail clearance.**
Handrails adjacent to a wall shall have a space of not less than 1 1/2inches (38 mm) between the wall and the handrails.
**R311.7.8.4 Continuity.**
Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals.
**R311.7.8.5 Grip size.**
Required handrails shall be of one of the following types or provide equivalent graspability.
Type I. Handrails with a circular cross section shall have an outside diameter of not less than 1 1/4 inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter of not less than 4 inches (102 mm) and not greater than 61/4inches (160 mm) and a cross section of not more than 21/4inches (57 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).

**R312.1 Guards Fall Protection.**
R312.1.1 where required. Guards shall be provided for those portions of open-sided waling surfaces, including stairs, ramps, and landings, that are located more than 30 inches measured vertically to the floor or grade below at any point within 36 inches horizontally to the edge of the opening side. Insect screening shall not be considered as a guard.

R312.12 height. required guards at open sided walking surfaces, including stairs, porches, balconies, or landings, shall be not less than 36 inches in height as measured vertically above the adjacent walking surface or the line connecting the nosings.

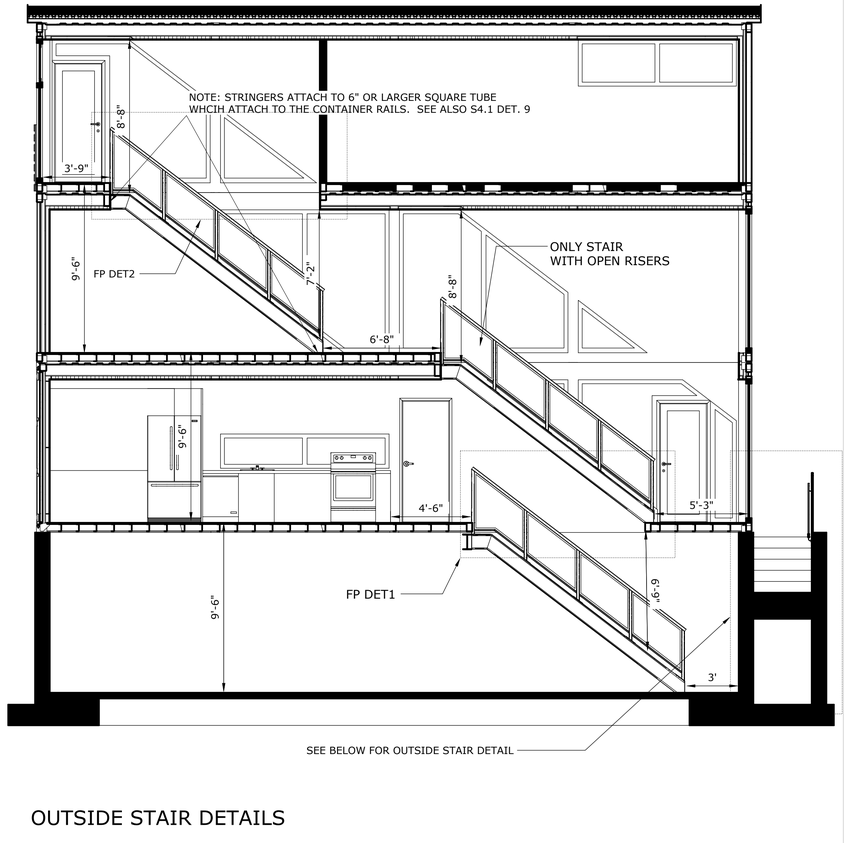
STAIR SIDE VIEW
WITH SECTION DETAIL



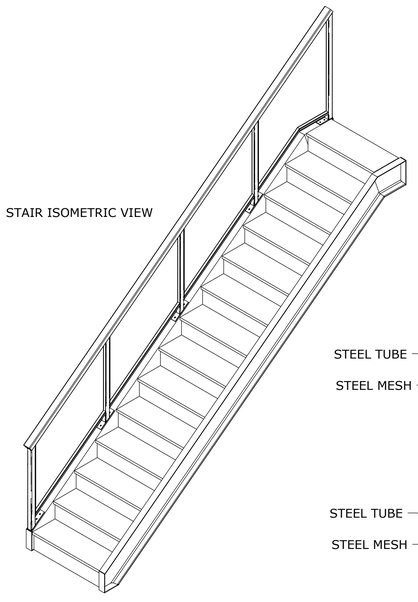

STAIR FRONT VIEW
WITH SIDE SECTION



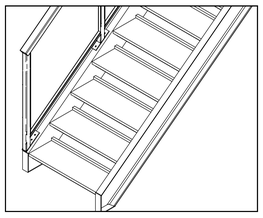

STAIRS SECTION



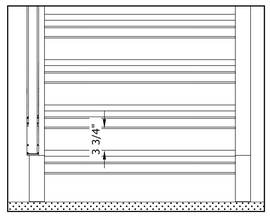

STAIR ISOMETRIC VIEW



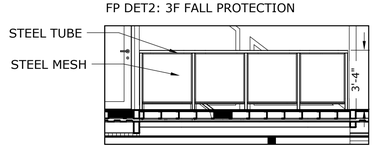
ISO VIEW OPEN RISER VARIATION



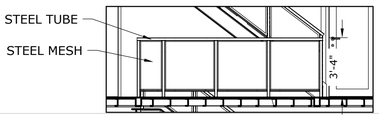
FRONT VIEW OPEN RISER VARIATION



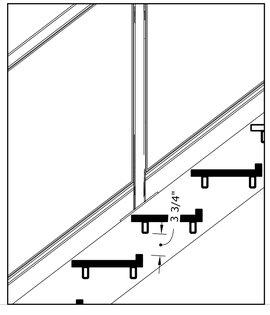

FP DET2: 3F FALL PROTECTION




FP DET1: 1F FALL PROTECTION

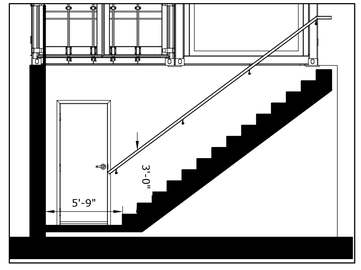



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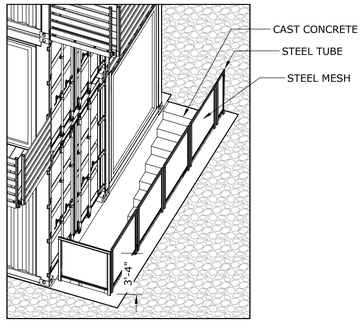



## OUTSIDE STAIR DETAILS

EXTERIOR STAIR SECTION W/ RAIL




EXTERIOR STAIR FALL PROTECTION ISO

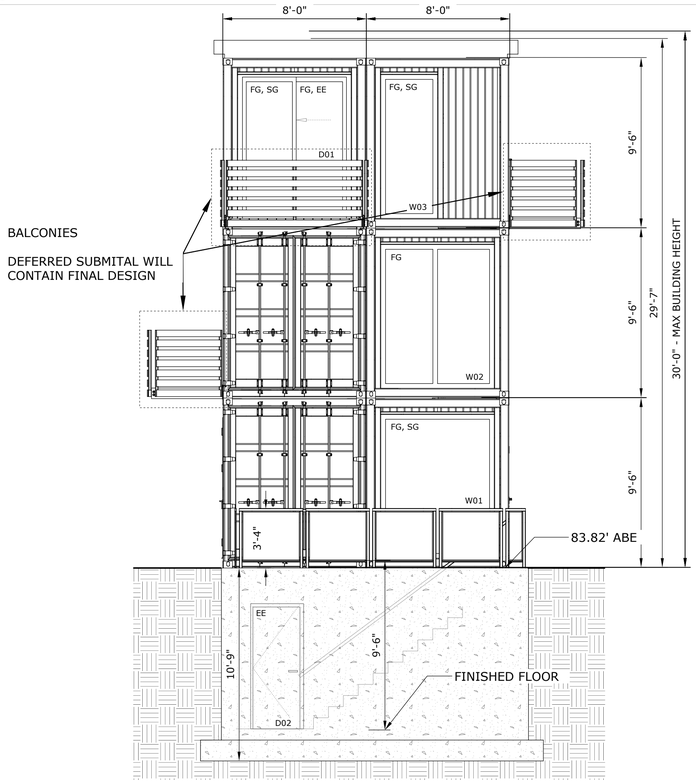


# Elevations

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smadasam@gmail.com
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3508 96th Ave SE
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## NORTH



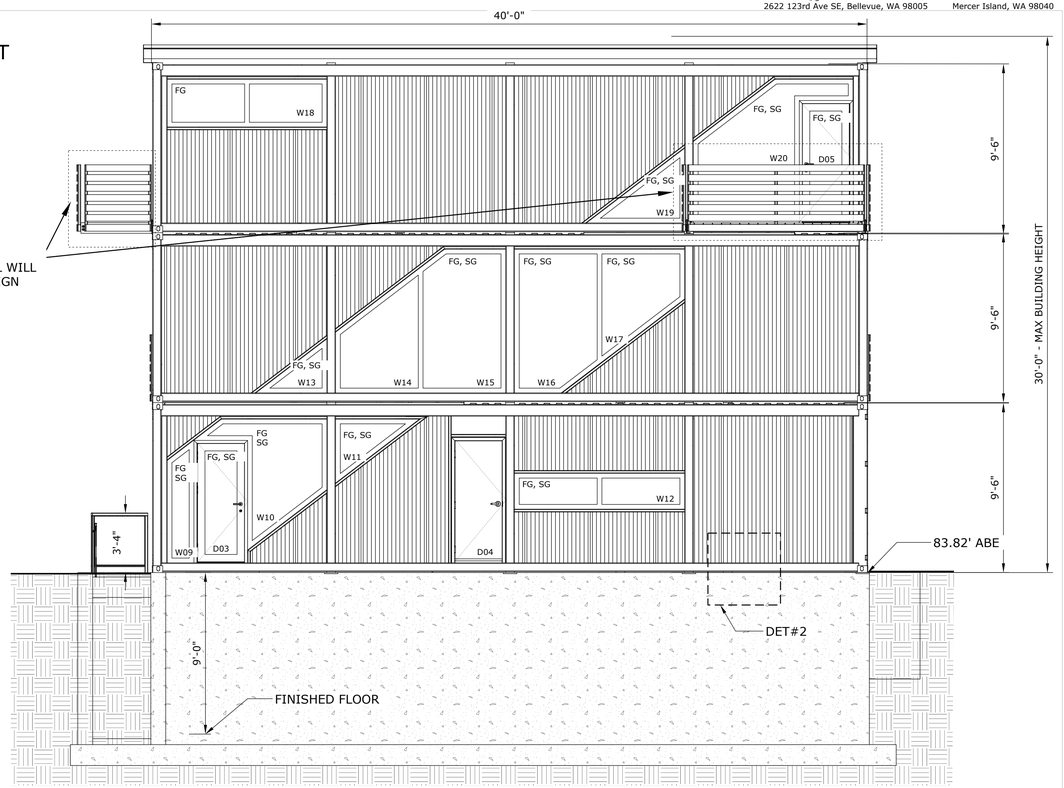

## WINDOW AND DOOR SCHEDULE

| # | DESCRIPTION | GLAZING | U-Factor | NOTES |
|---|---|---|---|---|
| W01 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W02 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | . |
| W03 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W04 | Alum. Single Hung Window | DUAL PANE LOW E | 0.28 | EE |
| W05 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | . |
| W06 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | . |
| W07 | Alum. Fix + Tilt Window | DUAL PANE LOW E | 0.28 | SG |
| W08 | Alum. Sliding Window | DUAL PANE LOW E | 0.28 | SG, EE |
| W09 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W10 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W11 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W12 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W13 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W14 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | . |
| W15 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W16 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W17 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W18 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | . |
| W19 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W20 | Alum. Fix Window | DUAL PANE LOW E | 0.28 | SG |
| W21 | Alum. Awning Window | DUAL PANE LOW E | 0.28 | SG |
| W22 | Alum. Awning Window | DUAL PANE LOW E | 0.28 | SG |
| W23 | Alum. Sliding Window | DUAL PANE LOW E | 0.28 | EE |
| W24 | Alum. Awning Window | DUAL PANE LOW E | 0.28 | SG |
| W25 | Alum. Awning Window | DUAL PANE LOW E | 0.28 | SG |
| W26 | Alum. Awning Window | DUAL PANE LOW E | 0.28 | SG |

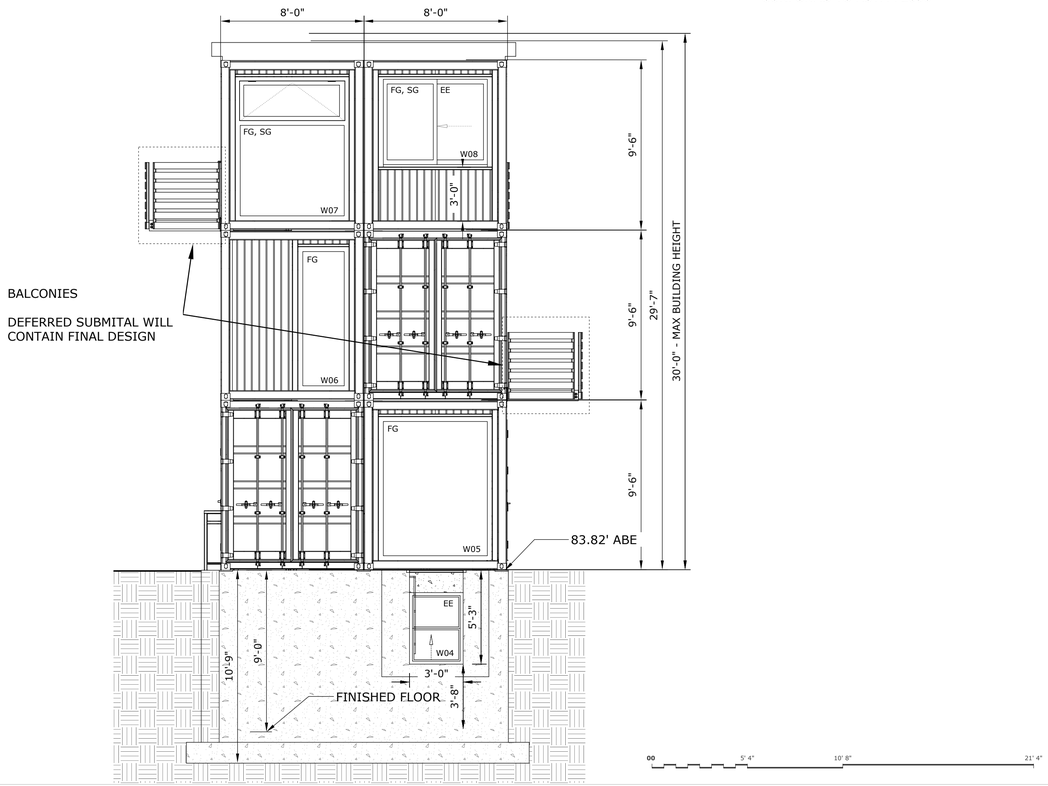
| # | DESCRIPTION | GLAZING | U-Factor | NOTES |
|---|---|---|---|---|
| D01 | Alum. Sliding Glass Door | DUAL PANE LOW E | 0.3 | SG |
| D02 | Steel Door | . | 0.58 | . |
| D03 | Alum. Glass Door | DUAL PANE LOW E | 0.3 | SG |
| D04 | Steel Door | . | 0.58 | . |
| D05 | Alum. Glass Door | DUAL PANE LOW E | 0.3 | SG |
| D06 | Alum. Sliding Glass Door | DUAL PANE LOW E | 0.3 | SG |
| D07 | Alum. Bi-Fold Glass Door | DUAL PANE LOW E | 0.3 | SG |
| D08 | Alum. Sliding Glass Door | DUAL PANE LOW E | 0.3 | SG |
| D09 | Alum. Sliding Glass Door | DUAL PANE LOW E | 0.3 | SG |
| D10 | Alum. Sliding Glass Door | DUAL PANE LOW E | 0.3 | SG |

WINDOW & DOOR ABRIVIATIONS
WXX - WINDOW ID = XX
DXX - DOOR ID = XX
SG - SAFETY GLAZING
FG - FIXED GLAZING
EE - EMERGENCY ESCAPE
FP - FALL PROTECTION PER R312.2.2
CONFORMS TO ASTM F2090

## WEST




## SOUTH




## EAST

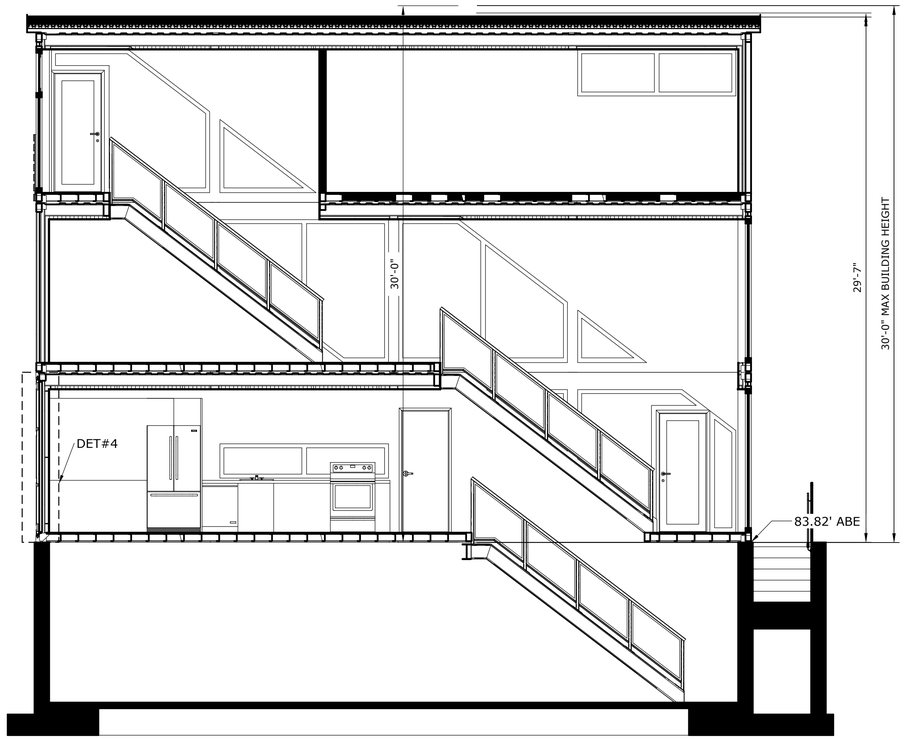


# Sections

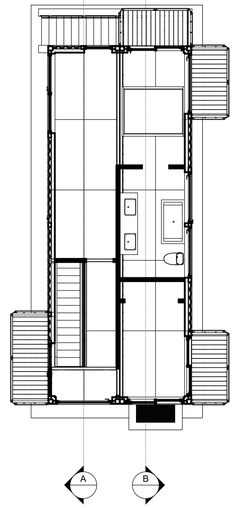
Owner/Architect: Sam Adams
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2622 123rd Ave SE, Bellevue, WA 98005

Site Address:
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Mercer Island, WA 98040

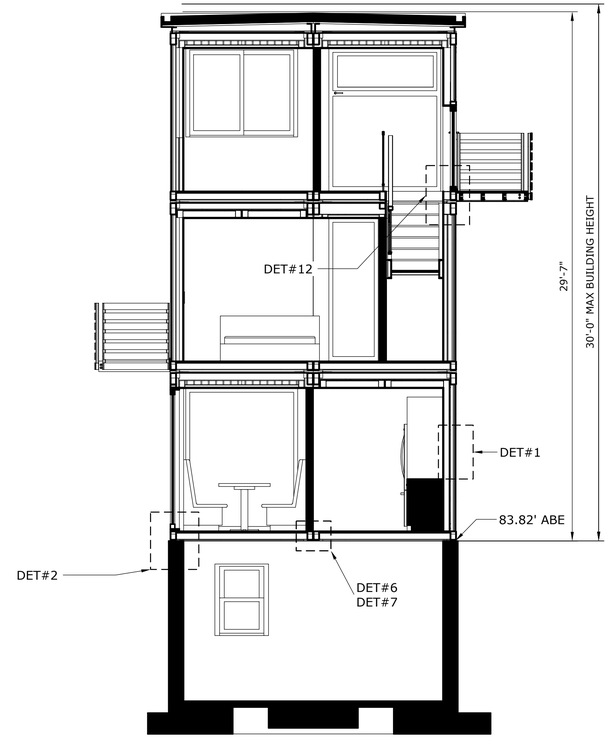
## SECTION A



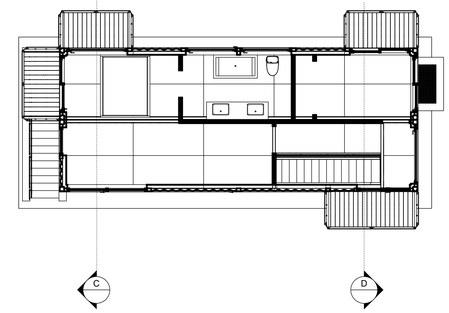

## 3F



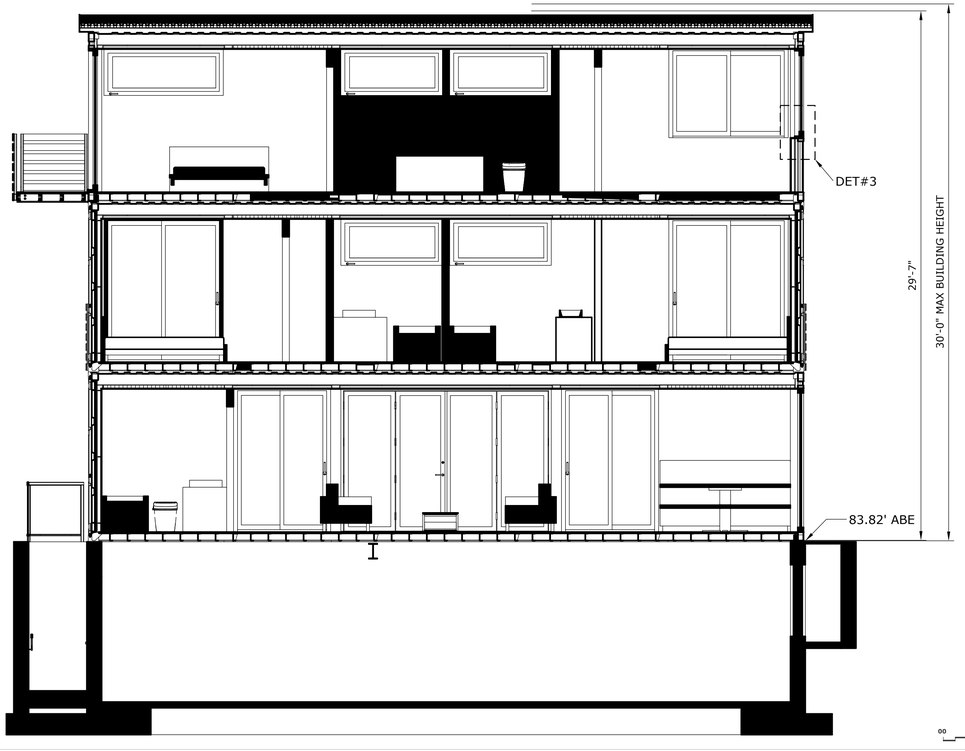

## SECTION D




## 3F



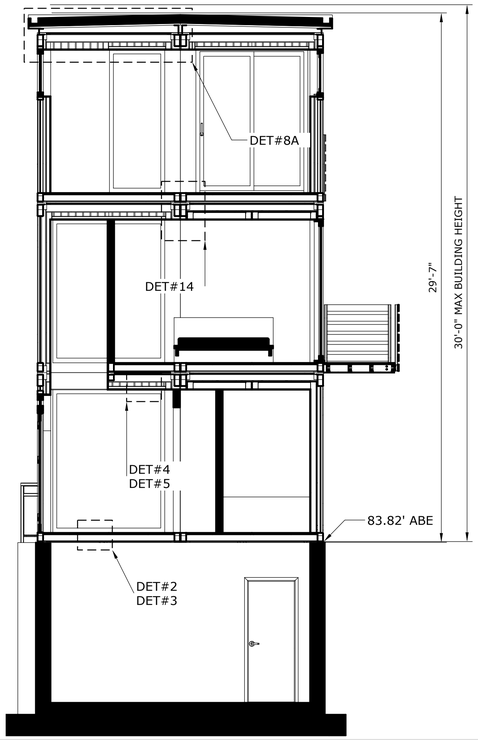

## SECTION B







## SECTION C

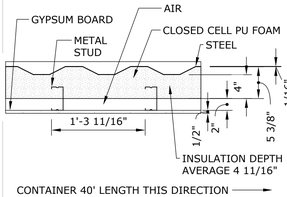


# Energy Code & Insulation Details

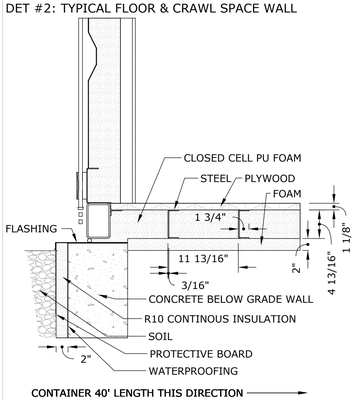
Owner/Architect: Sam Adams
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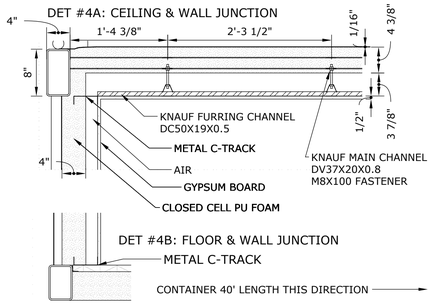
DET #1: TYPICAL SIDE WALL




DET #2: TYPICAL FLOOR & CRAWL SPACE WALL



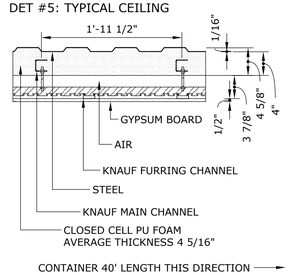

DET #4A: CEILING & WALL JUNCTION



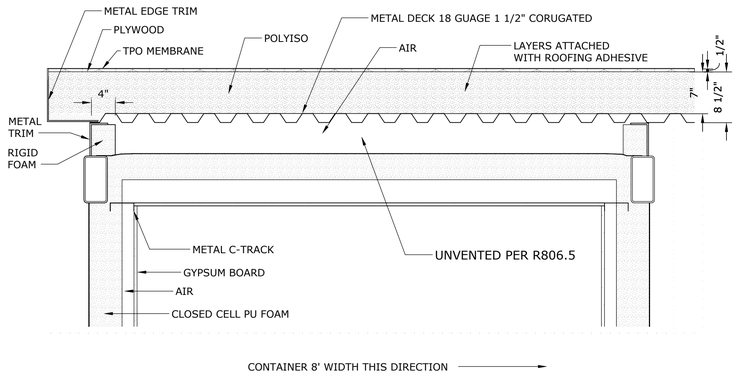

DET #4B: FLOOR & WALL JUNCTION



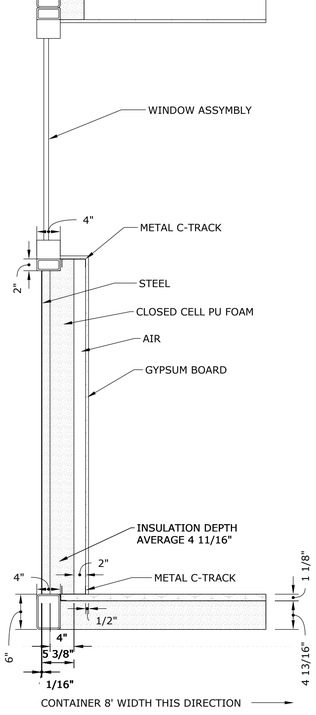

DET #5: TYPICAL CEILING



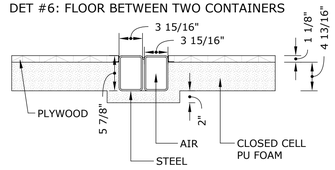

DET #8A: CONTAINER CEILING & STEEL DECK ROOF



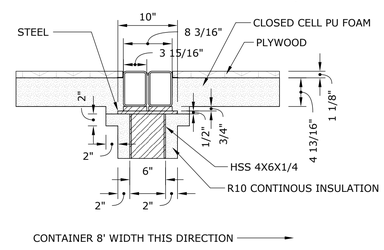

DET #3: WALL SECTION WITH WINDOW




DET #6: FLOOR BETWEEN TWO CONTAINERS

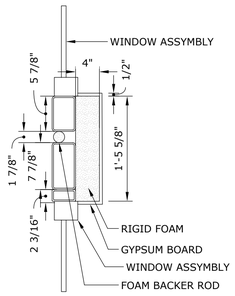



DET #7: FLOOR BETWEEN TWO CONTAINERS W/ COLUMN

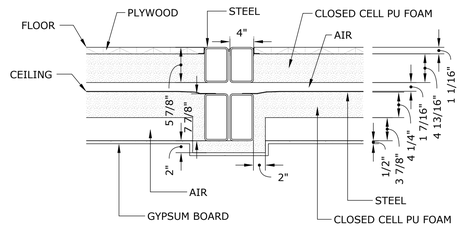



DET #17: ROOF DECK

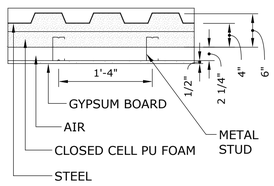
DET #12: INTERFACE BETWEEN TWO CONTAINER WALLS AT STAIR PENETRATION



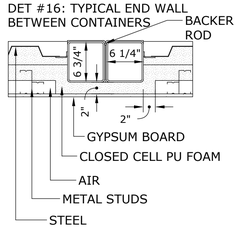

DET #14: INTERFACE BETWEEN CONTAINERS




DET #15: TYPICAL END WALL




DET #16: TYPICAL END WALL BETWEEN CONTAINERS




EXTERIOR WATERPROOFNESS NOTES: IN A NUTSHELL, EACH INDIVIDUAL CONTAINER MODULE'S STEEL AND GLASS EXTERIORS ARE WATERPROOF AT THE TIME THEY LEAVE THE FACTORY. THEN THE GAPS BETWEEN CONTAINERS ARE SEALED WITH FOAM BACKER RODS AND CALKING ON SITE AS DETAILED ON SHEET 12. FOR EXAMPLE, DETAILS 6, 7, 12, 14 & 16 SHOWS A BACKER ROD INSTALLED BETWEEN TWO CONTAINERS.

WHY DO WE CONSIDER THE EXTERIOR WATERPROOF? STEEL IS WATERPROOF. 1405.2 SPECIFIES THAT STEEL AT LEAST 0.38MM IS AN APPROVED WEATHER COVERING. CONTAINER WALLS ARE TYPICALLY AROUND 1.5-2MM THICK STEEL AND THE TUBE STEEL ABOUT 4MM. THE WELDS ARE ALSO CONSIDERED WATERPROOF. WELDS ARE DONE WITH AUTOMATIC AND SEMI-AUTOMATIC CO2 GAS ARC WELDING (MAG WELDING), OR SUPERIOR WELDING PROCESS. ALL EXTERIOR WELDINGS INCLUDING THAT ON BASE STRUCTURE WILL BE CONTINUOUS TO GIVE PERFECT WATERTIGHTNESS. ALL THE WELDS, EVEN SPOTS, WILL HAVE FULL PENETRATION WITHOUT UNDERCUTTING OR POROSITY. INTERIOR WELDS CAN BE INTERMITTENT WITH A MINIMUM BEAD LENGTH OF 25 MM FOR EVERY 150 MM. FLOORING IS FIXED TO THE CROSS MEMBERS BY SELF-TAPPING SCREWS. ALL CREVICES WILL BE SEALED WITH AN ELASTIC SEALING COMPOUND. EXTERIOR FENESTRATION IN THE CONTAINERS IS PREINSTALLED IN THE FACTORY AND IS WEATHER TIGHT. ON SITE, GAPS BETWEEN CONTAINERS ARE SEALED WITH FOAM BACKER RODS AND CALKING AS SHOWN ON SHEET 12 TO WEATHERPROOF THOSE GAPS.

**SUMMARY: WSEC 2018 THERMAL ENVELOPE COMPLIANCE**

Our approach for thermal envelope compliance is using the total UA alternative as allowed by section R402.1.4 of WSEC-R 2018.

**SECTION R402 BUILDING THERMAL ENVELOPE**

**R402.1.4 Total UA alternative.** If the **proposed *building thermal envelope* UA is less than or equal to the target UA, the building shall be considered in compliance with Table R402.1.1**. The proposed UA shall be calculated in accordance with Equation 2. The target UA shall be calculated in accordance with Equation 1. U-factors shall be determined as specified in Section R402.1.5.

**EQUATION 1 — GROUP R OCCUPANCY: TARGET UA**

$UA_T = U_{WAW} + U_{BGWABGW} + U_{VGAVG} + U_{OGAOG} + U_{FAF} + U_{RCARC} + U_{DAD} + F_{SPS} + F_{BGSPBGS}$

**EQUATION 2 — GROUP R OCCUPANCY: PROPOSED UA**

$UA = U_{WAW} + U_{BGWABGW} + U_{VGAVG} + U_{OGAOG} + U_{FAF} + U_{RCARC} + U_{DAD} + F_{SPS} + F_{BGSPBGS}$

**APROACH SUMMARY:**

Because this building uses mostly custom assemblies, U-factors from Appendix A were not often applicable. We therefore computed the thermal transmittance of all of the building's custom assemblies. See the full analysis report produced by Helix Energy Partners LLC and is included with the supplemental documents, so review that document for specific numbers and calculations. Although the building has many custom assemblies, they are used consistently throughout the building. Sections in previous sheets call out where these typical details are found in the build. This sheet contains architectural details of each of these assemblies. Using software produced by the Department of Energy, Helix Energy Partners modeled R-values for each of these details. Then, the whole building was modeled using Open Studio, a DoE produced and industry standard modeling software for the purpose. Helix Engineer Partners has a series of training videos of how the software works on their YouTube channel. With the software, you specify walls, ceilings, floors, etc. detailing the different assemblies with R values (which were modeled in the previous step) to a 3D geometry of the building and its rooms, etc. Open Studio then performs many complex calculations and simulations for the building as a whole. These outputs are what we used to compute the building's total UA as seen the thermal envelope report. These were also used to produce to the HVAC report as well.

**CONCLUSION:**

UA (980.7) <= $U_{AT}$ (1065.1)

| **SUMMARY** | U-Factor | R-Value |
|---|---|---|
| Above-Grade Wall | 0.04952 | 20.19146 |
| Ceiling (Roof) | 0.012 | 83.333333 |
| Below Grade Wall | 0.04838 | 20.667961 |
| Floor | 0.056 | 17.857143 |
| Opaque Doors | 0.242 | 4.132231 |
| Fenestration | 0.28 | 3.571429 |
| | | |
| **R402.1.5 Total UA alternative** | | |
| | TARGET | PROPOSED |
| **UAT** | **1065.1** | **980.7** |
| UW | 0.056 | 0.049526 |
| AW | 5572 | 5572 |
| UBGW | 0.035 | 0.048384 |
| ABGW | 1378 | 1378 |
| UVG | 0.3 | 0.28 |
| AVG | 1961 | 1961 |
| UOG | . | . |
| AOG | . | . |
| UF | 0.029 | 0.045 |
| AF | 935 | 935 |
| URC | 0.024 | 0.012 |
| ARC | 3117 | 3117 |
| UD | 0.37 | 0.242 |
| AD | 39.44 | 39.44 |
| FS | . | . |
| PS | . | . |
| FBGS | . | . |
| PBGS | . | . |

**SUMMARY: IRC 2018 - M1505.4 – WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM**

Each dwelling unit must have a ventilation system which consists of one ore supply **or** exhaust fans **or** a combination of such. According to WSU Energy Program's guide on this topic, it therefore acceptable to use only exhaust fans, and using bathroom vent fans or kitchen oven hoods are acceptable for this purpose. However, only using bathroom exhaust vents is considered "not balanced" and "not distributed" which implies a 1.5x system coefficient penalty, per TABLE M1505.4.3(2). **The base ventilation requirement is 95 CFM per TABLE M1505.4.3(1) based on this house's square footage and bedroom, or 95 CFM * 1.5 (system coefficient) = 142.5 CFM.** The system may run intermittently, offset by the factors outlined in TABLE M1505.4.3(3), but we will just run the fans all of the time which keeps the factor at 1.0x.

**[VENTILATION SYSTEM EQUIPMENT REQUIREMENTS]**

**2x bathroom vents totaling at least 142.5 CFM combined flow rate. These are to run continuously.**

**SUMMARY: WSEC RESIDENTIAL 2018 - REQUIREMENTS**

**R402.2.7 Floors**
Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of the subfloor decking. Insulation supports shall be installed so spacing is no more than 24 inches on center. Foundation vents shall be placed so that the top of the vent is below the lower surface of the floor insulation.

**R402.2.8 Basement Walls**
Below-grade exterior wall insulation used on the exterior (cold) side of the wall shall extend from the top of the below-grade wall to the top of the footing and shall be approved for below-grade use. Above-grade insulation shall be protected. Insulation used on the interior (warm) side of the wall shall extend from the top of the below-grade wall to the below-grade floor level and shall include R-5 rigid board providing a thermal break between the concrete wall and the slab.

**R402.4.1.2 Testing.**
The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascals). For this test only, the volume of the home shall be the conditioned floor area in ft2 (m2) multiplied by 8.5 feet (2.6 m). Where required by the code official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope. Once visual inspection has confirmed sealing (see Table R402.4.1.1), operable windows and doors manufactured by small business shall be permitted to be sealed off at the frame prior to the test.

**R403.4 Mechanical system piping insulation.**
Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-6.

**R403.5 Service hot water systems.**
Energy conservation measures for service hot water systems shall be in accordance with Sections R403.5.1 through R403.5.5. Service water-heating equipment shall meet the requirements of DOE 10 CFR Part 430 Uniform Energy Factor or the equipment shall meet the requirements of Section C404.2.

**R403.6 Mechanical ventilation.**
The building shall be provided with ventilation that meets the requirements of the International Residential Code or International Mechanical Code, as applicable, or with other approved means of ventilation. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

Installation Overview:
Container modules are prefabricated in a steel factory along with all glazing. The modules are delivered to site insulated with their fenestration preinstalled, and interiors framed with typical steel framing. Closed cell PU foam is sprayed in the factory to a minimum thickness of 4" on the inside of all exterior walls, every roof, and under all floors. This eliminates all air voids to the exterior to the minimum 4" thickness. These modules are considered watertight in their delivered condition. The steel exterior is an approved weather covering per R1405.2, and all exterior steel seams have continuous MAG welds with full penetration for watertightness. When stacked, the gap between modules are sealed on site with foam backer rods and calking. The rest of the construction happens on site, using common methods with typical materials sourced locally, with the added insulation being rigid foam. Per R303.1 the materials and equipment must be identifiable.

**SUMMARY: WSEC 2018 – ENERGY OPTION SELECTIONS [EQUIPMENT REQUIREMENTS]**

SECTION R406 ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS
**This house classifies as a "medium dwelling unit"** as defined in R406.3; therefore, this house shall be built with the flowing options:

**6.0 Credits are required.**

TABLE R406.2 FUEL NORMALIZATION CREDITS
**Selected: Heating option 2: Heat pump, +1 Credit.**
**[REQUIRED EQUIPMENT]**
For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(1)C or C403.3.2(2) or Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590

TABLE 406.3 ENERGY CREDITS
**Selected: Air Leakage Control and Efficient Ventilation, option 2.2, +1 Credits.**
Reduce the tested air leakage to 2.0 air changes per hour maximum at 50 Pascals.

**Selected: High Efficiency HVAC, option 3.6, +2 Credits.**
**[REQUIRED EQUIPMENT]**
Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature.

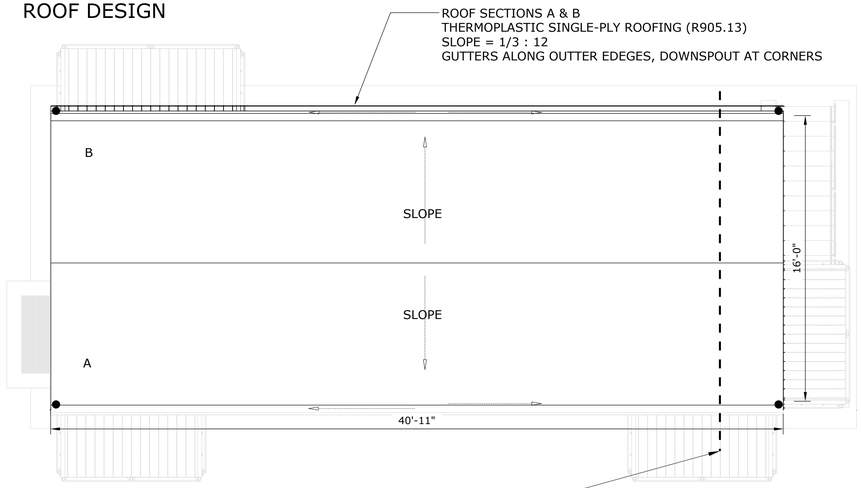
**Selected: Efficient Water Heating, option 5.5, +2 Credits.**
**[REQUIRED EQUIPMENT]**
Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification.

**TOTAL CREDITS: 6**

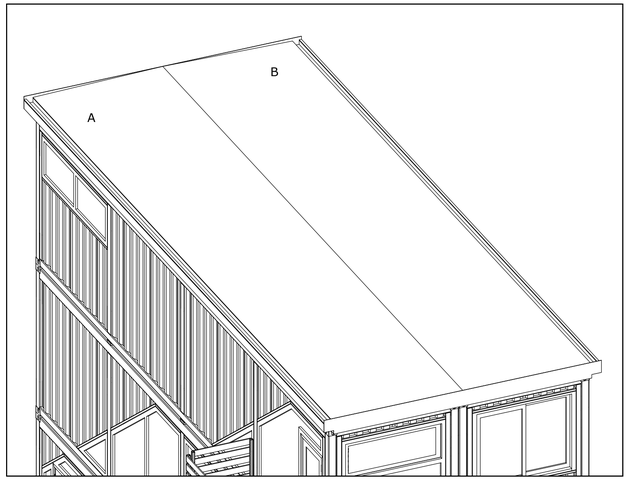
Owner/Architect: Sam Adams
210-452-1541
smadasam@gmail.com
2622 123rd Ave SE, Bellevue, WA 98005

Site Address:
3508 96th Ave SE
Mercer Island, WA 98040

## ROOF DESIGN




SPAN ROOF SECTION
ASSYMBLY DETAIL



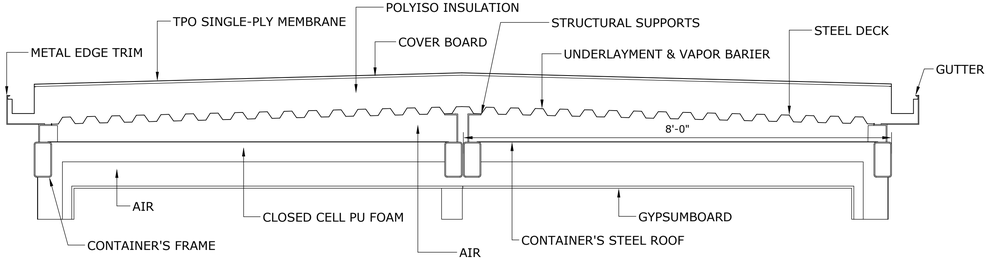

HOUSE ROOF DRAINAGE NOTES: THE CENTER ROOF GENTLY SLOPES TO THE EDGES OF THE BUILDING. 5" GUTTERS RUN ALONG THE EDGES CENTER ROOF AND DECKS. GUTTERS ARE SLOPED SUCH THAT 20' SECTIONS DRAIN TO THE CORNERS FROM THE MIDDLE. DOWNSPOUTS RUN DOWN FROM THE CORNER OF THE GUTTERS TO THE PVC STORMDRAIN PIPES THAT RUN ALONG THE BUILDING THEN COLLECT TO THE ONSITE DETENTION SYSTEM. FOR MORE DETAIL, REFER TO THE STORMDRAIN DESIGN IN THE CIVIL SHEETS.

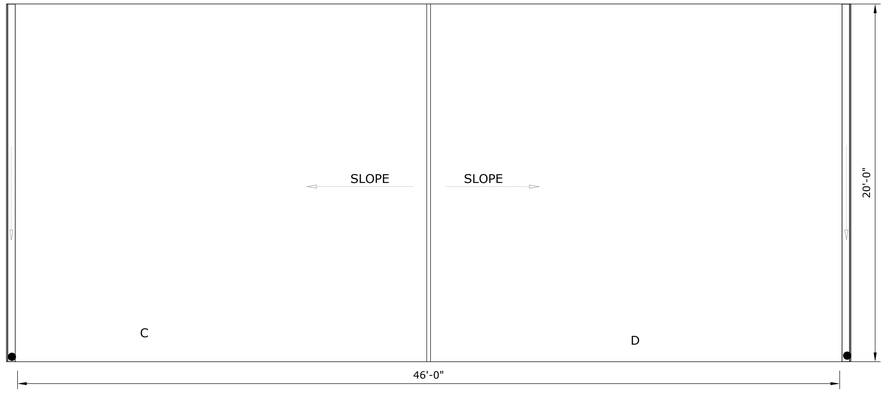
STRUCTURAL NOTE: SHEET S2.5 "ROOF PLAN" SHOWS THE STRUCUTRAL DESIGN FOR THE ROOF AONG WITH THE FOLLOWING DETAILS:

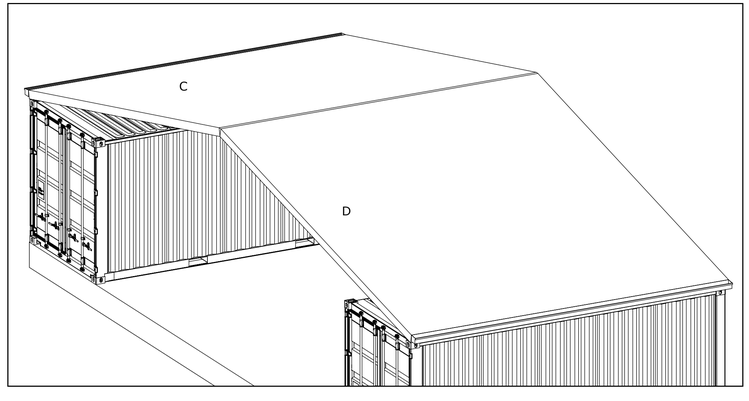
S2.5 - ROOF PLAN
S5.3-2 - ROOF DECK
S5.3-8 - ROOF EDGE DECK PERPENDICULAR
S5.3-11 - EXTERIOR CONTAINER SIDE WALL AT ROOF
S5.3-12 - INSIDE CONTAINER SIDE WALL AT ROOF

CAR PORT ROOF DRAINAGE NOTES: THE CENTER ROOF SLOPES TO THE EDGES OF THE BUILDING. 5" GUTTERS RUN ALONG THE EDGES CENTER ROOF AND DECKS. GUTTERS ARE SLOPED SUCH THAT THEY DRAIN TO THE FRONT. DOWNSPOUTS RUN DOWN FROM THE CORNER OF THE GUTTERS TO THE PVC STORMDRAIN PIPES THAT RUN ALONG THE BUILDING THEN COLLECT TO THE ONSITE DETENTION SYSTEM. FOR MORE DETAIL, REFER TO THE STORMDRAIN DESIGN IN THE CIVIL SHEETS.

NOTE: THE PREENGINEERED CAR PORT FINAL DESING IS A DEFERED SUBMISION.



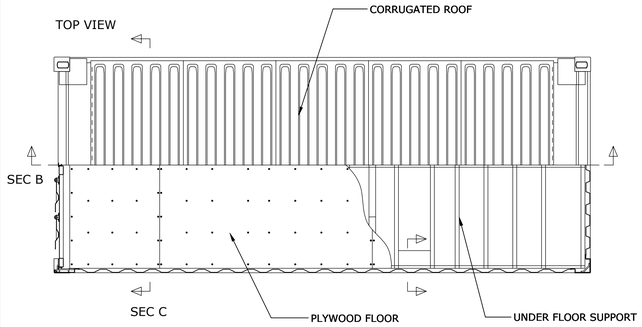



# Car Port & Typical Container Details

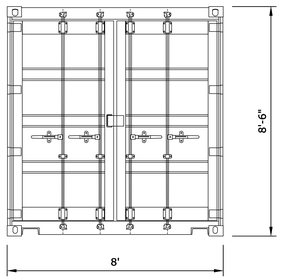
Owner/Architect: Sam Adams
210-452-1541
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2622 123rd Ave SE, Bellevue, WA 98005

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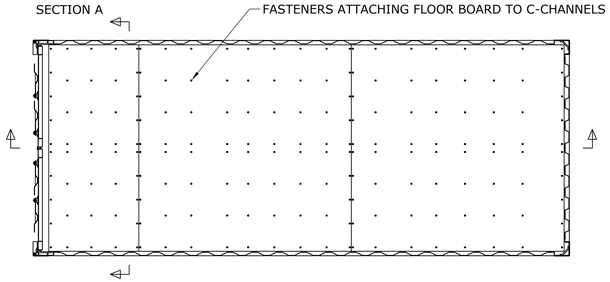
TOP VIEW

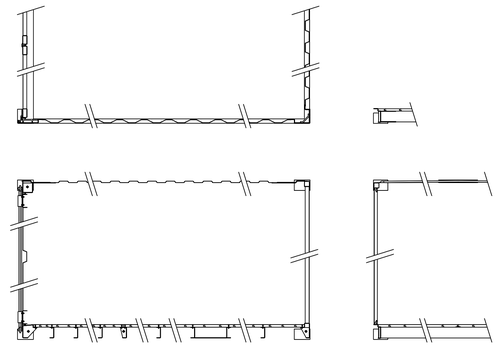



TYPICAL END WALL WITH DOORS

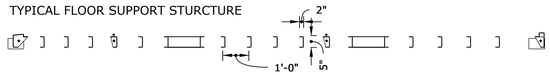



SECTION A

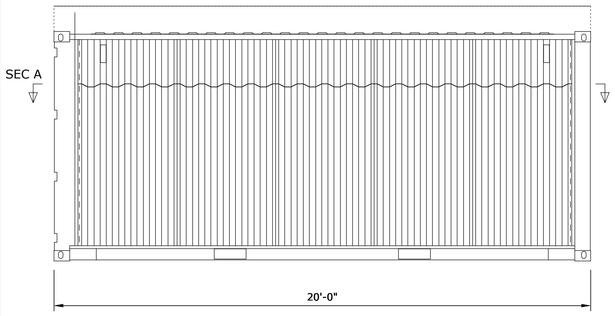


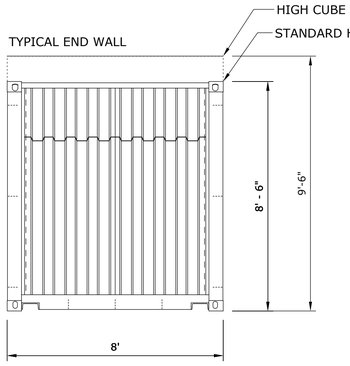
TYPICAL FLOOR SUPPORT STURCTURE



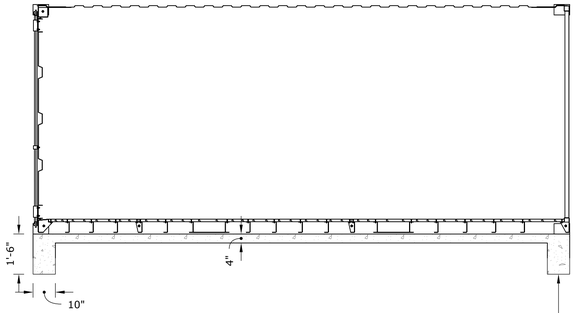

TYPICAL SIDE WALL



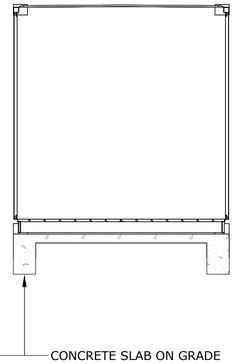

TYPICAL END WALL




SEC B

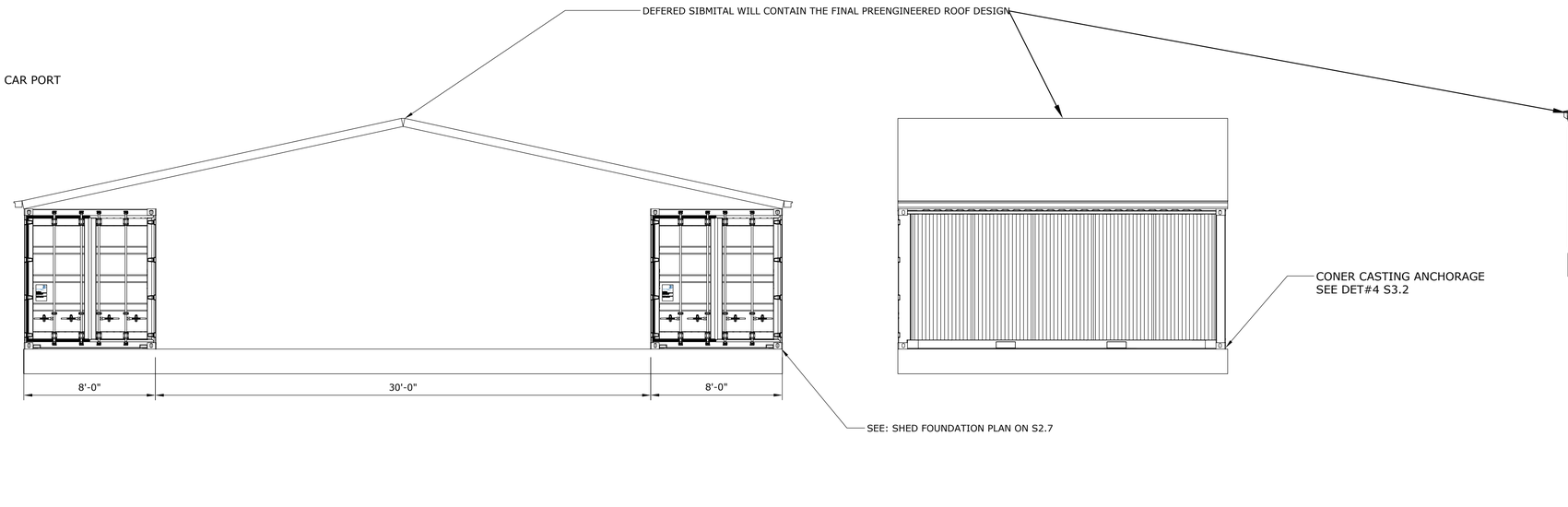


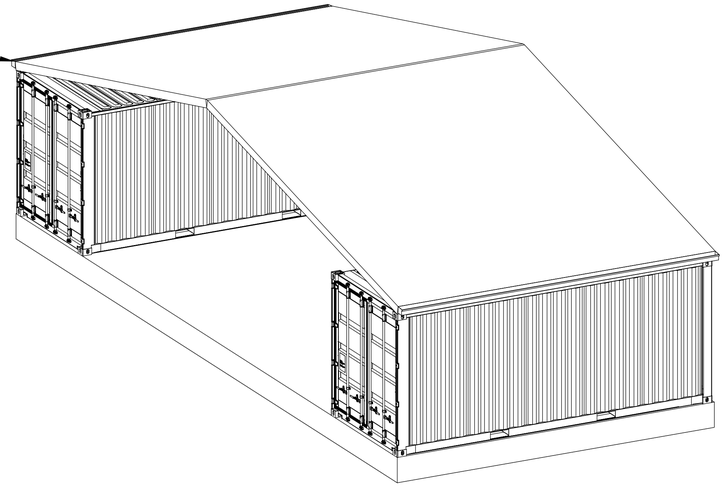

SEC C






CAR PORT

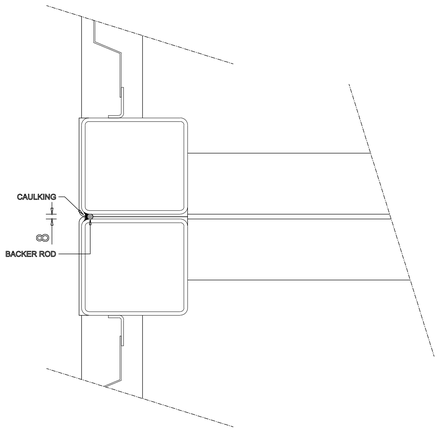


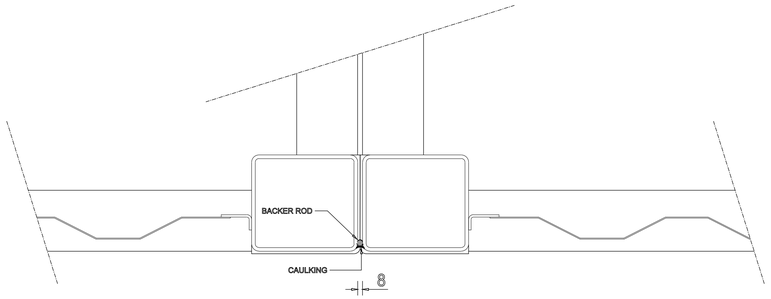
# Container Sealing Details

Owner/Architect: Sam Adams
210-452-1541
smadasam@gmail.com
2622 123rd Ave SE, Bellevue, WA 98005

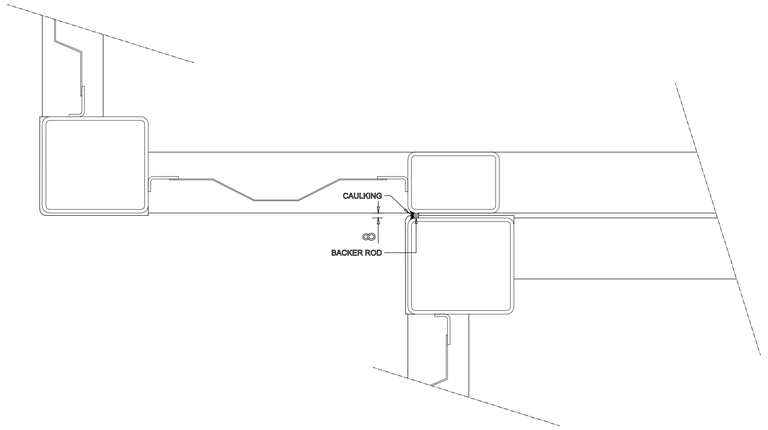
Site Address:
3508 96th Ave SE
Mercer Island, WA 98040



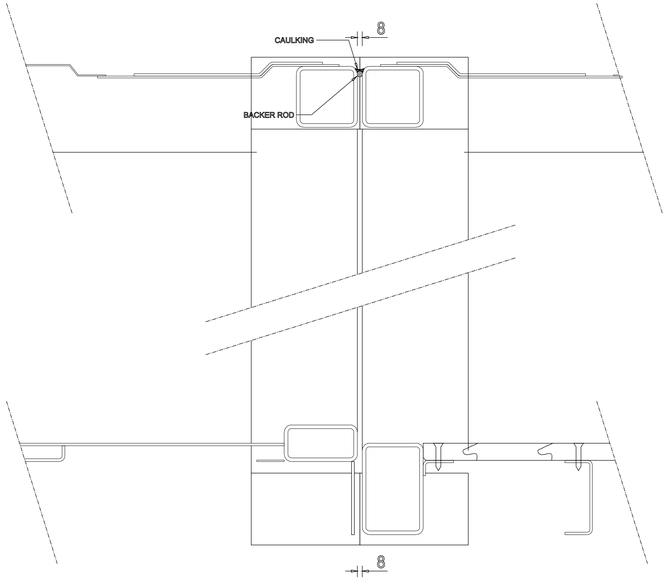

OPEN SIDE-SIDE DETAIL
PLAN



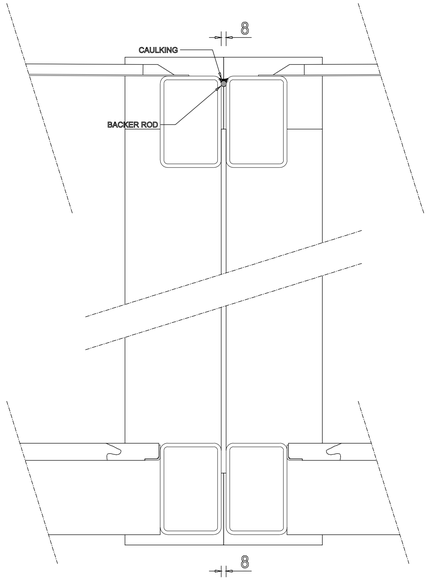

OPEN REAR END - FRONT END DETAIL
PLAN



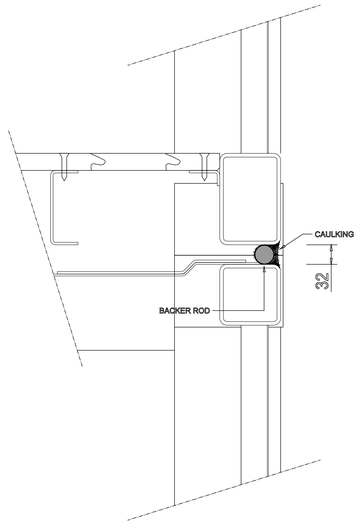

OPEN SIDE-SIDE OFFSET DETAIL
PLAN



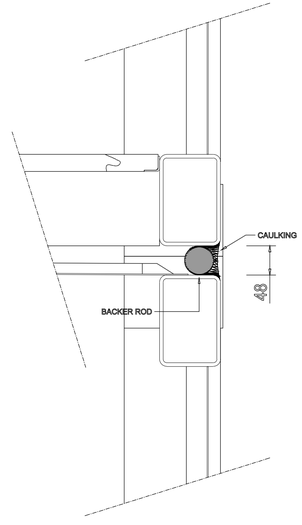

OPEN REAR END - FRONT END DETAIL
SECTION



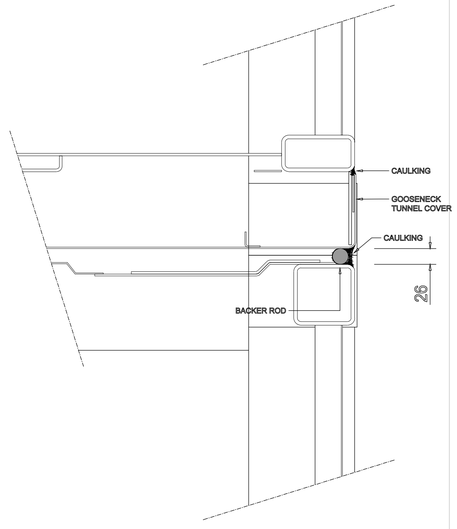

OPEN SIDE-SIDE DETAIL
SECTION




REAR END VERTICAL DETAIL
SECTION




SIDE VERTICAL DETAIL
SECTION




FRONT END VERTICAL DETAIL
SECTION

NOTE: The typical temperature for applying caulk must be above 43F(6C) and below 80F (26C), to ensure the caulk hardens correctly.

# NE 1/4 OF SE 1/4 OF SECTION 7, TOWNSHIP 24N, RANGE 5E, WM

# ADAMS SFR

## MERCER ISLAND

### LEGEND

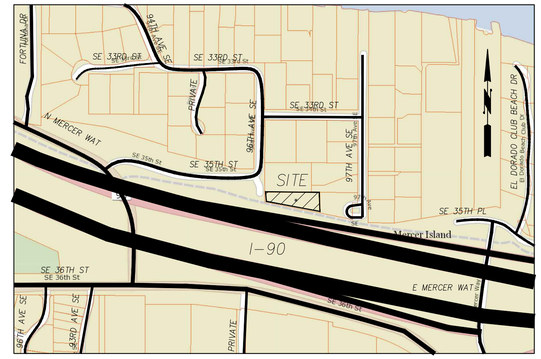
| | | | |
|---|---|---|---|
| BENCHMARK | CO | CLEANOUT | PROPERTY LINES (ADJACENT) |
| CENTERLINE ROW | | SEWER MANHOLE | PROPERTY LINE (SUBJECT) |
| FENCE LINE (WOOD) | SS | SEWER LINE | REBAR & CAP (SET) |
| IRON PIPE (FOUND) | G | GAS LINE | REBAR AS NOTED (FOUND) |
| LINE STAKE | | GUY ANCHOR | RETAINING WALL |
| MONUMENT (IN CASE, FOUND) | LP | LIGHT POLE | RIGHT-OF-WAY LINES |
| NAIL AS NOTED | PP | POWER POLE | SUBDIVISION LINES |
| CONCRETE SURFACE | | 10' UTILITY & DRAINAGE EASEMENT | SIGN (AS NOTED) |
| ROCKERY | | PERMANENT SANITARY SEWER EASEMENT | INLET (TYPE 1) |
| BUILDING | | TEMPORARY CONSTRUCTION EASEMENT | STORM MANHOLE |
| ASPHALT SURFACE | CB | CATCH BASIN | STORM DRAIN LINE |
| GRAVEL SURFACE | C.C. | CENTER CHANNEL | |
| MAILBOX (RESIDENTIAL) | G | GAS | |

| | | | |
|---|---|---|---|
| PH | | POWER HAND HOLE | |
| P | | POWER (OVERHEAD) | |
| | | FIRE HYDRANT | |
| WM | | WATER METER | |
| WV | | WATER VALVE | |
| W | | WATER LINE | |
| SIZE TYPE | | TREE (AS NOTED) | |
| OHP | | OVERHEAD POWER | |
| ROW | | RIGHT OF WAY | |
| SD | | SERVICE DRAIN | |
| SSMH | | SANITARY SEWER MANHOLE | |

GRAPHIC SCALE

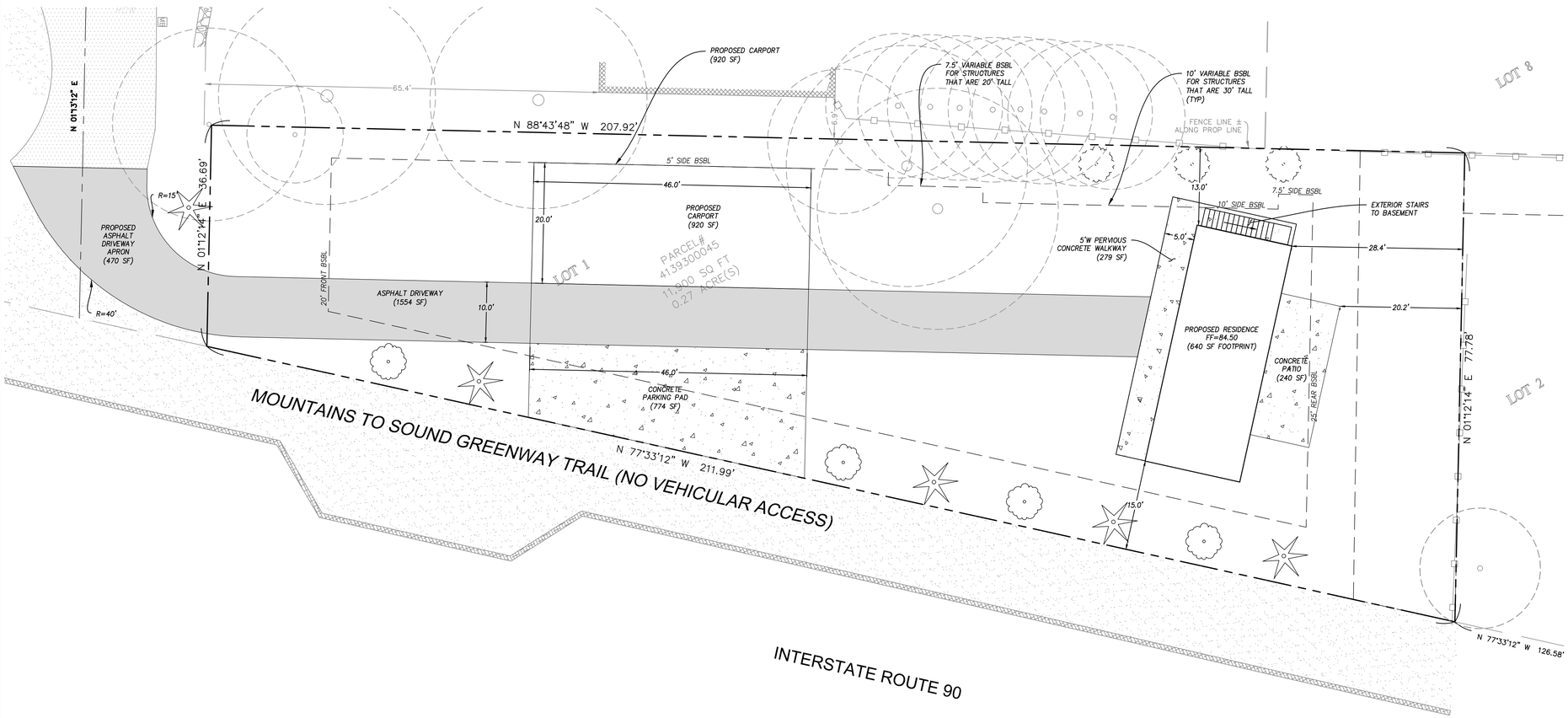
10 0 5 10

SCALE IN FEET
1"=10'




**VICINITY MAP**

N.T.S.




## PROJECT DATA

| | |
|---|---|
| PROPERTY ADDRESS: | 3508 96TH AVE SE<br>MERCER ISLAND, 98040 |
| LOT NUMBER: | 413930-0045 |
| SITE AREA: | 11,900 SF (0.273 AC.) |
| ZONING: | RS-9.6 |

## PROJECT TEAM

| | |
|---|---|
| OWNER: | SAMUEL ADAMS<br>2622 123RD AVE SE<br>MERCER, WA 98004<br>(210) 452-1541 |
| CIVIL ENGINEER: | G2 CIVIL<br>1700 NW GILMAN BLVD, STE 200<br>ISSAQUAH, WA 98027<br>(425) 821-5038<br>CONTACT: EDWARD MECUM, PE |
| SURVEYOR: | SITE SURVEYING, INC.<br>21923 NE 11TH ST<br>SAMMAMISH, WA 98074<br>(425) 298-4412<br>CONTACT: THOMAS N. WOLDENDORP, PLS |

## LEGAL DESCRIPTION

LOT 1, CITY OF MERCER ISLAND SHORT PLAT NO. M.I. 90-08-19, RECORDED UNDER RECORDING NO. 9101109002, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

## BASIS OF BEARINGS

CITY OF MERCER ISLAND SHORT PLAT NO. M.I. 90-08-19, RECORDED UNDER RECORDING NUMBER 9101109002, RECORDS OF KING COUNTY, WASHINGTON.

## GENERAL NOTES

1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 35 TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN SEPTEMBER 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

## UTILITY CONTACT LIST

| | |
|---|---|
| SANITARY SEWER: | CITY OF MERCER ISLAND<br>(206) 275-7783 |
| WATER: | CITY OF MERCER ISLAND<br>(206) 275-7783 |
| ELECTRIC: | PUGET SOUND ENERGY<br>PHONE: 1-800-321-4123 |
| GAS: | PUGET SOUND ENERGY<br>PHONE: 1-800-321-4123 |
| TELEPHONE: | CENTURYLINK<br>PHONE: 1-800-475-7526 |

## SHEET INDEX


1. COVER SHEET
2. TESC PLAN
3. SITE DEVELOPMENT PLAN & PROFILE
4. OFFSITE DEVELOPMENT PLAN & NOTES
5. SITE SECTIONS
6. STANDARD DETAILS
7. STANDARD DETAILS
8. TREE REPLACEMENT PLAN

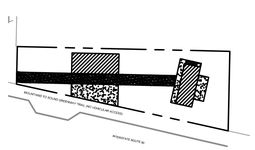

## EXISTING UTILITY NOTE

LOCATION OF EXISTING UTILITIES SHOWN, IF ANY, IS APPROXIMATE AND MAY NOT BE ACCURATE OR ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. AGENCIES INVOLVED SHALL BE NOTIFIED WITHIN A REASONABLE TIME PRIOR TO THE START OF CONSTRUCTION.

## SURVEY NOTE

EXISTING SURVEY FEATURES, BOUNDARY AND TOPOGRAPHIC DATA SHOWN ON THESE DRAWINGS HAS BEEN PREPARED, BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, G2 CIVIL CANNOT ENSURE THE ACCURACY AND THUS IS NOT RESPONSIBLE FOR THE ACCURACY OF DATA/INFORMATION PROVIDED BY OTHERS, OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.

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




## SURFACE AREAS EXHIBIT

| | |
|---|---|
| PARCEL AREA: | 11,900 SF |
| ROOF AREA: | 1,560 SF |
| CONC. AREA: | 1,293 SF |
| ASPHALT AREA: | 1,554 SF |
| TOTAL IMPERVIOUS AREA: | 4,407 SF (37.0%) |
| TOTAL PERVIOUS AREA: | 7,493 |

## LOT COVERAGE CALCULATIONS

LOT AREA: 11,900 SF.
ALLOWED LOT COVERAGE: 4,760 SF. / 40%
MAIN STRUCTURE ROOF AREA: 640 SF.
CARPORT ROOF AREA: 920 SF.
VEHICULAR USE: 2,327 SF
TOTAL LOT COVERAGE: 3,887 SF. = 32.7%

HARDSCAPE CALCULATIONS:
ALLOWED HARDSCAPE AREA = 9% (1,071 SF)
AREA BORROWED FROM LOT COVERAGE: 69 SF
TOTAL ALLOWED HARDSCAPE AREA= 1,140 SF (9.6%)
PATIOS 240
WALKS 279
TOTAL HARDSCAPE AREA: 519 SF. / 4.4%

APPROVED: _____
CITY OF MERCER ISLAND DEVELOPMENT SERVICES GROUP

| NOTES | DATE | CHKD BY | DWN BY |
|---|---|---|---|
| REVISED PER CITY COMMENTS | 04-29-2024 | SJZ | WJR |
| REVISED PER ARCHITECT | 06-28-2024 | SJZ | WJR |
| LIMITS OF EXCAVATION | 11-07-2024 | SJZ | WJR |
| UPDATED SURVEY | 11-26-2024 | SJZ | WJR |
| UPDATED ARBORIST REPORT | 01-07-2025 | SJZ | WJR |
| REVISED SITE PLAN | 05-07-2025 | SJZ | JAT |


G2 CIVIL
1700 NW GILMAN BLVD, STE 200
ISSAQUAH, WA 98027
PHONE: (425) 821-5038


**COVER SHEET**
**ADAMS SFR**
**MERCER ISLAND, WA**
SAMUEL ADAMS
2622 123RD AVE SE
MERCER ISLAND, WA

SHEET
1 of 8

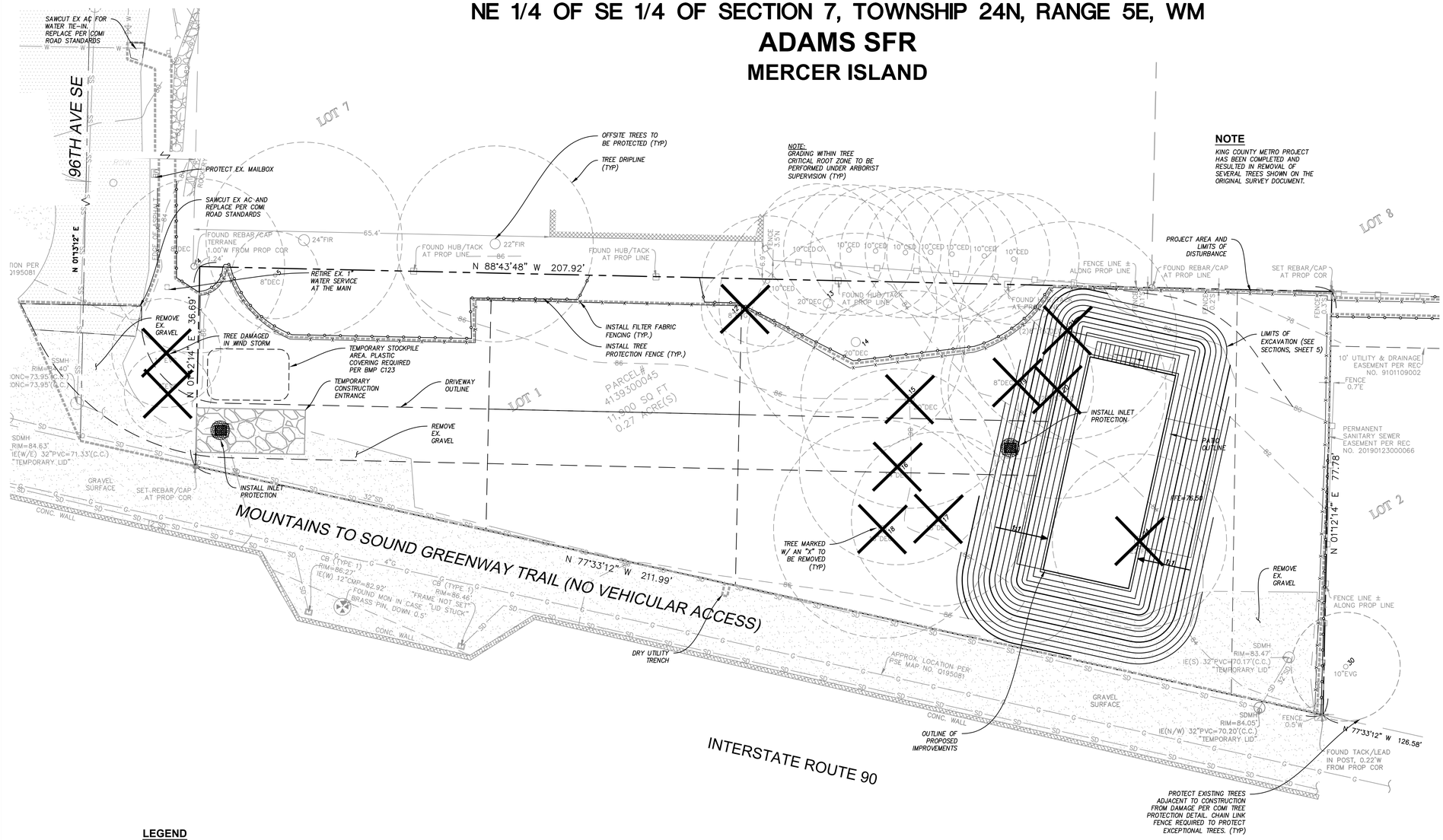
JOB No.

DRAWING: G:\Projects\Adams Mercer Island SFR\CAD\ADAMS MI SFR.dwg PLOT BY: Civil May 07, 2025 @ 11:09am

# NE 1/4 OF SE 1/4 OF SECTION 7, TOWNSHIP 24N, RANGE 5E, WM

# ADAMS SFR

## MERCER ISLAND




GRAPHIC SCALE

10 0 5 10

SCALE IN FEET
1"=10'

## NOTE

KING COUNTY METRO PROJECT HAS BEEN COMPLETED AND RESULTED IN REMOVAL OF SEVERAL TREES SHOWN ON THE ORIGINAL SURVEY DOCUMENT.

## WA D.O.E. SOIL AMENDMENT NOTES

SOIL RETENTION: RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.

SOIL QUALITY: ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:

1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL
3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
   - A. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1, THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
   - B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIALS MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND MEETING THE CONTAMINANT STANDARDS OF GRADE A COMPOST

## CONSTRUCTION SEQUENCE

A. CONDUCT PRE-CONSTRUCTION MEETING.
B. FLAG OR FENCE CLEARING LIMITS.
C. POST SIGN WITH NAME AND PHONE NUMBER OF TESC SUPERVISOR.
D. INSTALL CATCH BASIN PROTECTION IF REQUIRED.
E. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
F. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
G. CONSTRUCT SEDIMENT PONDS AND TRAPS.
H. GRADE AND STABILIZE CONSTRUCTION ROADS.
I. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
J. MAINTAIN EROSION CONTROL MEASURE IN ACCORDANCE WITH CITY OF MERCER ISLAND STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
K. RELOCATE EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY TESC MINIMUM REQUIREMENTS.
L. COVER ALL AREAS WITHIN THE SPECIFIED TIME FRAME WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, CRUSHED ROCK OR EQUIVALENT.
M. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN 7 DAYS.
N. SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
O. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BEST MANAGEMENT PRACTICES REMOVED IF APPROPRIATE.

## LEGEND

| | | | |
|---|---|---|---|
| | BENCHMARK | CO | CLEANOUT |
| | CENTERLINE ROW | | SEWER MANHOLE |
| | FENCE LINE (WOOD) | SS | SEWER LINE |
| IP | IRON PIPE (FOUND) | G | GAS LINE |
| | LINE STAKE | | GUY ANCHOR |
| | MONUMENT (IN CASE, FOUND) | LP | LIGHT POLE |
| | NAIL AS NOTED | PP | POWER POLE |
| | PROPERTY LINES (ADJACENT) | PH | POWER HAND HOLE |
| | PROPERTY LINE (SUBJECT) | P | POWER (OVERHEAD) |
| | REBAR & CAP (SET) | | FIRE HYDRANT |
| | REBAR AS NOTED (FOUND) | WM | WATER METER |
| | RETAINING WALL | WV | WATER VALVE |
| | RIGHT-OF-WAY LINES | W | WATER LINE |
| | SUBDIVISION LINES | SIZE TYPE | TREE (AS NOTED) |
| | SIGN (AS NOTED) | OHP | OVERHEAD POWER |
| | INLET (TYPE 1) | ROW | RIGHT OF WAY |
| | STORM MANHOLE | SD | SERVICE DRAIN |
| SD | STORM DRAIN LINE | SSMH | SANITARY SEWER MANHOLE |
| | CONCRETE SURFACE | | 10' UTILITY & DRAINAGE EASEMENT |
| | ROCKERY | | PERMANENT SANITARY SEWER EASEMENT |
| | BUILDING | | TEMPORARY CONSTRUCTION EASEMENT |
| | ASPHALT SURFACE | CB | CATCH BASIN |
| | GRAVEL SURFACE | C.C. | CENTER CHANNEL |
| MB | MAILBOX (RESIDENTIAL) | G | GAS |

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

## EROSION & SEDIMENT CONTROL NOTES

1. PRIOR TO BEGINNING EARTH DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRADING, ALL CLEARING LIMITS, EASEMENTS, SETBACKS, TREES AND DRAINAGE COURSES SHALL BE CLEARLY DEFINED AND MARKED IN THE FIELD TO PREVENT DAMAGE AND OFFSITE IMPACTS.
2. CONSTRUCTION VEHICLE ACCESS AND EXIT SHALL BE LIMITED TO ONE ROUTE IF POSSIBLE. ACCESS POINTS SHALL BE STABILIZED WITH QUARRY SPALLS OR CRUSHED ROCK TO MINIMIZE THE TRACKING OF SEDIMENTS ONTO PUBLIC STREETS. WHEEL WASH OR TIRE BATHS SHALL BE LOCATED ON-SITE. IF SEDIMENT IS TRANSPORTED ONTO A ROAD SURFACE, THE PAVEMENT SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE PAVEMENT BY SHOVELING OR SWEEPING AND BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA. STREET WASHING WILL ONLY BE ALLOWED AFTER SEDIMENT IS REMOVED IN THIS MANNER. PAVEMENT WASHING SHALL NOT OCCUR UNTIL ALL STORM DRAIN INLETS, LOCATED DOWNSTREAM OF THE WASHING AREA, HAVE BEEN PROTECTED BY PLACEMENT OF A FILTER CLOTH UNDER THE INLET GRATE.
3. PROPERTIES AND WATERWAYS DOWNSTREAM FROM THE DEVELOPMENT SITE SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY, AND PEAK FLOW RATE OF STORMWATER RUNOFF FROM THE PROJECT SITE.
4. PRIOR TO LEAVING THE SITE, STORMWATER RUNOFF SHALL PASS THROUGH APPROVED SEDIMENT BARRIERS OR FILTERS, DIKES, OR ANY OTHER APPROVED FACILITY INTENDED TO TRAP SEDIMENT. THESE SEDIMENT CONTROLLING MEASURES SHALL BE CONSTRUCTED AS THE FIRST STEP IN GRADING. THESE FACILITIES SHALL BE FUNCTIONAL BEFORE ANY OTHER LAND DISTURBING ACTIVITY TAKES PLACE. EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS SHALL BE SEEDED AND MULCHED ACCORDING TO THE TIMING INDICATED UNDER ITEM 5.
5. ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY THE PLACEMENT OF SOD OR OTHER VEGETATION, PLASTIC COVERING, MULCHING, APPLICATION OF BASE ROCK WITHIN AREAS TO BE PAVED, OR SOME OTHER APPROVED MEANS, TO PROTECT THE SOIL FROM THE EROSIVE FORCES OF RAINDROP IMPACT AND FLOWING WATER. FROM OCTOBER 1 THROUGH APRIL 30, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. FROM MAY 1 THROUGH SEPTEMBER 30, NO SOIL SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS. THIS CONDITION APPLIES TO ALL SOILS ON SITE, WHETHER AT FINAL GRADE OR NOT. THE SOIL STABILIZATION MEASURES SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, ESTIMATED DURATION OF USE, AND THE POTENTIAL WATER QUALITY IMPACTS THAT THE STABILIZATION MEASURES MAY HAVE ON THE DOWNSTREAM WATERS. SOIL STOCKPILES SHALL BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES.
6. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. CONSIDER SOIL TYPE AND ITS POTENTIAL FOR EROSION. REDUCE SLOPE RUNOFF VELOCITIES BY (1) REDUCING THE LENGTH OF CONTINUOUS SLOPES BY USING TERRACING AND DIVERSIONS, (2) REDUCING THE GRADE OF THE SLOPE, AND (3) ROUGHEN SLOPE SURFACE. CONTAIN DOWNSLOPE COLLECTED WATER IN PIPES OR PROTECTED CHANNELS.
7. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENTS.
8. ALL TEMPORARY ON-SITE CONVEYANCE CHANNELS SHALL BE DESIGNED, CONSTRUCTED AND STABILIZED TO PREVENT EROSION. STABILIZATION, INCLUDING ARMORING MATERIAL, ADEQUATE TO PREVENT EROSION AT ALL DISCHARGE POINTS, ADJACENT STREAM BANKS, SLOPES AND DOWNSTREAM REACHES, SHALL BE PROVIDED.
9. ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, SOLVENT AND DE-GREASING CLEANING OPERATIONS AND OTHER ACTIVITIES WHICH MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF, MUST BE CONDUCTED UNDER COVER AND ON IMPERVIOUS SURFACES. THESE SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILLAGE INCIDENT. WHEEL WASH, OR TIRE BATH WASTEWATER, SHALL NOT BE DISCHARGED TO THE STORM DRAIN, OR ON-SITE STORMWATER TREATMENT SYSTEM.
10. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.

| Tree # | Species | DBH " | Cndtn | Exceptnl | Comments |
|---|---|---|---|---|---|
| 4 | BL | 9 | Fair | No | Remove |
| 5 | CH | 7 & 4 | Fair | No | Retain |
| 11 | As | 2, 3, 3, 3, 4 & 5 | Fair | No | Offsite, not shown |
| 12 | BS | 7 | Poor | No | Remove |
| 13 | BLM | 19 | Fair | No | Remove |
| 14 | BLM | 18 | Fair | No | Retain |
| 15 | BLM | 18 | Fair | No | Remove |
| 16 | BLM | 14 | Poor | No | Remove |
| 17 | BLM | 11 | Fair | No | Remove |
| 18 | BLM | 15 | Poor | No | Remove |
| 19 | BLM | 7 | Good | No | Remove |
| 20 | BLM | 11 & 14 | Fair | No | Retain |
| 21 | BLM | 7, 12, 7 & 7 | Poor | No | Remove |
| 24 | DF | 26 | Good | No | Remove |
| 30 | DT | 4, 5, 6 & 6 | Fair | No | Offsite |

'NOT PRESENT - PREVIOUSLY REMOVED BY KING COUNTY METRO SEWER PROJECT

APPROVED: _____
CITY OF MERCER ISLAND DEVELOPMENT SERVICES GROUP

| NOTES | DATE | CHKD BY | DWN BY |
|---|---|---|---|
| REVISED PER CITY COMMENTS | 04-29-2024 | SJZ | WJR |
| REVISED PER ARCHITECT | 06-28-2024 | SJZ | WJR |
| EXCAVATION LIMITS | 11-07-2024 | SJZ | WJR |
| UPDATED SURVEY | 11-26-2024 | SJZ | WJR |
| UPDATED ARBORIST REPORT | 01-07-2025 | SJZ | WJR |
| REVISED SITE PLAN | 05-07-2025 | SJZ | JAT |


G2 CIVIL
1700 NW GILMAN BLVD, STE 200
ISSAQUAH, WA 98027
PHONE: (425) 821-5038


**APN: 413930-0045**
**TESC PLAN**
**ADAMS SFR**
**MERCER ISLAND, WA**
SAMUEL ADAMS
2622 123RD AVE SE
MERCER ISLAND, WA

SHEET
**2** of **8**

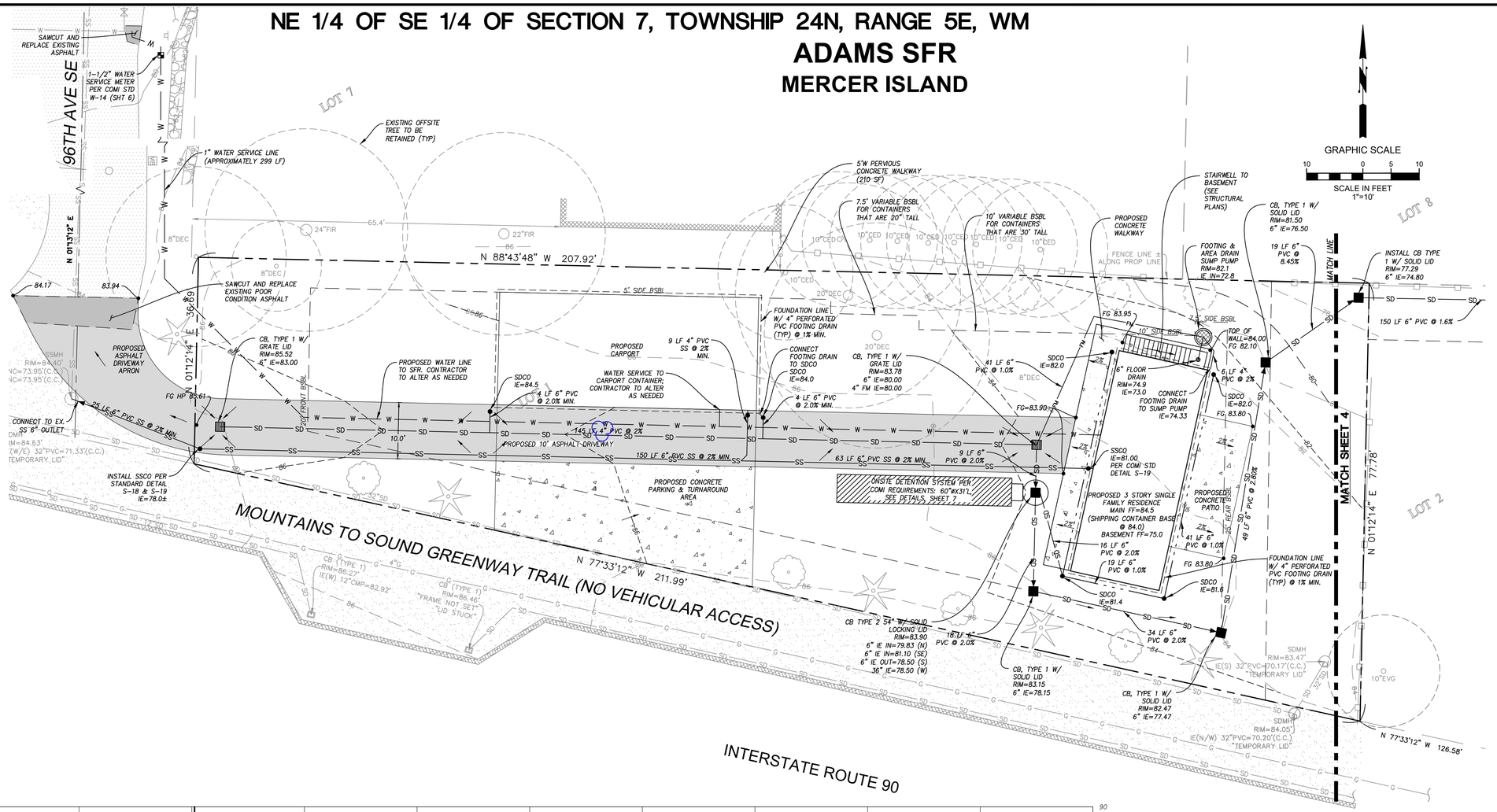
JOB No.

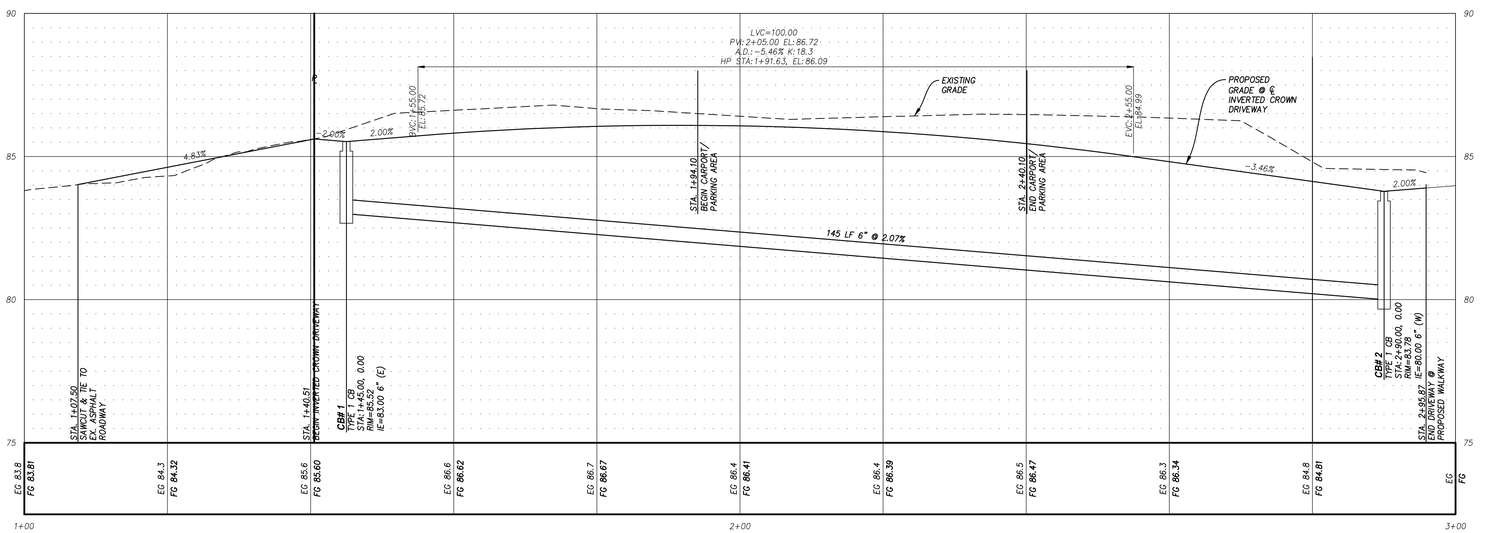

DRAWING: G:\Projects\Adams Mercer Island SFR\CAD\ADAMS MI SFR.dwg PLOT BY: Civil May 07, 2025 @ 11:09am

# NE 1/4 OF SE 1/4 OF SECTION 7, TOWNSHIP 24N, RANGE 5E, WM

# ADAMS SFR

## MERCER ISLAND




**DRIVEWAY PROFILE**
1"=10' HORIZ, 1"=5' VERT

## LEGEND

| | | | |
|---|---|---|---|
| BENCHMARK | | CLEANOUT | |
| CENTERLINE ROW | | SEWER MANHOLE | |
| FENCE LINE (WOOD) | SS | SEWER LINE | |
| IRON PIPE (FOUND) | G | GAS LINE | |
| LINE STAKE | | GUY ANCHOR | |
| MONUMENT (IN CASE, FOUND) | LP | LIGHT POLE | |
| NAIL AS NOTED | PP | POWER POLE | |
| CONCRETE SURFACE | | 10' UTILITY & DRAINAGE EASEMENT | |
| ROCKERY | | PERMANENT SANITARY SEWER EASEMENT | |
| BUILDING | | TEMPORARY CONSTRUCTION EASEMENT | |
| ASPHALT SURFACE | CB | CATCH BASIN | |
| GRAVEL SURFACE | C.C. | CENTER CHANNEL | |
| MAILBOX (RESIDENTIAL) | G | GAS | |
| PROPERTY LINES (ADJACENT) | PH | POWER HAND HOLE | |
| PROPERTY LINE (SUBJECT) | P | POWER (OVERHEAD) | |
| REBAR & CAP (SET) | | FIRE HYDRANT | |
| REBAR AS NOTED (FOUND) | WM | WATER METER | |
| RETAINING WALL | WV | WATER VALVE | |
| RIGHT-OF-WAY LINES | W | WATER LINE | |
| SUBDIVISION LINES | SIZE TYPE | TREE (AS NOTED) | |
| SIGN (AS NOTED) | OHP | OVERHEAD POWER | |
| INLET (TYPE 1) | ROW | RIGHT OF WAY | |
| STORM MANHOLE | SD | SERVICE DRAIN | |
| STORM DRAIN LINE | SSMH | SANITARY SEWER MANHOLE | |

APPROVED:
CITY OF MERCER ISLAND DEVELOPMENT SERVICES GROUP

Know what's below. Call before you dig.

| NOTES | DATE | CHKD BY | DWN BY |
|---|---|---|---|
| REVISED PER CITY COMMENTS | 04-29-2024 | SJZ | WJR |
| REVISED PER ARCHITECT | 06-28-2024 | SJZ | WJR |
| LIMITS OF EXCAVATION | 11-06-2024 | SJZ | WJR |
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| REVISED SITE PLAN | 05-07-2025 | SJZ | JAT |


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PHONE: (425) 821-5038


**APN: 413930-0045**
**SITE DEVELOPMENT PLAN & PROFILE**
**ADAMS SFR**
**MERCER ISLAND, WA**
SAMUEL ADAMS
2622 123RD AVE SE
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SHEET
**3** of **8**

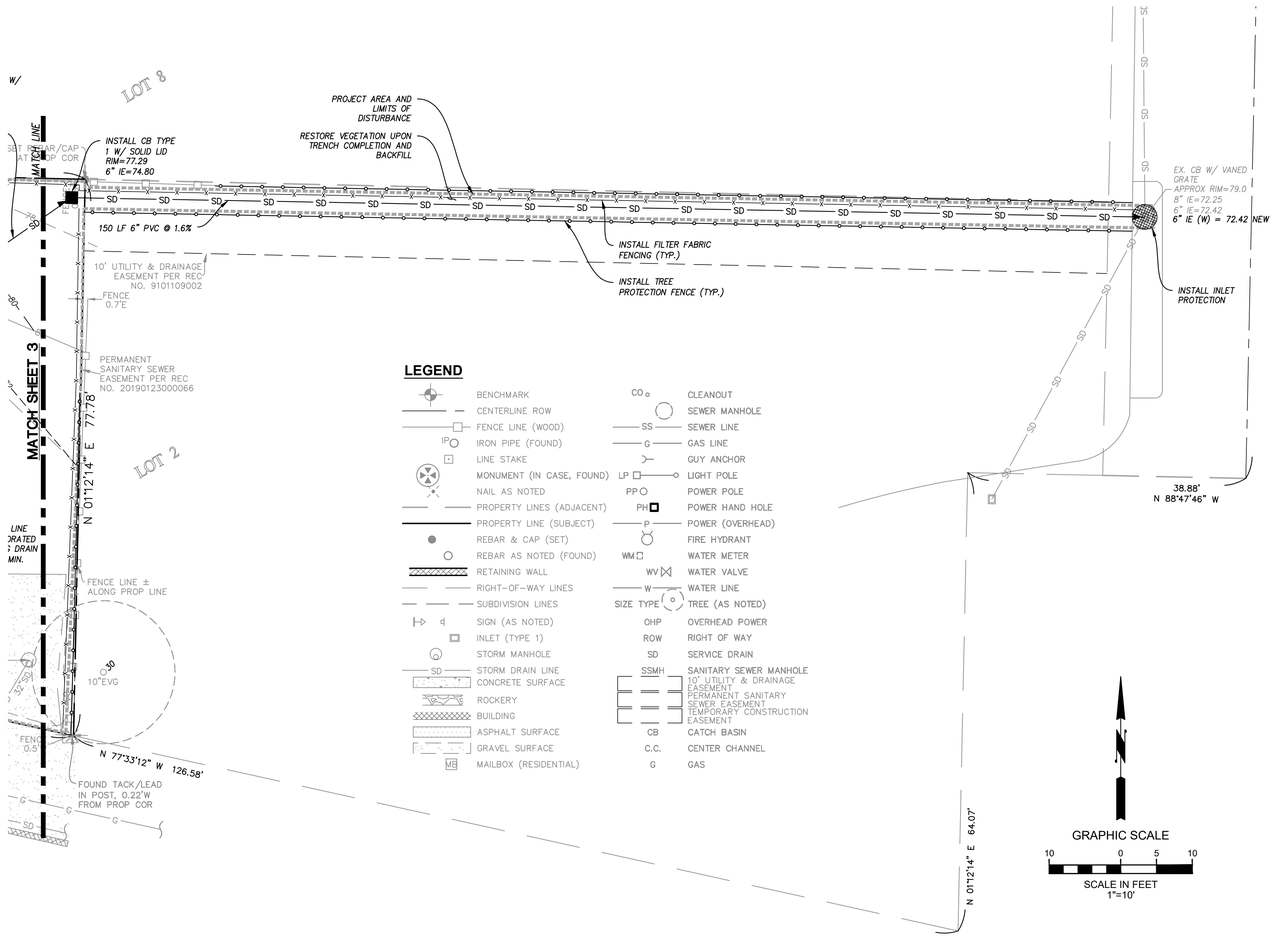
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# NE 1/4 OF SE 1/4 OF SECTION 7, TOWNSHIP 24N, RANGE 5E, WM

# ADAMS SFR

## MERCER ISLAND




## LEGEND

| | | | |
|---|---|---|---|
| BENCHMARK | | CO | CLEANOUT |
| CENTERLINE ROW | | | SEWER MANHOLE |
| FENCE LINE (WOOD) | | SS | SEWER LINE |
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| INLET (TYPE 1) | | ROW | RIGHT OF WAY |
| STORM MANHOLE | | SD | SERVICE DRAIN |
| STORM DRAIN LINE | SD | SSMH | SANITARY SEWER MANHOLE |
| CONCRETE SURFACE | | | 10' UTILITY & DRAINAGE EASEMENT |
| ROCKERY | | | PERMANENT SANITARY SEWER EASEMENT |
| BUILDING | | | TEMPORARY CONSTRUCTION EASEMENT |
| ASPHALT SURFACE | | CB | CATCH BASIN |
| GRAVEL SURFACE | | C.C. | CENTER CHANNEL |
| MAILBOX (RESIDENTIAL) | MB | G | GAS |

## WATER NOTES

1. *1–1½" WATER SERVICE PER COMI SD W–14. METER/SERVICE SIZE PER WATER SYSTEM BUILDING PLANS BY PLUMBING/MECHANICAL DESIGNER. CONSTRUCT OVERSIZE POLY PIPE OR PVC TO RESIDENCE TO ACCOMMODATE FLOW REQUIREMENTS (1–1/4" MINIMUM SIZE).*
2. *SAWCUT, REMOVE & PATCH EXISTING PAVEMENT TO ORIGINAL CONDITION OR BETTER AT PRIVATE TRENCH PER COMI STANDARDS.*
3. *RESTORE DISTURBED LANDSCAPE AREAS TO PRE–EXISTING CONDITION OR BETTER TO THE SATISFACTION OF THE PROPERTY OWNER.*
4. *EXISTING WATER SERVICE LINES ARE LOCATED WITHIN THE IMMEDIATE AREA OF WORK. CONTRACTOR RESPONSIBLE TO COORDINATE ANY SHUT–DOWNS WITH ADJACENT PROPERTIES. REPAIR ANY SERVICE LINES DAMAGED TO ORIGINAL CONDITION OR BETTER.*

## SANITARY SEWER NOTES

1. *CONNECT NEW 6" SIDE SEWER TO EXISTING SANITARY SEWER SYSTEM PER COMI STANDARDS. VERIFY LOCATION & INVERTS.*
2. *SAWCUT, REMOVE & PATCH EXISTING PAVEMENT PER CITY OF MERCER ISLAND REQUIREMENTS IN RIGHT–OF–WAY AT TRENCH CROSSING PER COMI STANDARDS.*
3. *SSCO PER COMI SD S–19 W/ TRAFFIC RATED LID.*
4. *SSCO PER COMI SD S–19 W/ PVC CAP 6" ABOVE FINISH GRADE.*
5. *CONSTRUCT TEMP. CAP FOR FUTURE BUILDING CONNECTION.*
6. *CONSTRUCT 6" SANITARY SIDE SEWER AT S=0.0200'/' MINIMUM TO BUILDING. SEE SANITARY SEWER SYSTEM BUILDING PLANS BY PLUMBING DESIGNER CONFIRM LOCATION W/ ARCHITECT.*
7. *SAWCUT, REMOVE & PATCH EXISTING PAVEMENT TO ORIGINAL CONDITION OR BETTER PER COMI STANDARDS.*
8. *EXISTING GAS LINE IN WORK AREA. CONTRACTOR TO COORDINATE CONSTRUCTION OF SANITARY SIDE SEWER & PROTECT GAS LINE FROM ANY DAMAGE.*

## AMENDMENT SOIL NOTE

*ALL DISTURBED, PERVIOUS SURFACES TO MEET POST CONSTRUCTION SOIL DEPTH AND QUALITY REQUIREMENTS (SHT 2). FINAL INSPECTION OF SOIL WILL BE REQUIRED TO VERIFY DEPTH, ORGANIC CONTENT.*
*PHOTOS TO BE TAKEN DURING CONSTRUCTION SHOWING UNDERLYING SOIL SCARIFIED TO 12" DEPTH*

## SOIL AMENDMENT NOTE

*THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST–CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT GEOTECHNICAL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENT SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT.*

## SITE IMPROVEMENT NOTES

1. *PROVIDE SMOOTH TRANSITION FROM EXISTING IMPROVEMENTS TO NEW IMPROVEMENTS.*
2. *CONSTRUCT DRIVEWAY SECTION PER DETAIL SHEET 5. FINISH, TEXTURE, JOINTS, REINF. ETC. PER ARCHITECTS & STRUCTURAL PLANS.*
3. *RETAINING WALLS AT LOCATIONS SHOWN. FINISH, TEXTURE, JOINTS, REINF. ETC. PER ARCHITECTS & STRUCTURAL PLANS. SEPARATE BUILDING PERMIT REQUIRED IF GREATER THAN 4' HIGH.*
4. *CONSTRUCT MODULAR LANDSCAPE RETAINING WALLS ADJACENT TO BUILDING PER MANUFACTURER REQ'T.'S. PERMIT REQUIRED IF GREATER THAN 4' HIGH.*
5. *SEE LANDSCAPING PLAN BY OTHERS FOR LANDSCAPE.*
6. *SEE ILLUMINATION PLAN BY OTHERS FOR LANDSCAPE LIGHTING & ASSOCIATED APPURTENANCES.*
7. *REFUSE / RECYCLE AREA PER ARCHITECTS PLANS.*
8. *FLOWLINE OF DRIVEWAY PAVEMENT, TYP.*
9. *DECKS, CATWALKS, STEPS AS SHOWN. MATERIAL, FINISH, TEXTURE, ETC. PER ARCHITECTS & STRUCTURAL PLANS.*

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

## SPECIAL CONTRACTOR NOTES

*CONTRACTOR TO INSURE THAT THE FINAL DRIVEWAY GRADE AND CATCH BASIN/YARD DRAIN ELEVATIONS ARE CONSTRUCTED TO RESTRICT ANY STORM DRAINAGE FROM LEAVING THE DRIVEWAY SURFACE.*

## RETAINING WALL NOTES

*ALL WALL DESIGN, REINFORCEMENT, WATERPROOFING, AND RETAINING WALL DRAINAGE CONTROL PER STRUCTURAL AND ARCHITECTURAL PLANS AND SPECIFICATIONS.*
*INSTALL 36" HANDRAILING AS NECESSARY WHERE WALLS EXCEED 30" IN HEIGHT SEE ARCHITECT'S PLANS.*

## WORK WITHIN EXISTING TREE DRIPLINES NOTES

*ALL TRENCHES THAT ARE EXCAVATED WITHIN TREE DRIP LINES SHALL BE EXCAVATED WITH AN AIR SPADE SO THAT UTILITY LINES CAN BE INSTALLED WITHOUT CUTTING MAJOR ROOTS. ROOTS EXPOSED IN OPEN TRENCHES MUST BE KEPT MOIST BY BEING COVERED WITH MOISTENED BURLAP UNTIL THE TRENCH CAN BE CLOSED.*
*ALL GRADING WITHIN THE TPZ OF THE TREES TO REMAIN SHALL BE ACCOMPLISHED UNDER THE DIRECTION OF THE ARBORIST.*

## SOIL AMENDMENT NOTE

*THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST–CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT GEOTECHNICAL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENT SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT.*

## TRENCH EXCAVATION NOTES

*ALL SEWER AND DRAINAGE PIPES SHALL BE BACKFILLED TO 95% MDD (INTENT: TO RESTRICT SUBSURFACE DRAINAGE FROM TRAVELING ALONG THE PIPE BARREL).*

## STORM DRAINAGE NOTES

1. *CATCH BASIN, 48"Ø TYPE 2 WSDOT SD B–10.20–02 W/ SOLID ROUND LOCKING LID. LOCATE ON EXISTING 12" CP.*
2. *SDCO PER SD MI S–19 W/ TRAFFIC RATED LID.*
3. *SDCO PER SD MI S–19 W/ PVC CAP 6" ABOVE FINISH GRADE.*
4. *CONSTRUCT 4"Ø PERF. PVC FOOTING DRAIN.*
5. *CATCH BASIN TYPE 2–54"Ø W/ SOL. LOCKING LID & RESTRICTOR PER CITY OF MERCER ISLAND ON–SITE DETENTION SYSTEM WORKSHEET DETAIL. SEE DETENTION SYSTEM WORKSHEET, PLAN & PROFILES SHEETS 3 & 4.*
6. *CONSTRUCT 6"Ø PVC OUTFALL STORM DRAIN SYSTEM.*
7. *CONNECT FOOTING DRAIN TO TIGHTLINE TO OUTFALL STORM SYSTEM 1' MIN. LOWER THAN LOWEST FOOTING DRAIN.*
8. *CONSTRUCT 6"Ø PVC ROOF DRAIN COLLECTOR @ S=1.00% MIN.*
9. *PRIVATE YARD\AREA DRAIN SEE DETAIL SHEET 5.*
10. *DOWNSPOUTS PER ARCHITECT'S PLANS.*
11. *FOOTING DRAIN NOT TO BE CONNECTED TO DETENTION SYSTEM.*
12. *STORM DRAIN CLEANOUT 100 FEET MAXIMUM BETWEEN CLEANOUTS.*
13. *PROVIDE DIP PIPE SLEEVE FOR PENETRATIONS THROUGH WALLS AS REQUIRED. COORDINATE LOCATIONS W/ STRUCTURAL PLANS. SLEEVE TO BE ONE PIPE SIZE LARGER THAN DESIGN PIPING SIZE (O.D.).*
14. *SAWCUT, REMOVE & PATCH EXISTING PAVEMENT PER CITY OF MERCER ISLAND REQUIREMENTS IN RIGHT–OF–WAY AT TRENCH CROSSING PER COMI STANDARDS.*
15. *SAWCUT, REMOVE & PATCH EXISTING PAVEMENT TO ORIGINAL CONDITION OR BETTER PER COMI STANDARDS.*
16. *6"Ø PVC ROOF/AREA DRAIN PIPING TO CONNECT TO ROOF DRAIN COLLECTOR*
17. *ADJACENT LOT IS OWNED BY THE SAME OWNER AND 15' STORM & SEWER EASEMENT WILL BE PROVIDED WITH THE NEXT SUBMITTAL*

## SITE IMPROVEMENT NOTES

1. *PROOF OF LIABILITY INSURANCE SHALL BE SUBMITTED TO THE CITY PRIOR TO THE PRE–CONSTRUCTION MEETING.*
2. *THESE PLANS ARE APPROVED FOR GRADING, DRAINAGE, AND UTILITY IMPROVEMENTS ONLY. PLANS FOR STRUCTURES REQUIRE A SEPARATE REVIEW AND APPROVAL.*
3. *RETAINING WALLS GREATER THAN FOUR (4) FEET IN HEIGHT REQUIRE A SEPARATE BUILDING PERMIT.*
4. *FILL MATERIAL PLACED UNDER BUILDING FOUNDATIONS OR PAVEMENT SHALL BE CRUSHED BASE ROCK OR COMPACTED STRUCTURAL FILL IN ACCORDANCE WITH CITY AND WSDOT STANDARD SPECIFICATIONS.*
5. *ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS.*
6. *THIS PLAN DOES NOT SHOW THE LOCATION OF ALL EXISTING UTILITIES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.*
7. *THE CONTRACTOR SHALL EXPOSE ALL EXISTING PIPING THAT WILL BE CONNECTED TO WITH NEW PIPING. DEPTH, LOCATION, AND CONDITION SHALL BE RELAYED TO THE ENGINEER IF CONDITIONS VARY SIGNIFICANTLY FROM WHAT IS DETAILED OR ANTICIPATED.*
8. *ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE TO DETAILS AND SPECIFICATIONS OF CITY STANDARDS. ALL CONSTRUCTION DEBRIS GENERATED DURING CONSTRUCTION TO BE REMOVED & DISPOSED OF AT AN APPROVED LOCATION OFF SITE.*
9. *ALL CUT MATERIAL GENERATED DURING THE PROJECT THAT IS NOT ACCEPTABLE FOR USE AS COMPACTED FILL MATERIAL AT ANOTHER LOCATION ON–SITE MUST BE HAULED TO AN APPROVED LOCATION OFF–SITE.*

## ARCHITECTURAL & STRUCTURAL NOTES

1. *THESE PLANS ARE APPROVED FOR STANDARD ROAD AND DRAINAGE IMPROVEMENTS ONLY. PLANS FOR STRUCTURES SUCH AS RETAINING WALLS REQUIRE A SEPARATE REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.*
2. *SPECIAL INSPECTIONS FOR STRUCTURAL ASPECTS OF OF THE PROJECT MAY BE REQUIRED DURING VARIOUS STAGES OF THE PROECT. CONTRACTOR TO BE RESPONSIBLE FOR COORDINATION AND OBTAINING INSPECTIONS WHEN AND WHERE NECESSARY.*
3. *SEE ARCHITECTURAL PLANS FOR BUILDING SECTIONS AND ALL LOCATIONAL/DIMENSIONAL ASPECTS OF BUILDINGS.*
4. *SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL BUILDING AND RETAINING WALL DETAILS.*
5. *COORDINATE ALL SITE CIVIL CONSTRUCTION WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL/PLUMBING AND LANDSCAPE PLANS*

## STORM DRAIN GENERAL NOTES

1. *A PRE–CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.*
2. *BEFORE ANY CONSTRUCTION MAY OCCUR, THE CONTRACTOR SHALL HAVE PLANS WHICH HAVE BEEN SIGNED AND APPROVED BY THE CITY OF MERCER ISLAND PUBLIC WORKS DEPARTMENT, OBTAINED ALL CITY, COUNTY, STATE, FEDERAL AND OTHER REQUIRED PERMITS, AND HAVE POSTED ALL REQUIRED BONDS.*
3. *ALL STORM DRAINAGE IMPROVEMENTS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF MERCER ISLAND PUBLIC WORKS PRE–APPROVED PLANS AND POLICIES AND THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, PREPARED BY WSDOT AND THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA).*
4. *ANY DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN APPROVAL, ALL CHANGES SHALL BE SUBMITTED TO THE CITY.*
5. *A COPY OF THE APPROVED STORM WATER PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.*
6. *ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SIMILARLY STABILIZED TO THE SATISFACTION OF THE CITY OF MERCER ISLAND DEPARTMENT OF PUBLIC WORKS FOR THE PREVENTION OF ON–SITE EROSION AFTER THE COMPLETION OF CONSTRUCTION.*
7. *MINIMUM COVER OVER STORM DRAINAGE PIPES IN ROW OR VEHICULAR PATH SHALL BE 18 INCHES, UNLESS OTHER DESIGN IS APPROVED.*
8. *CONSTRUCTION OF DEWATERING (GROUNDWATER) SYSTEMS SHALL BE IN ACCORDANCE WITH THE APWA STANDARD SPECIFICATIONS.*
9. *ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT DENSITY IN ROADWAYS, ROADWAY SHOULDERS, ROADWAY PRISM AND DRIVEWAYS, AND 85 PERCENT DENSITY IN UNPAVED AREAS. ALL PIPE ZONE COMPACTION SHALL BE 95 PERCENT.*
10. *THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, CONFINED SPACE PROTECTION, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.*
11. *APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF EXISTING UTILITY LOCATIONS WHETHER OR NOT THESE UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE TO ANY UTILITY. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE DEVELOPMENT ENGINEER PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.*
12. *THE UNDERGROUND UTILITY LOCATION SERVICE SHALL BE CONTACTED FOR FIELD LOCATION OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE SHALL BE CONTACTED IF A UTILITY CONFLICT EXISTS. FOR UTILITY LOCATION IN KING COUNTY, CALL 811. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT UTILITY LOCATES ARE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.*
13. *OPEN CUT ROAD CROSSINGS FOR UTILITY TRENCHES ON EXISTING TRAVELED ROADWAY SHALL BE BACKFILLED ONLY WITH 5/8" MINUS CRUSHED ROCK AND MECHANICALLY COMPACTED (UNLESS OTHERWISE APPROVED BY THE CITY). CUTS INTO THE EXISTING ASPHALT SHALL BE NEAT LINE CUT WITH SAW OR JACKHAMMER IN A CONTINUOUS LINE. A TEMPORARY COLD MIX PATCH MUST BE PLACED IMMEDIATELY AFTER BACKFILL AND COMPACTION. A PERMANENT HOT MIX PATCH SHALL BE PLACED WITHIN 30 DAYS AND SHALL BE A MINIMUM OF 1" THICKER THAN THE ORIGINAL ASPHALT WITH A MINIMUM THICKNESS OF 2".*
14. *ALL DAMAGES INCURRED TO PUBLIC AND/OR PRIVATE PROPERTY BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPAIRED TO THE SATISFACTION OF THE CITY CONSTRUCTION INSPECTOR BEFORE PROJECT APPROVAL AND/OR THE RELEASE OF THE PROJECT'S PERFORMANCE BOND.*
15. *GROUT ALL SEAMS AND OPENINGS IN ALL INLETS, CATCH BASINS, AND MANHOLES.*

*APPROVED: _____*
*CITY OF MERCER ISLAND DEVELOPMENT SERVICES GROUP*

| NOTES | DATE | CHKD BY | DWN BY |
|---|---|---|---|
| REVISED PER CITY COMMENTS | 04–29–2024 | SJZ | WJR |
| REVISED PER ARCHITECT | 06–28–2024 | SJZ | WJR |
| LIMITS OF EXCAVATION | 11–07–2024 | SJZ | WJR |
| UPDATED SURVEY | 11–26–2024 | SJZ | WJR |
| UPDATED ARBORIST REPORT | 01–07–2025 | SJZ | WJR |
| REVISED SITE PLAN | 05–07–2025 | SJZ | JAT |


G2 CIVIL
1700 NW GILMAN BLVD, STE 200
ISSAQUAH, WA 98027
PHONE: (425) 821-5038


**APN: 413930–0045**
**OFFSITE DEVELOPMENT PLAN & NOTES**
**ADAMS SFR**
**MERCER ISLAND, WA**
SAMUEL ADAMS
2622 123RD AVE SE
MERCER ISLAND, WA

SHEET
**4** of **8**

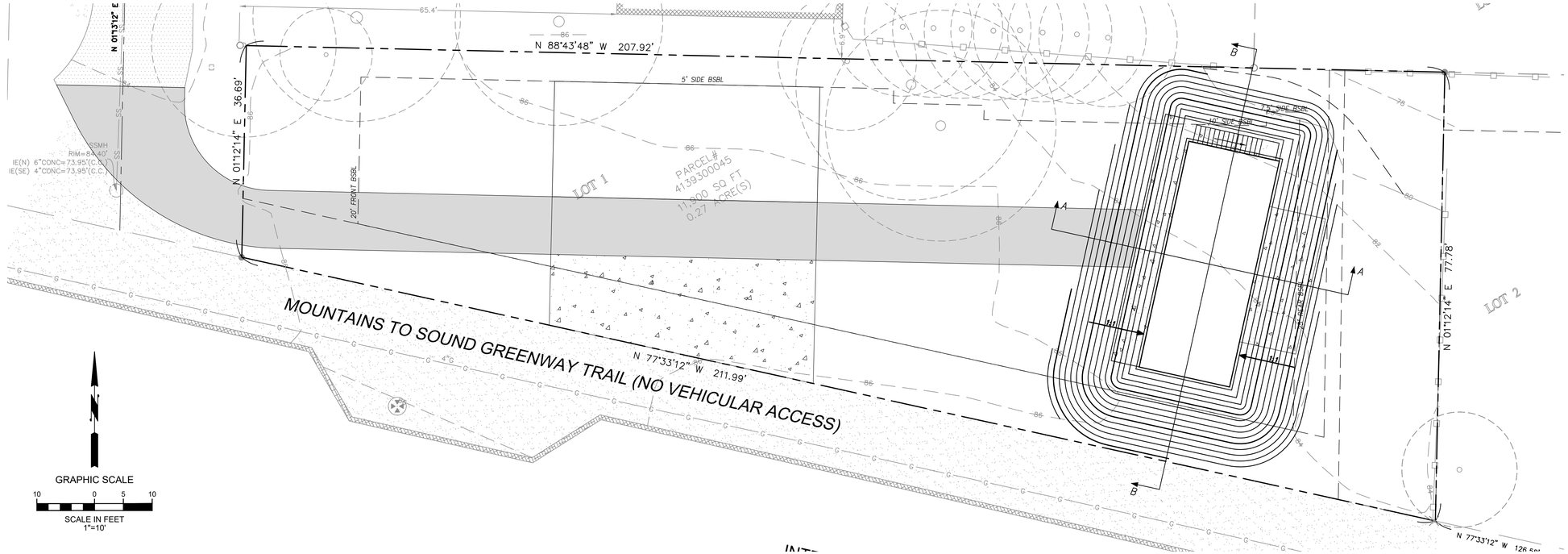
JOB No.


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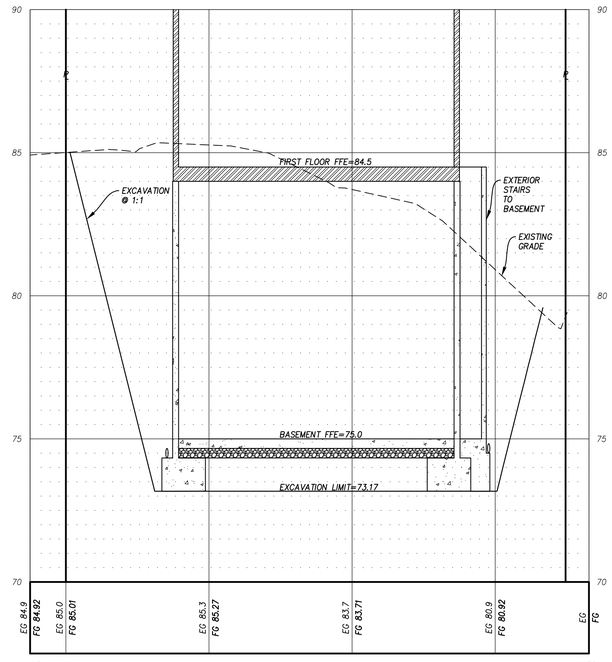
# NE 1/4 OF SE 1/4 OF SECTION 7, TOWNSHIP 24N, RANGE 5E, WM

# ADAMS SFR

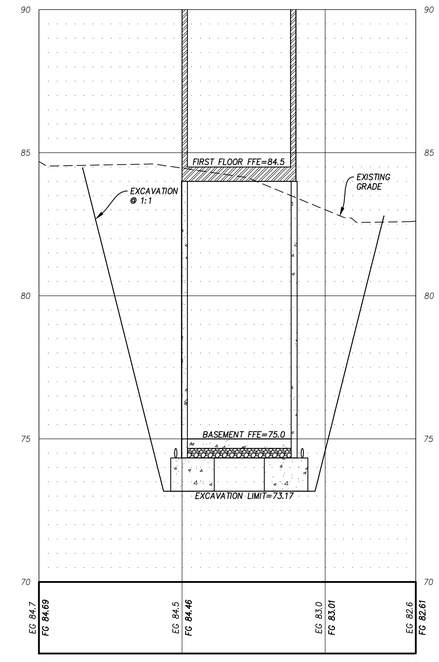
## MERCER ISLAND




**PLAN VIEW**
SCALE: 1"=10'




**SECTION A-A**
1"=10' HORIZ, 1"=5' VERT




**SECTION B-B**
1"=10' HORIZ, 1"=5' VERT

APPROVED: _____
CITY OF MERCER ISLAND DEVELOPMENT SERVICES GROUP

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

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| REVISED SITE PLAN | 05-07-2025 | SJZ | JAT |

EXPIRES: 10-07-2025

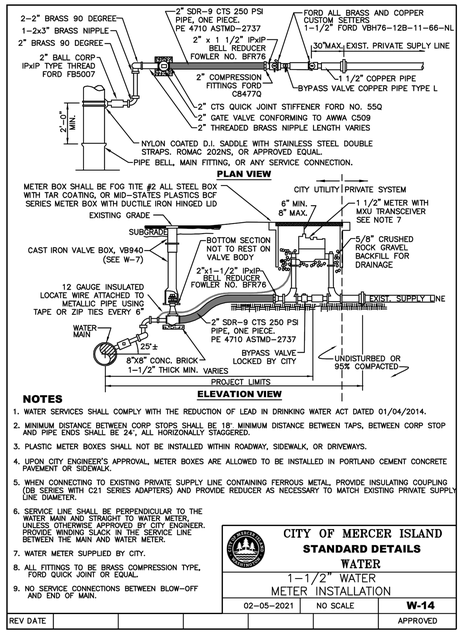

G2 CIVIL
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ISSAQUAH, WA 98027
PHONE: (425) 821-5038


**APN: 413930-0045**
**SITE SECTIONS & PLANS**
**ADAMS SFR**
**MERCER ISLAND, WA**
SAMUEL ADAMS
2622 123RD AVE SE
MERCER ISLAND, WA

SHEET
**5** of **8**

JOB No.


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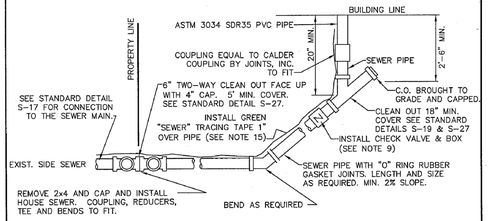

**NOTES**

1. WATER SERVICES SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT DATED 01/04/2014.
2. MINIMUM DISTANCE BETWEEN CORP STOPS SHALL BE 18" MINIMUM DISTANCE BETWEEN TAPS, BETWEEN CORP STOP AND PIPE ENDS SHALL BE 24", ALL HORIZONALLY STAGGERED.
3. PLASTIC METER BOXES SHALL NOT BE INSTALLED WITHIN ROADWAY, SIDEWALK, OR DRIVEWAYS.
4. UPON CITY ENGINEER'S APPROVAL, METER BOXES ARE ALLOWED TO BE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT OR SIDEWALK.
5. WHEN CONNECTING TO EXISTING PRIVATE SUPPLY LINE CONTAINING FERROUS METAL, PROVIDE INSULATING COUPLING (OB SERIES WITH C21 SERIES ADAPTERS) AND PROVIDE REDUCER AS NECESSARY TO MATCH EXISTING PRIVATE SUPPLY LINE DIAMETER.
6. SERVICE LINE SHALL BE PERPENDICULAR TO THE WATER MAIN AND STRAIGHT TO WATER METER, UNLESS OTHERWISE APPROVED BY CITY ENGINEER. PROVIDE WINDING SLACK IN THE SERVICE LINE BETWEEN THE MAIN AND WATER METER.
7. WATER METER SUPPLIED BY CITY.
8. ALL FITTINGS TO BE BRASS COMPRESSION TYPE, FORD QUICK JOINT OR EQUAL.
9. NO SERVICE CONNECTIONS BETWEEN BLOW-OFF AND END OF MAIN.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
**WATER**
1-1/2" WATER METER INSTALLATION

| 02-05-2021 | NO SCALE | **W-14** |
|---|---|---|

| REV DATE | | | | | | APPROVED |
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**BUILDING CONNECTION**

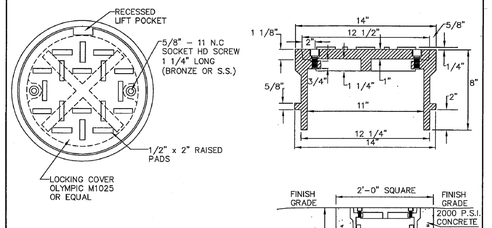
**NOTES**

1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. ALL HOUSE PLUMBING OUTLETS MUST BE CONNECTED TO THE SEWER. NO DOWN SPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
4. 18" MINIMUM COVERAGE OVER PIPE.
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH ⅛ BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 4" SEWER PIPE MINIMUM SIZE ON PROPERTY. 2% MINIMUM GRADE.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT SEWER ORDINANCES.
8. ALL CONSTRUCTION REQUIRES A PLAN SHOWING PROPERTY AND DIMENSIONS AND COMPLETION OF SIDE SEWER APPLICATION AND MAINTENANCE AGREEMENT, AS NEEDED.
9. BACK WATER VALVE (CHECK VALVE) IS REQUIRED:
   A. IF CONNECTED TO A SHARED SIDE SEWER.
   B. IF CONNECTION AT HOUSE IS LOWER THAN BOTH UPSTREAM AND DOWNSTREAM MANHOLE.
   C. SEE S-23 & S-24 FOR LAKE LINE REQUIREMENTS.
10. AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER & ALL BENDS, C.O. ETC., IN RELATION TO THE HOUSE IS REQUIRED AFTER INSPECTION & INSTALLATION. SEE STANDARD DETAIL S-38 FOR A TYPICAL "AS BUILT".
11. THE MINIMUM PIPE SIZE FOR SIDE SEWERS SHALL BE:
    6" – WITHIN THE PUBLIC RIGHT-OF-WAY.
    4" – SINGLE FAMILY RESIDENCES.
    6" – 2 TO 6 SINGLE FAMILY RESIDENCES.
    6" – BUILDINGS OTHER THAN SINGLE FAMILY RESIDENCES.
12. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER
HOUSE SEWER CONNECTION

| 6-5-2009 | NO SCALE | **S-18** |
|---|---|---|

| REV DATE | | | | | | APPROVED |
|---|---|---|---|---|---|---|




**FOR PVC PIPE**

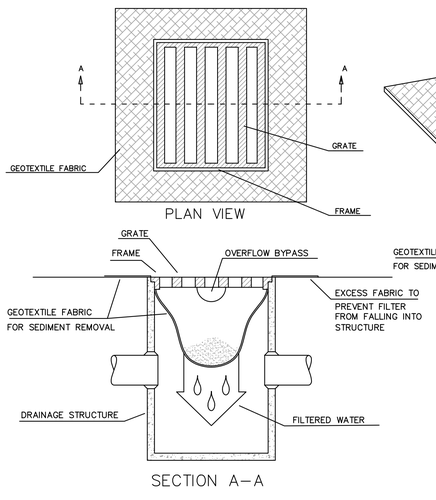
**NOTES**

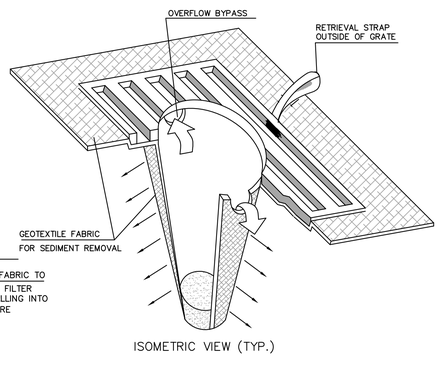
1. SEE S-27 FOR INSTALLATION DETAILS.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER
CLEAN OUT DETAIL

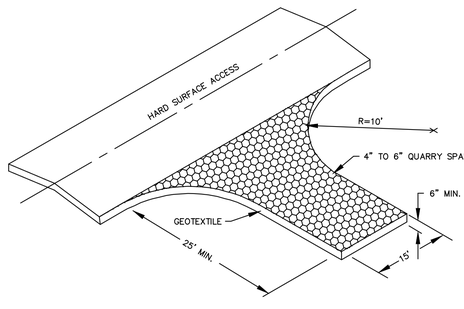
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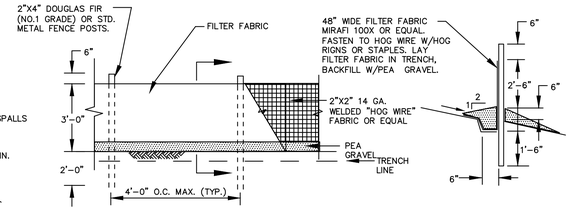


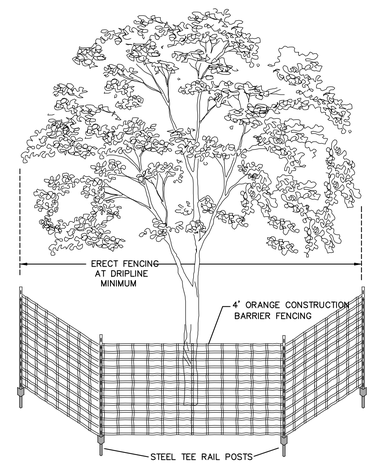

**STORM DRAIN PROTECTION INSERT**
N.T.S.




**TEMPORARY GRAVEL CONSTRUCTION ENTRANCE**
N.T.S.




**FILTER FABRIC FENCING**
N.T.S.




**TREE PROTECTION DETAIL**
N.T.S.

811
Know what's **below.**
**Call** before you dig.

*APPROVED:* _____
*CITY OF MERCER ISLAND DEVELOPMENT SERVICES GROUP*

| DWN BY | CHKD BY | DATE | NOTES |
|---|---|---|---|
| WJR | SJZ | 04-29-2024 | REVISED PER CITY COMMENTS |
| WJR | SJZ | 06-28-2024 | REVISED PER ARCHITECT |
| WJR | SJZ | 11-07-2024 | LIMITS OF EXCAVATION |
| WJR | SJZ | 11-26-2024 | UPDATED SURVEY |
| WJR | SJZ | 01-07-2025 | UPDATED ARBORIST REPORT |
| JAT | SJZ | 05-07-2025 | REVISED SITE PLAN |

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1700 NW GILMAN BLVD, STE 200
ISSAQUAH, WA 98027
PHONE: (425) 821-5038

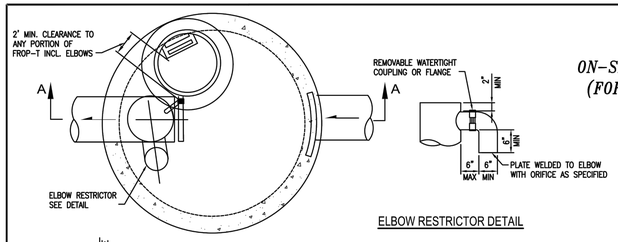
**APN: 413930-0045**
**STANDARD DETAILS**
**ADAMS SFR**
**MERCER ISLAND, WA**
SAMUEL ADAMS
2622 123RD AVE SE
MERCER ISLAND, WA

SHEET
**6** of **8**

JOB No.

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# ATTACHMENT 1
# CITY OF MERCER ISLAND
# ON-SITE DETENTION SYSTEM WORKSHEET
# (FOR NEW PLUS REPLACED IMPERVIOUS AREA OF 9,500 SF OR LESS)

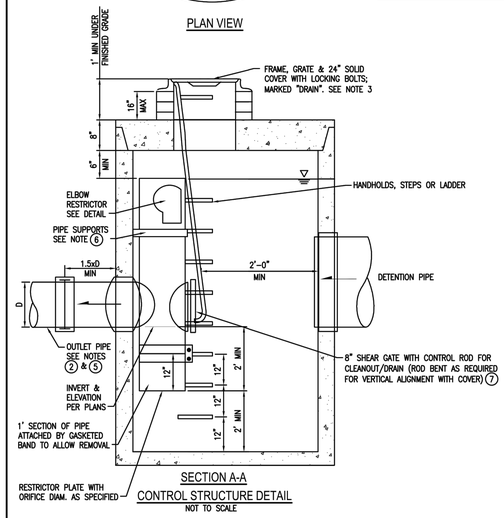



PLAN VIEW



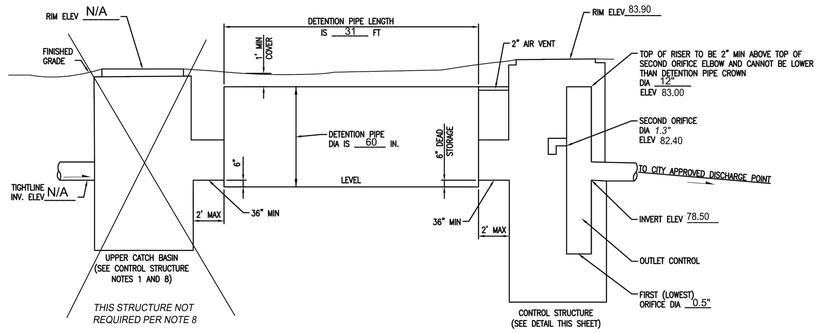

ELBOW RESTRICTOR DETAIL

| | | | |
|---|---|---|---|
| OWNER: SAMUEL ADAMS | ADDRESS: 3508 96TH AVE SE MERCER ISLAND, 98040 | PREPARED BY: G2 CIVIL | |
| PERMIT #: | | PHONE: (425)-821-5038 | |
| | | DATE: 11/14/2023 | |
| NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 4,406 | DETENTION PIPE DIA (INCH): 60 | DETENTION PIPE LENGTH (FT): 31 | ORIFICE #1 DIA 0.5 INCH, ELEV 78.50 |
| SOIL TYPE: KpB - Type C | PIPE MATERIAL: LCPE | | ORIFICE #2 DIA 1.3 INCH, ELEV 82.40 |




SECTION A-A

CONTROL STRUCTURE DETAIL
NOT TO SCALE




ON-SITE DETENTION SYSTEM
NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

CONTROL STRUCTURE NOTES:

1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP;
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
   C. FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION ZG32A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B.
   THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION), IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED.
   A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED.
   THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT.
   ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTANANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
3. PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING, LINED CORRUGATED POLYETHYLENE PIPE (LCPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
4. FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

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

APPROVED: _____
CITY OF MERCER ISLAND DEVELOPMENT SERVICES GROUP

| DWN BY | CHKD BY | DATE | NOTES |
|---|---|---|---|
| WJR | SJZ | 04-29-2024 | REVISED PER CITY COMMENTS |
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SHEET
7 of 8

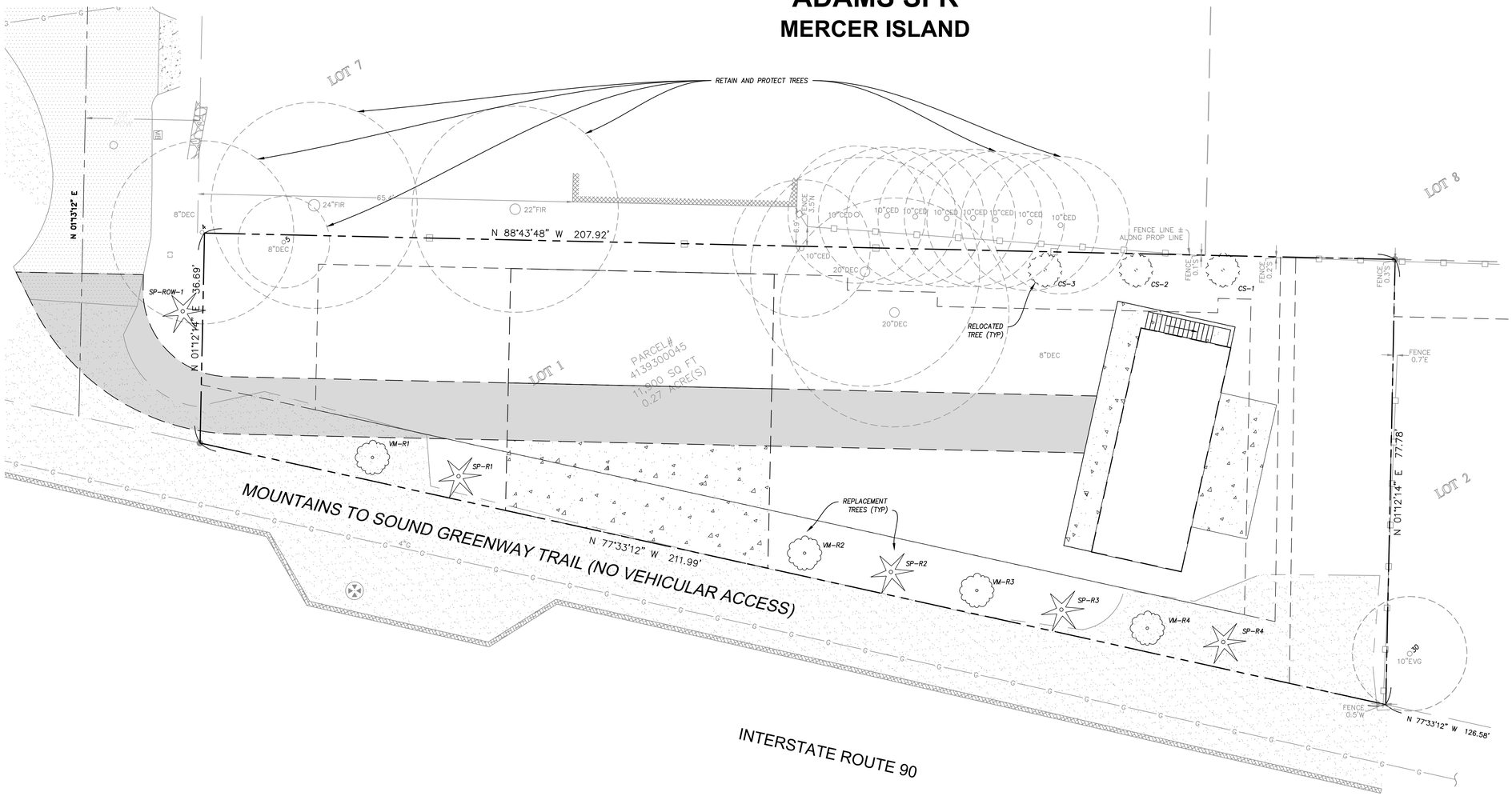
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# NE 1/4 OF SE 1/4 OF SECTION 7, TOWNSHIP 24N, RANGE 5E, WM

# ADAMS SFR

## MERCER ISLAND




GRAPHIC SCALE

10 0 5 10

SCALE IN FEET
1"=10'

### BMPS TO REDUCE IMPACTS TO CRZ

**THE ARBORIST REPORT PROVIDED WITH THE SUBMITTAL SHOULD BE CONSULTED FOR ANY QUESTIONS RELATED TO ARBORIST RECOMMENDATIONS AND SUGGESTIONS FOR BMPS*

1. *FENCING OF THE TPZ*
2. *CANTILEVERING OVER ROOT ZONES RATHER THAN INSTALLING A SOLID FOUNDATION WALL*
3. *USE OF PIER PILING CONSTRUCTION METHODS INSTEAD OF SOLID FOUNDATION WALLS*
4. *CUTTING OF LARGE ROOTS (OVER 2" DIAMETER) THAT NEED TO BE REMOVED RATHER THAN UTILIZING EXCAVATION EQUIPMENT*
5. *KEEPING CUT ROOTS MOIST TO PREVENT DEHYDRATION AND FURTHER DIEBACK.*
   - 5.1. *THIS INCLUDES COVERING THEM WITH MOIST ORGANIC MULCH, WOOD CHIPS, OR MOIST FABRIC (BURLAP, CLOTH TARP, ETC) UNTIL THEY ARE COVERED WITH SOIL*
6. *TUNNELING UNDER ROOTS WHEN POSSIBLE*
7. *USING PNEUMATIC OR HYDRAULIC EXCAVATION METHODS TO PRESERVE ROOTS, RATHER THAN OPEN TRENCHING WITH EXCAVATION EQUIPMENT*
8. *PROHIBITING THE STORAGE OF MATERIALS AND THE USE OF HEAVY EQUIPMENT WITHIN THE TPZ*
9. *PROVIDING EXTRA IRRIGATION DURING THE SUMMER DRY SEASON*
10. *PROVIDING SUPPLEMENTAL ORGANIC FERTILIZER AND ROOT BIO-STIMULANT PRODUCTS TO PROMOTE ROOT GROWTH*

### 19.10.080 Tree protection standards.

A. To ensure long-term viability of trees identified for protection, permit plans and construction activities shall comply with the then-existing best management practices (BMP) — managing trees during construction, published by the International Society of Arboriculture, adopted by reference. The tree protection plan shall be prepared by a qualified arborist and the plan shall be reviewed for adequacy by the city arborist. All minimum required tree protection measures shall be shown on the development plan set and tree replanting/restoration/protection plan.

B. Alternative methods. The city arborist may approve construction-related activity or work within the tree protection barriers if the city arborist concludes:

1. That such activity or work will not threaten the long-term health of the retained tree(s); and

2. That such activity or work complies with the protective methods and best building practices established by the International Society of Arboriculture.

### Appendix E: Tree Replacement Chart

| Tree # | Species | Minimum Size | Comments & Recommendations |
|---|---|---|---|
| SP-R1 | Shore Pine | 6' tall | Plant along the south lot line in full sunlight |
| SP-R2 | Shore Pine | 6' tall | Plant along the south lot line in full sunlight |
| SP-R3 | Shore Pine | 6' tall | Plant along the south lot line in full sunlight |
| SP-R4 | Shore Pine | 6' tall | Plant along the south lot line in full sunlight |
| VM-R1 | Vine Maple | 1.5" caliper | Plant along the south lot line in full sunlight |
| VM-R2 | Vine Maple | 1.5" caliper | Plant along the south lot line in full sunlight |
| VM-R3 | Vine Maple | 1.5" caliper | Plant along the south lot line in full sunlight |
| VM-R4 | Vine Maple | 1.5" caliper | Plant along the south lot line in full sunlight |
| SP-ROW-R1 | Shore Pine | 6' tall | Plant along the south lot line in full sunlight |
| ~~JC-R1~~ | ~~Japanese Cherry~~ | ~~1.5" caliper~~ | ~~Provide root protection measures for driveway, Non-Native~~ |
| ~~JC-R2~~ | ~~Japanese Cherry~~ | ~~1.5" caliper~~ | ~~Provide root protection measures for driveway, Non-Native~~ |
| ~~JC-R3~~ | ~~Japanese Cherry~~ | ~~1.5" caliper~~ | ~~Provide root protection measures for driveway, Non-Native~~ |

*THESE REPLACEMENT TREES NOT NEEDED WITH UPDATED SITE PLAN AND FEWER TREES REMOVED.*

*NOTE: INFORMATION TAKEN FROM APPENDIX E OF ARBORIST REPORT DATED JUNE 24,2024*

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

*APPROVED:* _____
*CITY OF MERCER ISLAND DEVELOPMENT SERVICES GROUP*

| NOTES | DATE | CHKD BY | DWN BY |
|---|---|---|---|
| REVISED PER CITY COMMENTS | 04-29-2024 | SJZ | WJR |
| REVISED PER ARCHITECT | 06-28-2024 | SJZ | WJR |
| LIMITS OF EXCAVATION | 11-07-2024 | SJZ | WJR |
| UPDATED SURVEY | 11-26-2024 | SJZ | WJR |
| UPDATED ARBORIST REPORT | 01-07-2025 | SJZ | WJR |
| REVISED SITE PLAN | 05-07-2025 | SJZ | JAT |


G2 CIVIL
1700 NW GILMAN BLVD, STE 200
ISSAQUAH, WA 98027
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**APN: 413930-0045**
**TREE REPLACEMENT PLAN**
**ADAMS SFR**
**MERCER ISLAND, WA**
SAMUEL ADAMS
2622 123RD AVE SE
MERCER ISLAND, WA

SHEET
**8** of **8**

JOB No.


DRAWING: G:\Projects\Adams Mercer Island SFR\CAD\ADAMS MI SFR.dwg PLOT BY: Civil May 07, 2025 @ 11:24am

# General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

## CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2018 INTERNATIONAL BUILDING CODE INCLUDING MERCER ISLAND REVISIONS. CONTAINERS HAVE BEEN ANALYZED AND DESIGNED IN ACCORDANCE WITH 2021 WSBC SECTION 3115

2. DESIGN LOADING CRITERIA:
   GARAGES
   RESIDENTIAL – ONE AND TWO-FAMILY DWELLINGS
   FLOOR LIVE LOAD . . . . . 40 PSF
   ROOF
   ROOF LIVE LOAD . . . . . 25 PSF
   MISCELLANEOUS LOADS
   STAIR AND CORRIDOR LIVE LOAD (UNLESS OTHERWISE INDICATED) . . . 100 PSF
   DECKS . . . . . 1.5 x AREA SERVED
   MECHANICAL UNITS . . . . . WEIGHTS FURNISHED BY MANUFACTURER
   PHOTOVOLTAIC PANEL SYSTEMS . . . . . 5 PSF
   DEFLECTION CRITERIA
   LIVE LOAD DEFLECTION . . . . . L/360
   TOTAL LOAD DEFLECTION . . . . . L/240
   ENVIRONMENTAL LOADS
   RAIN . . . . . 1.5 IN/HR
   SNOW . . . . . Ce=1.0, Is=1.0, Ct=1.1, Cs=1.0, Pg=25 PSF, Pf=20 PSF
   WIND . . . . . GCpi=0.18, 98 MPH, RISK CATEGORY II, EXPOSURE "C"
   EARTHQUAKE . ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
   LATERAL SYSTEM: LIGHT-FRAME STEEL WALLS SHEATHED WITH STEEL SHEETS FOR SEISMIC RESISTANCE, Vs = 36 KIPS
   SITE CLASS=D, Ss=1.395, Sds=1.116, S1=0.486, SD1=0.588, Cs=0.372
   SDC D (DEFAULT), Ie=1.0, R=2, CD=2, Ω =2.5
   SEE PLANS FOR ADDITIONAL LOADING CRITERIA 0

3. STRUCTURAL DRAWINGS ARE TO BE USED FOR CONSTRUCTION OF THE PRIMARY STRUCTURAL ELEMENTS. OTHER DRAWINGS ARE TO BE COORDINATED WITH THE STRUCTURAL DRAWINGS BY THE CONTRACTOR. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATION, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE OWNER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.

4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE CARGO CONTAINER MANUFACTURER (FOR CONTAINERS) AND BY OWNER (ALL OTHER ELEMENTS). VERTICAL DIMENSION CONTROL IS DEFINED BY THE CARGO CONTAINER MANUFACTURER'S WALL SECTIONS, BUILDING SECTIONS, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH THE MODULAR BUILDING MANUFACTURER AND STRUCTURAL DRAWINGS.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".

7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE OWNER AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE OWNER AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.

9. ALL STRUCTURAL SYSTEMS, WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED, SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

10. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE OWNER AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

    METAL DECKING
    CARGO CONTAINER
    STRUCTURAL STEEL

    APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.

11. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

    SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

12. SHOP DRAWINGS OF DESIGN BUILD COMPONENTS INCLUDING CANOPIES, BALCONIES, PREFABRICATED STAIR SYSTEMS, AND PRE-ENGINEERED SYSTEMS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON. SHOP DRAWINGS SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO REVIEW OF THE OWNER OR ENGINEER OF RECORD FOR GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON STRUCTURAL DRAWINGS. SHOP DRAWINGS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. DESIGN CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.

13. DEFERRED SUBMITTALS: SHOP DRAWINGS AND CALCULATIONS OF DEFERRED SUBMITTAL COMPONENTS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON AND SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO REVIEW BY THE OWNER OR ENGINEER OF RECORD FOR GENERAL CONFORMANCE. ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON THE STRUCTURAL DRAWINGS SHALL BE INCLUDED. SHOP DRAWINGS SHALL INCLUDE THE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON THE BASIC STRUCTURE. DESIGN CALCULATIONS SHALL ACCOMPANY ALL DEFERRED SUBMITTALS. THE OWNER OR CONTRACTOR SHALL FORWARD DEFERRED SUBMITTALS TO THE BUILDING OFFICIAL WHERE REQUIRED.

    DEFERRED SUBMITTAL BUILDING COMPONENTS FOR THIS PROJECT SHALL INCLUDE:

    HANGER BIFOLD DOORS MANUFACTURED BY SCHWEISS DOORS

14. STRUCTURAL OBSERVATION SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 1704.6 OF THE INTERNATIONAL BUILDING CODE FOR THE FOLLOWING BUILDING ELEMENTS:

    HOLDDOWNS
    CONCRETE CONSTRUCTION
    STRUCTURAL STEEL CONSTRUCTION
    CARGO CONTAINERS

    THE CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD ADEQUATE NOTICE TO SCHEDULE APPROPRIATE SITE VISITS FOR STRUCTURAL OBSERVATION.

    STRUCTURAL OBSERVATION MEANS THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM, FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED BY SECTION 110, 1705, OR OTHER SECTIONS OF THE CALIFORNIA BUILDING CODE.

    THE OWNER SHALL EMPLOY THE ENGINEER RESPONSIBLE FOR THE STRUCTURAL DESIGN, TO PERFORM STRUCTURAL OBSERVATION. OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR, CONTRACTOR, AND THE BUILDING OFFICIAL. THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

## GEOTECHNICAL

15. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH OR COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

    ALLOWABLE SOIL PRESSURE. . . . . 1500 PSF
    LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED) . . . . . 60 PCF/40 PCF
    ALLOWABLE PASSIVE EARTH PRESSURE (FS OF 1.5 INCLUDED). . . . . 250 PCF
    COEFFICIENT OF FRICTION (FS OF 1.5 INCLUDED). . . . . 0.3
    SEISMIC SURCHARGE PRESSURE (UNIFORM LOAD) . . . . . 7H PSF

    SOILS REPORT REFERENCE: COLBALT GEOSCIENCES LLC DATED AUGUST 9TH, 2023

## CONCRETE

16. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c = 3,000 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. REQUIRED CONCRETE STRENGTH IS BASED ON THE DURABILITY REQUIREMENTS OF SECTION 1904 OF THE IBC. DESIGN STRENGTH IS f'c = 2,500 PSI.

17. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-14, TABLE 19.3.2.1 MODERATE EXPOSURE, F1.

18. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, FY = 60,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

19. WELDING OF GRADE 60 REINFORCING BARS IS NOT ALOWWED.

20. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315R-18 AND 318-14. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH "THE REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE." PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

    NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

21. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

    FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3"
    FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER). . 1-1/2"
    SLABS AND WALLS (INT. FACE). . . GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

22. CONCRETE WALL REINFORCING--PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

    8" WALLS #4 @ 12 HORIZ. #4 @ 18 VERTICAL 1 CURTAIN

23. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3000 PSI MINIMUM).

## ANCHORAGE

24. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2" WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-3037, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. PERIODIC SPECIAL INSPECTION IS REQUIRED TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR LOCATION, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS.

25. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-XP" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG, TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2508. MINIMUM BASE MATERIAL TEMPERATURE IS 50 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDDED BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.

26. CONCRETE SCREW ANCHORS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "TITEN HD" HEAVY DUTY SCREW ANCHOR AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2713 (CONCRETE), NO. ESR-1056 (CMU), INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. SCREW ANCHORS INTO CONCRETE MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED.

## STEEL

27. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON:

    A. AISC 360-16 AND SECTION 2205.2 OF THE INTERNATIONAL BUILDING CODE.
    B. JUNE 15, 2016 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AMENDED AS FOLLOWS: AS NOTED IN THE CONTRACT DOCUMENTS, BY THE DELETION OF PARAGRAPH 4.4.1, AND REVISE REFERENCE FROM "STRUCTURAL DESIGN DRAWINGS" TO "CONTRACT DOCUMENTS" IN PARAGRAPH 3.1.
    C. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.

28. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

| TYPE OF MEMBER | ASTM SPECIFICATION | FY |
|---|---|---|
| A. WIDE FLANGE SHAPES | A992 | 50 KSI |
| B. OTHER SHAPES, PLATES, AND RODS | A36 | 36 KSI |
| C. OTHER SHAPES AND PLATES (NOTED GRADE 50 ON PLANS) | A572 (GRADE 50) | 50 KSI |
| D. STRUCTURAL TUBING | A500 (GR. C) | |
| -SQUARE OR RECTANGULAR | | 50 KSI |
| -ANY SHAPE | ASTM A1085 | 50 KSI |
| E. CONNECTION BOLTS (3/4" ROUND, UNLESS SHOWN OTHERWISE) | A325-N | |

29. STEEL USE FOR CARGO CONTAINER CONSTRUCTION SHALL BE WEATHERING STEEL TYPE Q345 OR EQUIVALENT, FY = 50 KSI.

30. ALL STEEL EXPOSED TO THE WEATHER OR IN CONTACT WITH GROUND SHALL BE CORROSION PROTECTED BY GALVANIZATION OR PROVIDED WITH EXTERIOR PAINT SYSTEM, UNLESS OTHERWISE NOTED, PER OWNER. CONTAINERS SHALL BE SHOP PAINTED PER MANUFACTURERS RECOMMENDATION, ANY PAINT REMOVED FOR CONSTRUCTION OR WELDING SHALL BE REPAINTED.

31. SHOP PRIME ALL STEEL EXCEPT:

    A. STEEL ENCASED IN CONCRETE.
    B. SURFACES TO BE WELDED.
    C. CONTACT SURFACES AT HIGH-STRENGTH BOLTS.
    D. MEMBERS TO BE GALVANIZED.
    E. MEMBERS WHICH WILL BE CONCEALED BY INTERIOR FINISHES.
    F. SURFACES TO RECEIVE SPRAYED FIREPROOFING.
    G. SURFACES TO RECEIVE OTHER SPECIAL SHOP PRIMERS.

32. ALL A-325N CONNECTION BOLTS NEED ONLY BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH.

33. ALL ANCHORS EMBEDDED IN MASONRY OR CONCRETE SHALL BE A307 HEADED BOLTS OR A36 THREADED ROD WITH AN ASTM 563 HEAVY HEX NUT TACK WELDED ON THE EMBEDDED END.

34. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT -20 DEGREES F AND 40 FT - LBS AT 70 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

General Structural Notes
Continued on Pg S1.2

SSF STRUCTURAL ENGINEERING
SEATTLE
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Seattle, WA 98121
TACOMA
934 Broadway, Suite 100
Tacoma, WA 98402
CENTRAL WASHINGTON
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ssfengineers.com

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R. GREGORY COONS — STATE OF WASHINGTON — 23638 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

DESIGN: TWW/LTN
DRAWN: KIB
CHECKED: RGC
APPROVED: RGC

REVISIONS:

| | | |
|---|---|---|
| 1 | Permit Revisions | June 26, 2024 |
| 2 | Permit Revisions 2 | Oct. 31, 2024 |
| 3 | Plan and Permit Revisions 3 | Apr. 09, 2025 |

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE: Permit

SHEET TITLE: General Structural Notes

SCALE:
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO: S1.1

# General Structural Notes Continued

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

## WOOD

35. METAL FLOOR AND ROOF DECKING SHALL BE IN ACCORDANCE TO THE FOLLOWING: PROVIDE SIZE, TYPE, GAUGE, AND ATTACHMENT TO THE SUPPORTING STRUCTURE AS SHOWN ON THE PLANS. ARC SEAM AND SPOT (PUDDLE) WELDS FOR FIELD ASSEMBLY OF METAL DECK SHALL BE MADE WITH MINIMUM E60XX ELECTRODES. DECK ALTERNATES MUST BE CONNECTED ACCORDING TO PUBLISHED ICC-ES CRITERIA FOR DIAPHRAGM SHEARS SHOWN. PROVIDE TEMPORARY SHORING WHERE REQUIRED PER MANUFACTURER'S PUBLISHED CRITERIA.

    A. NONCOMPOSITE STEEL FLOOR DECKS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ANSI/SDI-NC1.0.
    B. STEEL ROOF DECK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ANSI/SDI-RD1.0.

36. COLD-FORMED STEEL FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

    A. COLD FORMED STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON AISI S100-16, "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS," AND ON THE 2015 NORTH AMERICAN STANDARDS FOR COLD FORMED STEEL FRAMING, INCLUSIVE.

    B. COLD-FORMED STEEL FRAMING MEMBERS INDICATED ON PLAN SHALL BE IN ACCORDANCE WITH THE "2015 IBC-SSMA PRODUCT TECHNICAL GUIDE" PUBLISHED BY THE STEEL STUD MANUFACTURERS ASSOCIATION, AND SHALL COMPLY WITH ICC-ES REPORT ESR-3064P.

    | DESIGNATION: | 600 | S | 200 | - | 54 |
    |---|---|---|---|---|---|
    | | DEPTH | MEMBER STYLE | FLANGE WIDTH | | MATERIAL THICKNESS(MILS) |

    C. MATERIAL:

    METAL FRAMING SHALL BE GALVANIZED UNLESS OTHERWISE NOTED, CONFORMING AS FOLLOWS:

    | | | |
    |---|---|---|
    | ASTM A653, GRADE 50 | FY = 50 KSI | 12, 14, AND 16 GAUGE |
    | ASTM A653, GRADE 33 | FY = 33 KSI | 18 AND 20 GAUGE |

    WHERE NOTED, PAINTED STUDS SHALL CONFORM TO: ASTM A570, GRADE E, FY=50 KSI. ALL 8 AND 10 GAGE MATERIAL SHALL CONFORM TO: ASTM A36, FY=36 KSI

    D. THE DESIGN OF INTERIOR COLD FORMED STEEL NON-BEARING WALLS, SOFFITS, CEILINGS AND OTHER MISCELLANEOUS FRAMING AND CONNECTIONS TO STRUCTURE SHALL BE THE RESPONSIBILITY OF THE CONTAINER MANUFACTURER.

    E. ACCESSORIES SHALL BE OF THE TYPE, SIZE, AND SPACING SHOWN ON THE DRAWINGS OF A MINIMUM 16 GAUGE MATERIAL UNLESS OTHERWISE SPECIFIED. FASTENING OF COMPONENTS SHALL BE BY WELDING OR SCREWING OR BY OTHER MEANS OF FASTENING AS INDICATED ON THE DRAWINGS. PROVIDE MISCELLANEOUS CLIP ANGLES, LEDGERS, AND ACCESSORIES OF A MINIMUM 16 GAUGE OR THE THICKNESS OF THE MATERIAL BEING FASTENED, WHICHEVER IS GREATER, FOR CONNECTIONS AND BEARING CONDITIONS NOT OTHERWISE NOTED IN THE DRAWINGS. WELDS SHALL BE OF SUFFICIENT SIZE TO INSURE THE STRENGTH OF THE CONNECTION: WIRE TYING OF COMPONENTS SHALL NOT BE PERMITTED. ALL WELDS SHALL BE TOUCHED UP WITH A ZINC-RICH PAINT.

    F. SCREWS: ALL SCREWS SHALL BE SELF-TAPPING SELF-DRILLING FASTENERS THAT ARE ZINC COATED AS MANUFACTURED BY HILTI KWIK-FLEX (ICC-ES ESR-2196), OR APPROVED EQUAL. THE MINIMUM SCREW SIZE/TYPE/POINT SHALL BE #8-18 (#2 POINT) OR #10-16 (#2 POINT) FOR USE IN 20 GAUGE THROUGH 16 GAUGE, AND #10-16 (#3 POINT) OR #12-14 (#2 OR #3 POINT) FOR HEAVIER THAN 16 GAUGE UNLESS NOTED OTHERWISE. SCREWS FOR SHEATHING CONNECTIONS SHALL BE OF THE PROPER SIZE AND TYPE FOR A POSITIVE SHEATHING-TO-METAL CONNECTION. ALL SCREW CONNECTIONS SHALL BE MADE FROM THE LIGHTER MATERIAL INTO THE HEAVIER MATERIAL UNLESS NOTED OTHERWISE. SCREWS SHALL HAVE A MINIMUM PROJECTION OF 3 THREADS THROUGH THE LAST MATERIAL JOINED AND SHALL HAVE MINIMUM EDGE DISTANCES AND CENTER-TO-CENTER SPACING OF 1-1/2 AND 3 SCREW DIAMETERS, RESPECTIVELY. ALL SCREWS SHALL CONFORM TO SAE J78 AND SHALL BE COATED WITH A CORROSIVE-RESISTANT COATING. THE SCREW MANUFACTURER SHALL PROVIDE VERIFICATION OF THE FASTENERS RESISTANCE TO HYDROGEN EMBRITTLEMENT, UPON REQUEST.

    G. WELDING OF COLD-FORMED METAL FRAMING SHALL CONFORM TO AWS D1.3 AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS QUALIFIED TO PRODUCE THE SPECIFIED CLASSES OF WELD.

    H. WALL FRAMING: REFER CONTAINER MANUFACTURERS DRAWINGS FOR ALL STUD WALLS NOT SHOWN. EXTERIOR WALL STUDS SHALL BE MINIMUM 20 GAUGE (33 MILS) SPACED AT 16" O.C. UNLESS INDICATED OTHERWISE. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. TWO 800S162-54 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR MULTI-STUD OR STEEL COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS FULL WIDTH BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10' IN HEIGHT.

    I. ALL STUD WALLS SHALL HAVE THEIR BOTTOM TRACKS ATTACHED TO FRAMING BELOW WITH #8 SCREWS AT 24" O.C. OR ATTACHED TO CONCRETE WITH 0.145" DIAMETER DRIVE-PINS @ 24" O.C. UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE WELDED TO EACH OTHER IN ACCORDANCE WITH THE DETAILS. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND STRAP BRACING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES AND GYPSUM SHEATHING ON EXTERIOR SURFACES SCREWED TO ALL STUDS, TOP AND BOTTOM TRACKS AND BLOCKING WITH SCREWS AT 12" O.C. TRACK SECTIONS SHALL MATCH THE WALL STUD GAUGE, BE UN-PUNCHED AND HAVE AT LEAST 1-1/4" FLANGES.

37. FRAMING LUMBER SHALL BE S-DRY, KD, OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD No. 17, GRADING RULES FOR WEST COAST LUMBER, 2018, OR WWPA STANDARD, WESTERN LUMBER GRADING RULES 2017. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

    | | | |
    |---|---|---|
    | JOISTS AND BEAMS | (2X & 3X MEMBERS) | HEM-FIR NO. 2 MINIMUM BASE VALUE, Fb = 850 PSI |
    | | (4X MEMBERS) | DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1000 PSI |
    | BEAMS | (INCL. 6X AND LARGER) | DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1350 PSI |
    | POSTS | (4X MEMBERS) | DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fc = 1350 PSI |
    | | (6X AND LARGER) | DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fc = 1000 PSI |
    | STUDS, PLATES & MISC. FRAMING: | | DOUGLAS FIR-LARCH NO. 2 OR HEM-FIR NO. 2 |

38. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1 OR PS 2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

    ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.

    FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.

    WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

    PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING.

    REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

39. PRESERVATIVE TREATED WOOD SHALL BE TREATED PER AWPA STANDARD U1 TO THE USE CATEGORY EQUAL TO OR HIGHER THAN THE INTENDED APPLICATION. TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO AWPA UC3B. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO AWPA UC4A. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO AWPA UC4B.

40. WOOD TREATED FOR FIRE RESISTANCE SHALL MEET THE REQUIREMENTS OF ASTM E84 OR UL 723 AND HAVE A LISTED FLAME SPREAD INDEX OF 25 OR LESS. FIRE RETARDANT TREATED LUMBER AND WOOD STRUCTURAL PANELS SHALL BE LABELED IN ACCORDANCE WITH IBC 2303.2.4. WOOD TREATED FOR FIRE PROTECTION FOR USE IN INTERIOR ABOVE GROUND CONSTRUCTION AND CONTINUOUSLY PROTECTED FROM WEATHER AND OTHER SOURCES OF MOISTURE SHALL BE TREATED TO AWPA UCFA. WOOD TREATED FOR FIRE PROTECTION FOR USE IN EXTERIOR ABOVE GROUND CONSTRUCTION AND SUBJECT TO WETTING OR OTHER SOURCES OF MOISTURE SHALL BE TREATED TO AWPA UCFB.

41. FASTENERS AND TIMBER CONNECTORS USED WITH TREATED WOOD SHALL HAVE CORROSION RESISTANCE AS INDICATED IN THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED.

    | WOOD TREATMENT | CONDITION | PROTECTION |
    |---|---|---|
    | HAS NO AMMONIA CARRIER | INTERIOR DRY | G90 GALVANIZED |
    | CONTAINS AMMONIA CARRIER | INTERIOR DRY | G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653 |
    | CONTAINS AMMONIA CARRIER | INTERIOR WET | TYPE 304 OR 316 STAINLESS |
    | CONTAINS AMMONIA CARRIER | EXTERIOR | TYPE 304 OR 316 STAINLESS |
    | AZCA | ANY | TYPE 304 OR 316 STAINLESS |

    INTERIOR DRY CONDITIONS SHALL HAVE WOOD MOISTURE CONTENT LESS THAN 19%. WOOD MOISTURE CONTENT IN OTHER CONDITIONS (INTERIOR WET, EXTERIOR WET, AND EXTERIOR DRY) IS EXPECTED TO EXCEED 19%. CONNECTORS AND THEIR FASTENERS SHALL BE THE SAME MATERIAL. COMPLY WITH THE TREATMENT MANUFACTURERS RECOMMENDATIONS FOR PROTECTION OF METAL.

42. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2021. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER FOR MAXIMUM LOAD CARRYING CAPACITY. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

    ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIT" SERIES JOIST HANGERS.

    WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

    ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

43. WOOD FASTENERS

    A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

    | SIZE | LENGTH | DIAMETER |
    |---|---|---|
    | 6d | 2" | 0.113" |
    | 8d | 2-1/2" | 0.131" |
    | 10d | 3" | 0.148" |
    | 12d | 3-1/4" | 0.148" |
    | 16d BOX | 3-1/2" | 0.135" |

    IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

    NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES WITH THE MEMBER AND STARTED 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END.

    B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.

44. NOTCHES AND HOLES IN WOOD FRAMING:

    A. NOTCHES ON THE ENDS OF SOLID SAWN JOISTS AND RAFTERS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF SOLID SAWN JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN SOLID SAWN JOISTS AND RAFTERS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.

    B. IN EXTERIOR WALLS AND BEARING PARTITIONS, ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH.

    C. NOTCHES AND HOLES IN MANUFACTURED LUMBER AND PREFABRICATED PLYWOOD WEB JOISTS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS UNLESS OTHERWISE NOTED.

45. WOOD FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

    A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE, THE AITC "TIMBER CONSTRUCTION MANUAL" AND THE AWC "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304.10.1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND CONTAINER MANUFACTURER DRAWINGS.

    B. WALL FRAMING: REFER CONTAINER MANUFACTURER DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

    ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C.. LAP TOP PLATES AT JOINTS A MINIMUM 4'-0" AND NAIL WITH TWELVE 16d NAILS @ 4" O.C. EACH SIDE JOINT.

    ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @12" ON-CENTER. UNLESS OTHERWISE NOTED, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4" TYPE S OR W SCREWS @ 8" ON-CENTER. UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

    C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING BETWEEN RAFTERS AND JOISTS AT ALL BEARING POINTS WITH A MINIMUM OF (3) 16d TOE NAILS EACH END. TOE-NAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

    UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6" ON-CENTER WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" ON-CENTER TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" ON-CENTER, MINIMUM TWO NAILS PER BLOCK, UNLESS OTHERWISE NOTED.

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R. GREGORY COONS — STATE OF WASHINGTON — 23638 — REGISTERED STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

DESIGN: TWW/LTN
DRAWN: KIB
CHECKED: RGC
APPROVED: RGC

REVISIONS:

| | | |
|---|---|---|
| 1 | Permit Revisions | June 26, 2024 |
| 2 | Permit Revisions 2 | Oct. 31, 2024 |
| 3 | Plan and Permit Revisions 3 | Apr. 09, 2025 |

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE:
Permit

SHEET TITLE:
General Structural Notes Continued

SCALE:

DATE: Nov. 19, 2024

PROJECT NO: 13074-2022-01

SHEET NO:
S1.2

# Statement of Special Inspections

Special inspections shall be provided per the requirements of IBC section 1705 and as noted herein

## SOILS

| VERIFICATION AND INSPECTION TASK | CONTINUOUS | PERIODIC | COMMENTS | REFERENCES |
|---|---|---|---|---|
| 1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY | | X | | IBC 1705.6 |
| 2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL | | X | | |
| 3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS | | X | | |
| 4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL | X | | | |
| 5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY | | X | | |

## WOOD FRAMING

| VERIFICATION AND INSPECTION TASK | CONTINUOUS | PERIODIC | COMMENTS | REFERENCES |
|---|---|---|---|---|
| 1. HIGH LOAD DIAPHRAGMS | | X | | IBC 1705.5.1 |
| 2. METAL-PLATE-CONNECTED WOOD TRUSSES WITH OVERALL HEIGHTS OF 60 INCHES OR GREATER | | X | | IBC 1705.5.2 |
| 3. METAL-PLATE-CONNECTED OR OPEN WEB WOOD TRUSS BRACING FOR CLEAR SPANS 60 FEET OR MORE | | X | | IBC 1705.5.2 |
| 4. NAILING, BOLTING, AND ANCHORAGE OF COMPONENTS WITHIN THE SEISMIC FORCE RESISTING SYSTEM INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES AND HOLDOWNS | | X | NOT REQ'D WHERE SPACING OF SHEATHING FASTENERS IS MORE THAN 4 INCHES o.c. | IBC 1705.11.1<br>IBC 1705.12.2 |
| 5. PRE-FABRICATED WOOD ELEMENTS. | | | NOT REQ'D WHERE FABRICATOR MEETS IBC 1704.2.5.1 REQUIREMENTS | IBC 1704.2.5 |

## COLD-FORMED STEEL FRAMING

| VERIFICATION AND INSPECTION TASK | CONTINUOUS | PERIODIC | COMMENTS | REFERENCES |
|---|---|---|---|---|
| 1. MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK | | | | |
| a. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS | | X | APPLICABLE ASTM MATERIAL STANDARDS | |
| b. MANUFACTURER'S CERTIFIED TEST REPORTS | | X | | |
| 2. SCREW ATTACHMENT, WELDING, BOLTING, AND ANCHORAGE OF COMPONENTS WITHIN THE SEISMIC FORCE RESISTING SYSTEM INCLUDING SHEAR WALLS, DIAPHRAGMS, DRAG STRUTS, BRACES AND HOLDOWNS | | X | NOT REQ'D FOR GWB OR FIBERBOARD WALLS OR ONE-SIDED WALLS WITH FASTENER SPACING MORE THAN 4" o.c. | IBC 1705.11.2<br>IBC 1705.12.3<br>AWS D1.8 |
| 3. EXTERIOR WALLS | | X | NOT REQ'D FOR WALLS 30 ft OR LESS ABOVE GRADE | IBC 1705.12.5 |
| 4. COLD-FORMED STEEL TRUSSES SPANNING 60 ft OR MORE | | X | VERIFY TEMP & PERMANENT BRACING | IBC 1705.2.4 |
| 5. WELDING OF COLD-FORMED STEEL DECK | | X | | AWS D1.3 |
| 6. WELDING OF COLD-FORMED STEEL FRAMING | | | | AWS D1.3 |
| 7. COLD-FORMED STEEL SPECIAL MOMENT FRAME | | X | | IBC 1705.12.9 |

## STRUCTURAL STEEL

| VERIFICATION AND INSPECTION TASK | CONTINUOUS | PERIODIC | COMMENTS | REFERENCE |
|---|---|---|---|---|
| 1. FABRICATED AND ERECTED STEEL: | | | | |
| a. COMPLIANCE WITH DETAILS SHOWN ON CONSTRUCTION DOCUMENTS | | X | | AISC 360, SECTION N5 |
| b. APPLICATION OF JOINT DETAILS AT EACH CONNECTION | | X | | |
| 2. MATERIAL VERIFICATION OF WELD FILLER MATERIALS: | | | | |
| a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATIONS IN THE APPROVED CONSTRUCTION DOCUMENTS | | X | | AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS |
| b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED | | X | | |
| 3. INSPECTION OF WELDING: | | | | |
| a. COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELD | X | | | IBC 1705.2.1 AWS D1.1<br>AISC 360 SECTION N5.4 |
| b. MULTIPASS FILLET WELDS | X | | | |
| c. SINGLE PASS FILLET WELDS > 5/16" | X | | | |
| d. PLUG AND SLOT WELDS | X | | | |
| e. SINGLE PASS FILLET WELDS ≤ 5/16" | | X | | |
| 4. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE: | | | | |
| a. DETAILS SUCH AS BRACING AND STIFFENING | | X | | IBC 1705.2.1 |
| b. MEMBER LOCATIONS | | X | | |
| c. APPLICATION OF JOINT DETAILS AT EACH CONN. | | X | | |
| 5. INSPECTION OF ERECTED PRE-FABRICATED CARGO CONTAINERS: | | | | |
| a. FABRICATION | | X | | AISC 360, SECTION N5, N5.4-3 |
| b. WELDING | | X | | |

1. PERIODIC SPECIAL INSPECTIONS FOR FABRICATIONS REQUIRES INVESTIGATION OFA MINIMUM OF 5% OF RAILS AND 5% OF COLUMNS FOR DIMENSIONS INCLUDING WALL THICKNESS. ALSO VERIFY LOCATION AND GUAGE OF SHEARWALL CORRUGATED STEEL PANEL ELEMENTS.
2. PERIODIC SPECIAL INSPECTIONS FOR WELDING REQUIRES INVESTIGATION A MINIMUM OF 10% OF CORNER CASTING JOINTS AND 1% OF JOIST TO BOTTOM RAIL JOINTS BY VISUAL INSPECTION OF COMPLETED WELDS

2

## CONCRETE AND CONCRETE REINFORCING

| VERIFICATION AND INSPECTION TASK | CONTINUOUS | PERIODIC | COMMENTS | REFERENCE |
|---|---|---|---|---|
| 1. INSPECTION OF REINFORCING STEEL INCLUDING PRESTRESSING TENDONS, AND PLACEMENT | | X | | IBC 1908.4 ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3 |
| 2. INSPECTION OF ANCHORS CAST IN CONCRETE | | X | | ACI 318: 17.8.2 |
| 3. INSPECTION OF POST-INSTALLED ANCHORS IN HARDENED CONCRETE MEMBERS: | | | | |
| a. ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS | X | | SEE ICC-ES ESR REPORT FOR ADDITIONAL REQUIREMENTS | ACI 318: 17.8.2.4 |
| b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 3-a | | X | SEE ICC-ES ESR REPORT FOR ADDITIONAL REQUIREMENTS | ACI 318: 17.8.2 |
| 4. VERIFYING USE OF REQUIRED DESIGN MIX | | X | | IBC 1904.1<br>IBC 1904.2<br>IBC 1908.2<br>IBC 1908.3<br>ACI 318: Ch. 19, 26.4.3, 26.4.4 |
| 5. INSPECTION DURING CONCRETE MIXING: | | | | |
| a. CONCRETE MIXES PREPARED IN A BATCH PLANT THAT IS NOT CERTIFIED BY THE CITY OF SEATTLE | | X | CITY OF SEATTLE ONLY, NOT REQUIRED IF THE PROPORTIONS OF INGREDIENTS ARE ESTABLISHED IN ACCORDANCE WITH SBC 1905.1.10 OR IF THE MIX HAS BEEN GRANTED CONTINUOUS APPROVAL BY THE BUILDING OFFICIAL | SBC 1705.3.3 |
| b. MIXES WITH f'c > 6000psi | | X | | |
| c. STRUCTURAL LIGHT WEIGHT CONCRETE | | X | | |
| 6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE | X | | | IBC 1908.10 ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12 |
| 7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES | X | | | IBC 1908.6 -1908.8 ACI 318: 26.5 |
| 8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES | | X | | IBC 1908.9 ACI 318: 26.5.3-26.5.5 |
| 10. REINFORCING BAR WELDING: | | | | |
| a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 | | X | | AWS D1.4 ACI 318: 26.6.4 |
| b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16", OTHER THAN C & D | | X | | |
| c. WELDING OF REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT | X | | | |
| d. WELDING SHEAR REINFORCEMENT | X | | | |
| e. WELDING OF OTHER REINFORCEMENT STEEL | X | | | |
| 11. MECHANICAL COUPLERS FOR REINFORCING | | | SEE ICC-ES ESR REPORT FOR REQUIREMENTS | |

## NOTES

1. TESTING AND SPECIAL INSPECTION REPORTS SHALL BE PREPARED FOR EACH INSPECTION ITEM ON A DAILY BASIS WHENEVER WORK IS PERFORMED ON THAT ITEM. REPORTS SHALL BE DISTRIBUTED TO OWNER, CONTRACTOR, BUILDING OFFICIAL, ARCHITECT, AND STRUCTURAL ENGINEER.
2. STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD OR DESIGNATED REPRESENTATIVE IN ACCORDANCE WITH WSBC 1704.6. STRUCTURAL OBSERVATIONS SHALL BE PERFORMED AS FOLLOWS:

2

   a. PERIODIC VISUAL OBSERVATION OF STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE TO CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTON STAGES UPON CONTAINER ARRIVAL ON SITE, REINFORCING STEEL AND EMBEDS PRIOR TO CONCRETE POUR, STEEL ERECTION AND CONTAINER TO CONTAINER CONNECTION PRIOR TO BEING CONCEALED.

   b. REVIEW OF TESTING AND INSPECTION REPORTS

   c. REPORTS SHALL BE PREPARED FOR EACH SITE VISIT AND SHALL BE DISTRIBUTED TO ARCHITECT.

3. WHERE APPLICABLE, SEE ALSO WSBC SECTION 1705.11, SPECIAL INSPECTION FOR WIND RESISTANCE AND WSBC SECTION 1705.12, SPECIAL INSPECTION FOR SEISMIC RESISTANCE
4. "STRUCTURAL STEEL" REFERS TO STEEL CONSTRUCTION DEFINED BY AISC 303, "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."


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DESIGN: TWW/LTN
DRAWN: KIB
CHECKED: RGC
APPROVED: RGC

REVISIONS:

| | | |
|---|---|---|
| 1 | Permit Revisions | June 26, 2024 |
| 2 | Permit Revisions 2 | Oct. 31, 2024 |
| 3 | Plan and Permit Revisions 3 | Apr. 09, 2025 |

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

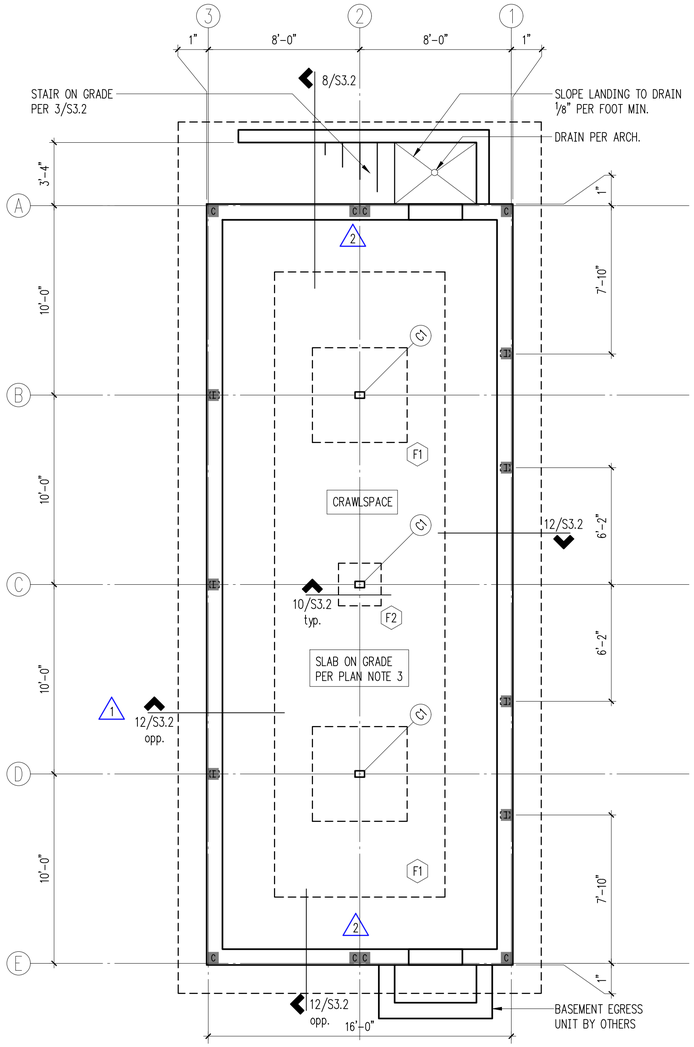
ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE: Permit

SHEET TITLE: Special Inspections

SCALE:
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO:

1 S1.3




## Foundation Plan

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

1

## Column Schedule

| MARK | SIZE |
|---|---|
| C1 | HSS 6x4x1/4 |

## Footing Schedule

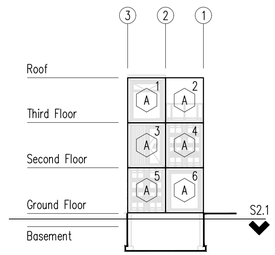
| MARK | SIZE | DEPTH | REINFORCING |
|---|---|---|---|
| F1 | 5'-0" x 5'-0" | 10" | (5)#4 E.W. BOT. |
| F2 | 2'-3" x 2'-3" | 10" | (2)#4 E.W. BOT. |

## Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO CONTAINER MANUFACTURER DRAWINGS FOR ALL DIMENSIONS NOT OTHERWISE SHOWN.
2. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE.
3. 4" CONCRETE SLAB OVER 10 MIL VAPOR BARRIER ON 4" OF GRAVEL OR CRUSHED ROCK OVER FIRM UNDISTURBED SOIL OR ENGINEERED COMPACTED BACK-FILL. REINFORCE WITH #3 AT 16"OC EACH WAY. PROVIDE CONSTRUCTION/CONTROL JOINTS PER DETAIL 4/S3.1.
4. CONTAINER INTERMEDIATE AND CORNER FITTINGS SHALL CONFORM TO ISO 1161-2016.
5. PROVIDE CORNER BARS PER DETAIL 12/S3.1 AT ALL WALL AND FOOTING INTERSECTIONS.
6. SEE 5/S3.1 FOR PIPE AND TRENCH UNDER FOOTINGS.
7. SEE 10/S3.1 FOR REINFORCING SPLICE AND DEVELOPMENT LENGHT SCHEDULE.
8. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

## Legend

- STEM WALL & FOOTING
- C — CORNER FITTING LOCATION ABOVE
- I — INTERMEDIATE FITTING LOCATION ABOVE
- X — FOOTING PER SCHEDULE
- Cx — COLUMN TYPE PER SCHEDULE
- COLUMN ABOVE




## Container Schedule & Level Keyplan

A CONTAINER SHALL BE INTERMODAL, CFC CERTIFIED TYPE AAA, 40' HIGH CUBE.


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REVISIONS:

| | | |
|---|---|---|
| 1 | Permit Revisions | June 26, 2024 |
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JURISDICTIONAL APPROVAL STAMP:

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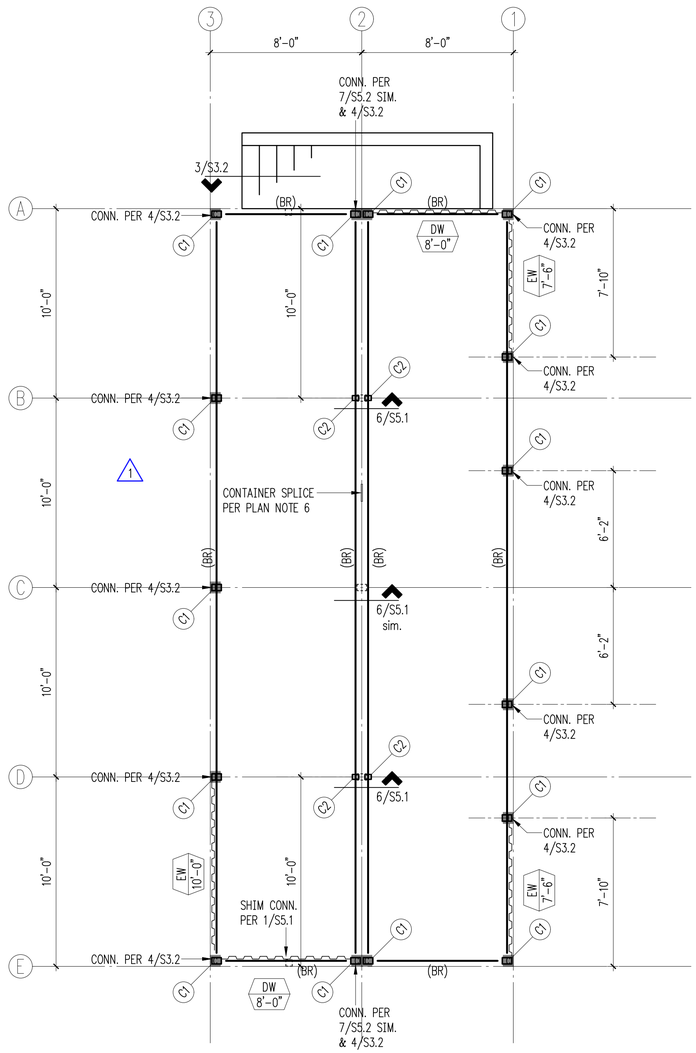
ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE: Permit

SHEET TITLE: Foundation Plan

SCALE: 1/4" = 1'-0"
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO: 3

S2.1




## Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. CONTAINER FLOOR SHEATHING SHALL BE 1-1/8" A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 32/16). PROVIDE #8-18 SELF-TAPPING SCREWS @ 6"oc AT ALL PANEL EDGES & @ 12"oc TO ALL INTERMEDIATE FRAMING.
3. REFER TO 1/S5.2, 5/S5.2, 6/S5.2, 10/S5.2, 11/S5.2 & 12/S5.2 FOR TYPICAL CONTAINER CONSTRUCTION DETAILS.
4. CONTAINER DOORS AND WINDOW HEADERS TO BE PROVIDED PER DETAIL 5/S5.3.
5. CONTAINER POSTS/COLUMNS AS SHOWN ON PLANS TO BE ATTACHED TO TOP & BOTTOM RAILS PER DETAIL 2/S5.1.
6. PROVIDE CONTAINER TO CONTAINER SPLICES PER 7/S5.3 IN THREE PLACES EACH CONTAINER LINE. LOCATE SPLICES 1'-0" EITHER SIDE OF FROM QUARTER POINTS. OFFSET SPLICES TO CLOSEST AVAILABLE SPACE AT WALLS.
7. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
8. CONTAINER INTERMEDIATE AND CORNER FITTINGS SHALL CONFORM TO ISO 1160-2016.

## Legend

| | |
|---|---|
| ——— | HEADER/BEAM PER PLAN |
| (TR) | HSS 8x4x$^{3}/_{16}$ TOP RAIL U.N.O. |
| (BR) | HSS 6x4x$^{3}/_{16}$ BOTTOM RAIL U.N.O. |
| C | CORNER FITTING LOCATION AT BOTTOM RAIL |
| I | INTERMEDIATE FITTING LOCATION AT TOP & BOTTOM RAILS |
| Cx | COLUMN TYPE PER SCHEDULE |
| | COLUMN BELOW |
| | CONTAINER CORRUGATED STEEL SHEAR WALL |

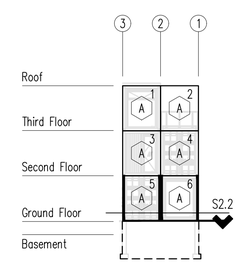
| | |
|---|---|
| EW X'-X" | SHEAR WALL END PANEL PER 4/S5.2 |
| DW X'-X" | DOOR WALL END PANEL PER 11/S5.2 |
| BW X'-X" | TENSION ROD END PANEL PER 8/S5.1 |

## Column Schedule

| MARK | SIZE |
|---|---|
| C1 | HSS 6x4x$^{1}/_{4}$ |
| C2 | HSS 4x3x$^{3}/_{16}$ |

## Ground Floor Plan

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




## Container Schedule & Level Keyplan

A CONTAINER SHALL BE INTERMODAL, CFC CERTIFIED TYPE AAA, 40' HIGH CUBE.


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PROFESSIONAL ENGINEER

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DRAWN: KIB
CHECKED: RGC
APPROVED: RGC

REVISIONS:

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|---|---|---|
| 1 | Permit Revisions | June 26, 2024 |
| 2 | Permit Revisions 2 | Oct. 31, 2024 |
| 3 | Plan and Permit Revisions 3 | Apr. 09, 2025 |

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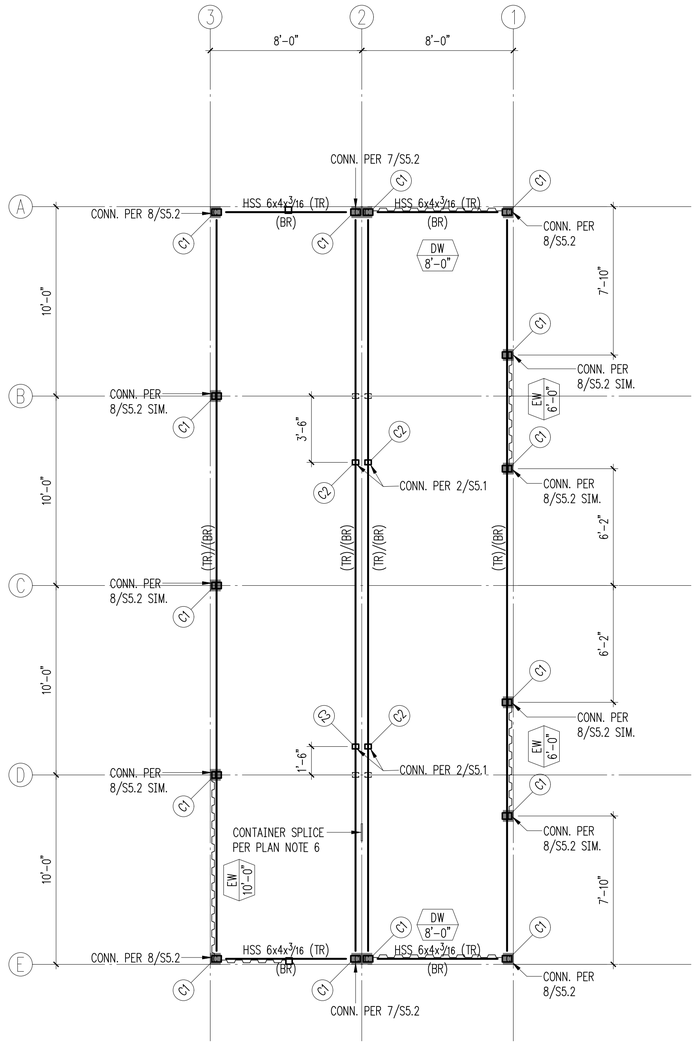
PROJECT TITLE:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE: Permit

SHEET TITLE: Ground Floor Plan

SCALE: 1/4" = 1'-0"
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO: S2.2




## Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. CONTAINER FLOOR SHEATHING SHALL BE 1-1/8" A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 32/16). PROVIDE #8-18 SELF-TAPPING SCREWS @ 6"oc AT ALL PANEL EDGES & @ 12"oc TO ALL INTERMEDIATE FRAMING.
3. REFER TO 1/S5.2, 5/S5.2, 6/S5.2, 10/S5.2, 11/S5.2 & 12/S5.2 FOR TYPICAL CONTAINER CONSTRUCTION DETAILS.
4. CONTAINER DOORS AND WINDOW HEADERS TO BE PROVIDED PER DETAIL 5/S5.3.
5. CONTAINER POSTS/COLUMNS AS SHOWN ON PLANS TO BE ATTACHED TO TOP & BOTTOM RAILS PER DETAIL 2/S5.1.
6. PROVIDE CONTAINER TO CONTAINER SPLICES PER 7/S5.3 IN THREE PLACES EACH CONTAINER LINE. LOCATE SPLICES 1'-0" EITHER SIDE OF FROM QUARTER POINTS. OFFSET SPLICES TO CLOSEST AVAILABLE SPACE AT WALLS.
7. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
8. CONTAINER INTERMEDIATE AND CORNER FITTINGS SHALL CONFORM TO ISO 1160-2016.

## Legend

- HEADER/BEAM PER PLAN
- (TR) HSS 8x4x3/16 TOP RAIL U.N.O.
- (BR) HSS 6x4x3/16 BOTTOM RAIL U.N.O.
- C — CORNER FITTING LOCATION AT BOTTOM RAIL
- I — INTERMEDIATE FITTING LOCATION AT TOP & BOTTOM RAILS
- Cx — COLUMN TYPE PER SCHEDULE
- CONTAINER CORRUGATED STEEL SHEAR WALL

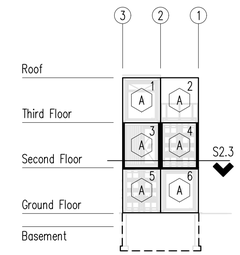
- EW X'-X" — SHEAR WALL END PANEL PER 4/S5.2
- DW X'-X" — DOOR WALL END PANEL PER 11/S5.2
- BW X'-X" — TENSION ROD END PANEL PER 8/S5.1

## Column Schedule

| MARK | SIZE |
|---|---|
| C1 | HSS 6x4x1/4 |
| C2 | HSS 4x3x3/16 |

## Second Floor Plan

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




## Container Schedule & Level Keyplan

A CONTAINER SHALL BE INTERMODAL, CFC CERTIFIED TYPE AAA, 40' HIGH CUBE.


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CHECKED: RGC
APPROVED: RGC

REVISIONS:

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|---|---|---|
| 1 | Permit Revisions | June 26, 2024 |
| 2 | Permit Revisions 2 | Oct. 31, 2024 |
| 3 | Plan and Permit Revisions 3 | Apr. 09, 2025 |

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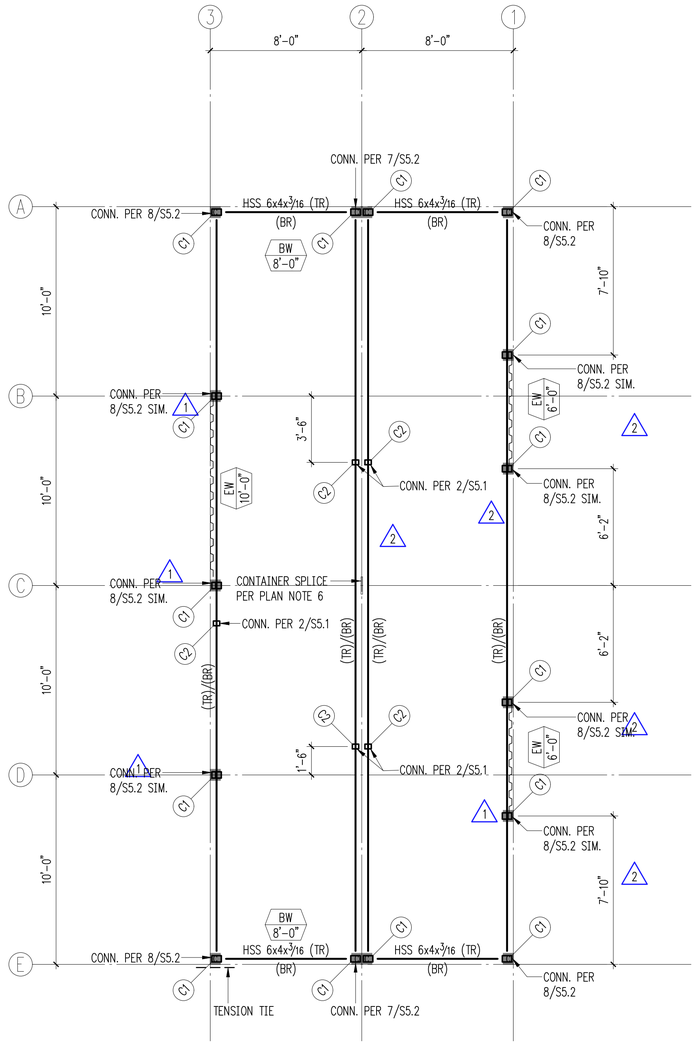
PROJECT TITLE:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE: Permit

SHEET TITLE: Second Floor Plan

SCALE: 1/4" = 1'-0"
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO: S2.3 (3)




## Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. CONTAINER FLOOR SHEATHING SHALL BE 1-1/8" A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 32/16). PROVIDE #8-18 SELF-TAPPING SCREWS @ 6"oc AT ALL PANEL EDGES & @ 12"oc TO ALL INTERMEDIATE FRAMING.
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4. CONTAINER DOORS AND WINDOW HEADERS TO BE PROVIDED PER DETAIL 5/S5.3.
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7. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
8. CONTAINER INTERMEDIATE AND CORNER FITTINGS SHALL CONFORM TO ISO 1160-2016.

## Legend

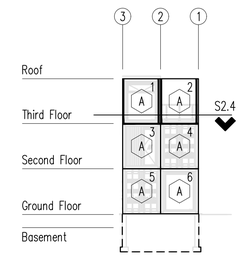
| | |
|---|---|
| ——— | HEADER/BEAM PER PLAN |
| (TR) | HSS 8x4x3/16 TOP RAIL U.N.O. |
| (BR) | HSS 6x4x3/16 BOTTOM RAIL U.N.O. |
| C | CORNER FITTING LOCATION AT BOTTOM RAIL |
| I | INTERMEDIATE FITTING LOCATION AT TOP & BOTTOM RAILS |
| □—Cx | COLUMN TYPE PER SCHEDULE |
| ~~~~ | CONTAINER CORRUGATED STEEL SHEAR WALL |
| EW X'-X" | SHEAR WALL END PANEL PER 4/S5.2 |
| DW X'-X" | DOOR WALL END PANEL PER 11/S5.2 |
| BW X'-X" | TENSION ROD END PANEL PER 8/S5.1 |

## Column Schedule

| MARK | SIZE |
|---|---|
| C1 | HSS 6x4x1/4 |
| C2 | HSS 4x3x3/16 |

# Third Floor Plan

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




## Container Schedule & Level Keyplan

A CONTAINER SHALL BE INTERMODAL, CFC CERTIFIED TYPE AAA, 40' HIGH CUBE.


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DESIGN: TWW/LTN
DRAWN: KIB
CHECKED: RGC
APPROVED: RGC

REVISIONS:

| | | |
|---|---|---|
| 1 | Permit Revisions | June 26, 2024 |
| 2 | Permit Revisions 2 | Oct. 31, 2024 |
| 3 | Plan and Permit Revisions 3 | Apr. 09, 2025 |

JURISDICTIONAL APPROVAL STAMP:

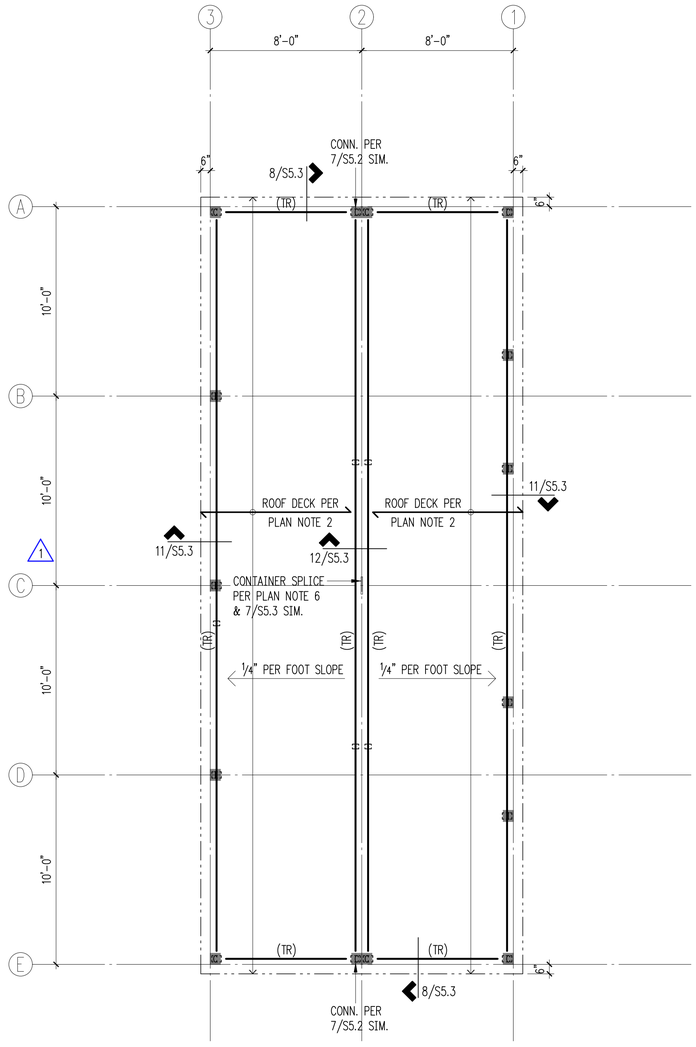
PROJECT TITLE:
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3508 96th ave SE
Mercer Island, WA 98040

ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE: Permit

SHEET TITLE: Third Floor Plan

SCALE: 1/4" = 1'-0"
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO: S2.4




## Plan Notes

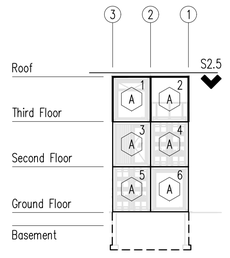
1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. ROOF FRAMING SHALL BE 18G ASC DG B36 METAL DECK PER 2/S5.3.
3. REFER TO 1/S5.2, 5/S5.2, 6/S5.2, 10/S5.2, 11/S5.2 & 12/S5.2 FOR TYPICAL CONTAINER CONSTRUCTION DETAILS.
4. CONTAINER DOORS AND WINDOW HEADERS TO BE PROVIDED PER DETAIL 5/S5.3.
5. CONTAINER POSTS/COLUMNS AS SHOWN ON PLANS TO BE ATTACHED TO TOP & BOTTOM RAILS PER DETAIL 2/S5.1.
6. PROVIDE CONTAINER TO CONTAINER SPLICES PER 7/S5.3 IN THREE PLACES EACH CONTAINER LINE. LOCATE SPLICES 1'-0" EITHER SIDE OF FROM QUARTER POINTS. OFFSET SPLICES TO CLOSEST AVAILABLE SPACE AT WALLS.
7. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
8. CONTAINER INTERMEDIATE AND CORNER FITTINGS SHALL CONFORM TO ISO 1160-2016.

## Legend

| | |
|---|---|
| ——— | HEADER/BEAM PER PLAN |
| (TR) | HSS 8x4x$\frac{3}{16}$ TOP RAIL U.N.O. |
| C | CORNER FITTING LOCATION AT TOP RAIL |
| I | INTERMEDIATE FITTING LOCATION AT TOP RAIL |
| ⬚ | COLUMN/POST BELOW |
| T.O.S. | TOP OF STEEL, ELEVATION RELATIVE TO TOP OF CORNER CASTING |

## Roof Plan

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




## Container Schedule & Level Keyplan

A CONTAINER SHALL BE INTERMODAL, CFC CERTIFIED TYPE AAA, 40' HIGH CUBE.


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| 3 | Plan and Permit Revisions 3 | Apr. 09, 2025 |

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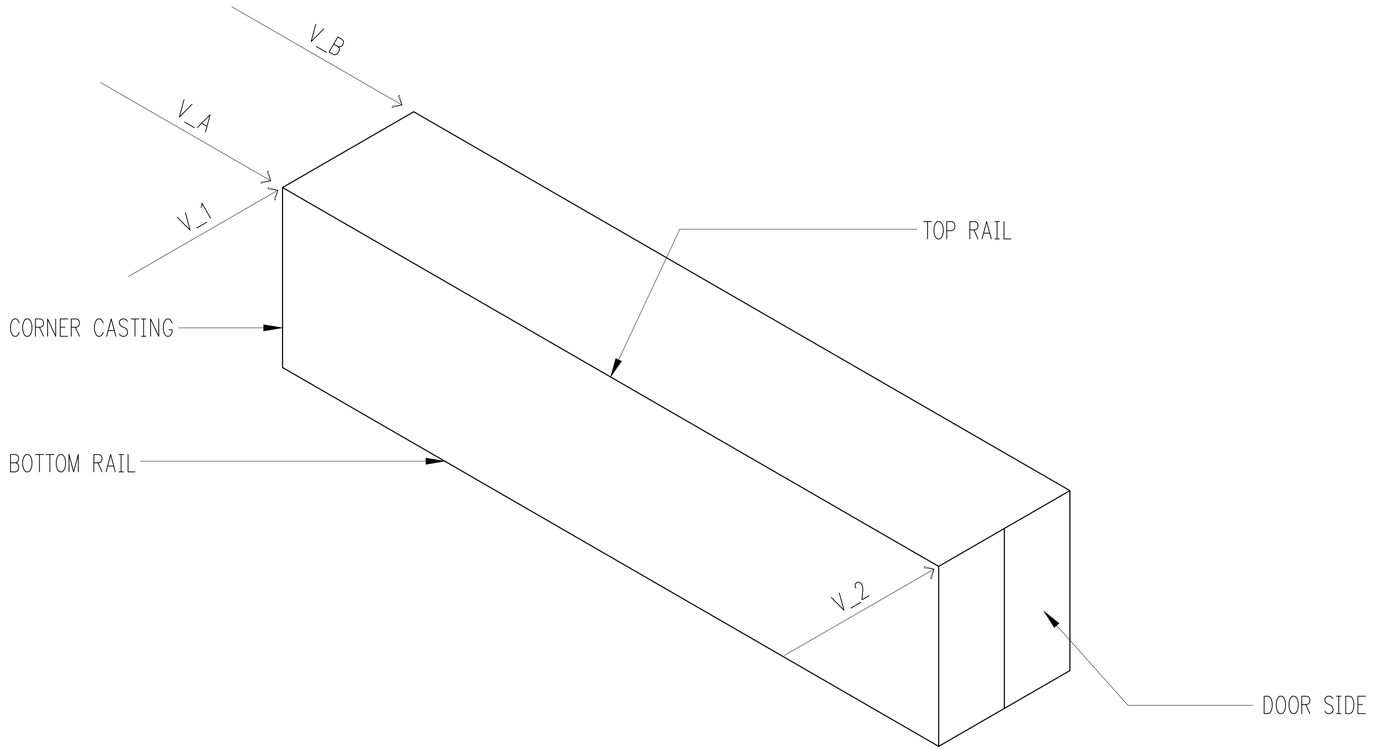
PROJECT TITLE:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE: Permit

SHEET TITLE: Roof Plan

SCALE: 1/4" = 1'-0"
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO: S2.5 (3)




## Plan Notes

1. PROVIDE BRACING, NO LOADING IS REQUIRED.
2. AT WALL LINES WITH EW END PANEL INSERTS, THE ENDS OF EACH EW SECTION SHALL BE LOCKED INTO PLACE PRIOR TO TESTING.
3. THE LONGITUDINAL DEFLECTION OF THE TOP OF THE CONTAINER WITH RESPECT TO THE BOTTOM OF THE CONTAINER, AT THE TIME IT IS UNDER FULL LONGITUDINAL RIGIDITY TEST CONDITIONS, SHALL NOT EXCEED 3 INCHES (75 mm).
4. TESTING SHALL BE DONE IN ACCORDANCE WITH THE 2021 WSBC 3115.3. THE APPROVED AGENCY, LRQA GROUP LIMITED (810 SEVENTH AVENUE NEW YORK 10019) TO CERTIFY TESTING.

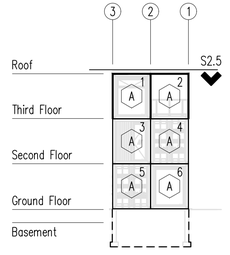
## Container Schedule

△3

| CONTAINER # | V_1 (kips) ENDS | V_2 (kips) (door side) ENDS | V_A (kips) SIDES | V_B (kips) SIDES |
|---|---|---|---|---|
| 1 | 6.9 | 6.9 | 6.9 | N/A |
| 2 | N/A | N/A | N/A | 6.9 |
| 3 | N/A | N/A | 21.7 | N/A |
| 4 | 21.7 | 21.7 | N/A | 14.1 |
| 5 | N/A | 28.7 | 28.7 | N/A |
| 6 | 28.7 | N/A | N/A | 17.8 |

## Typical Container

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




## Container Schedule & Level Keyplan

A CONTAINER SHALL BE INTERMODAL, CFC CERTIFIED TYPE AAA, 40' HIGH CUBE.


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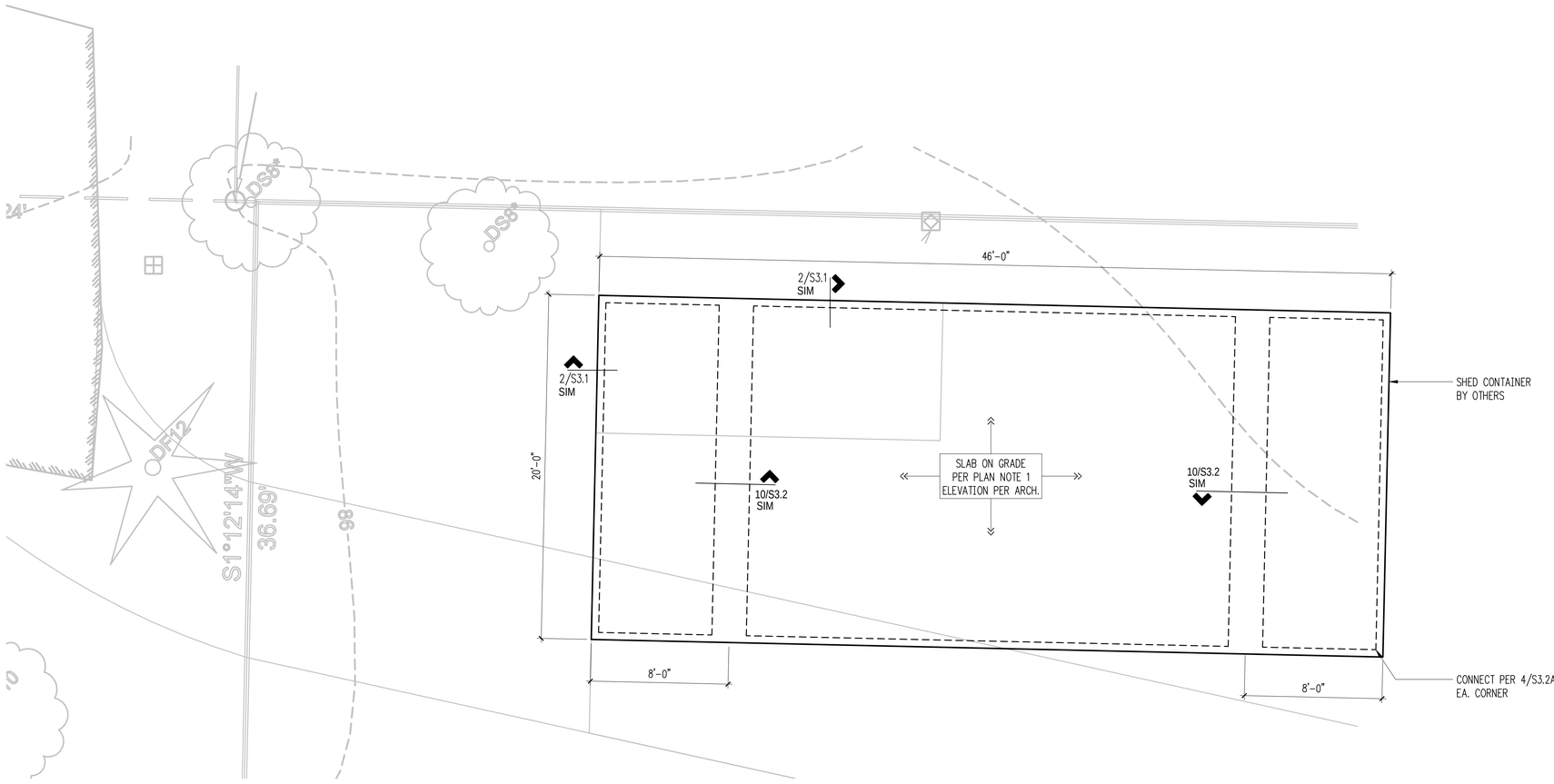
ARCHITECT:
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SHEET TITLE:
Typical Container Diaphragm

SCALE: 1/4" = 1'-0"
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO:

△1 S2.6




## Plan Notes

1. 4" CONCRETE SLAB OVER 10 MIL VAPOR BARRIER ON 4" OF GRAVEL OR CRUSHED ROCK OVER FIRM UNDISTURBED SOIL OR ENGINEERED COMPACTED BACK-FILL. REINFORCE WITH #3 AT 16"OC EACH WAY. PROVIDE CONSTRUCTION/CONTROL JOINTS PER DETAIL 8/S3.1.

## Shed Foundation Plan

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


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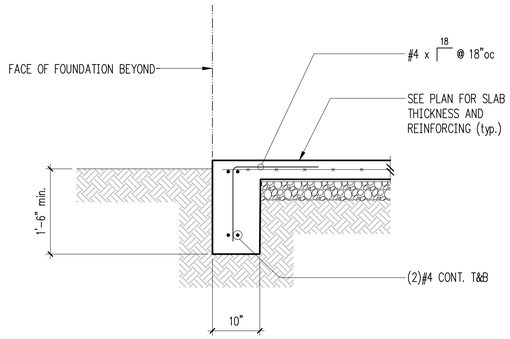
ISSUE:
Permit

SHEET TITLE:
Shed Foundation Plan

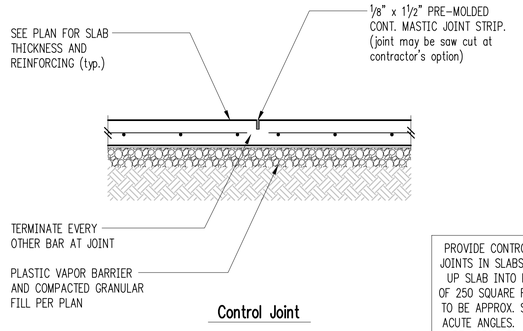
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DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO:

2 S2.7

1

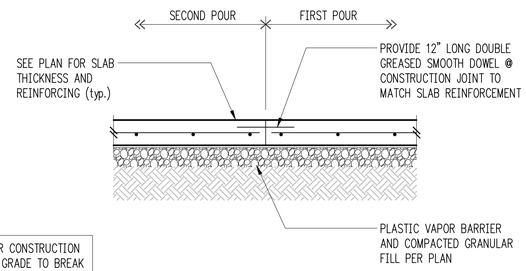



Typical Turned-Down Slab Edge 2



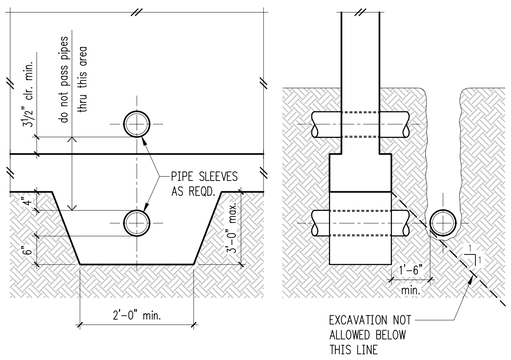

Control Joint

PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF 250 SQUARE FEET OR LESS. AREAS TO BE APPROX. SQUARE AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS TO BE APPROVED BY THE ARCHITECT.




Construction Joint

Typical Slab Joints 3 4




Pipe and Trench Locations 5

## Reinforcing Splice and Development Length Schedule

For f'c = 3000 psi, Grade 60 Reinforcing

I Minimum Straight Development Length ($\ell_d$)

| Bar Size | Top Bars | Other Bars |
|---|---|---|
| #3 | 21" | 16" |
| #4 | 28" | 22" |
| #5 | 36" | 27" |
| #6 | 43" | 33" |
| #7 | 62" | 48" |
| #8 | 71" | 55" |
| #9 | 80" | 62" |
| #10 | 90" | 70" |
| #11 | 100" | 77" |

II Minimum Lap Splice Lengths ($\ell_s$)

| Bar Size | Top Bars | Other Bars |
|---|---|---|
| #3 | 28" | 21" |
| #4 | 37" | 28" |
| #5 | 46" | 36" |
| #6 | 56" | 43" |
| #7 | 81" | 62" |
| #8 | 93" | 71" |
| #9 | 104" | 80" |
| #10 | 118" | 90" |
| #11 | 131" | 100" |

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.

IF CLEAR CONCRETE COVER IS NOT GREATER THAN THE DIAMETER OF THE BAR, OR THE CENTER TO CENTER SPACING IS NOT GREATER THAN 3 BAR DIAMETERS, THEN LENGTHS SHALL BE INCREASED BY 50%

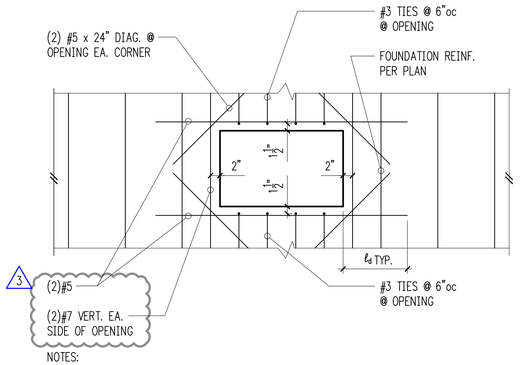
III Minimum Embedment Lengths ($\ell_{dh}$) For Standard End Hooks

| Bar Size | Length |
|---|---|
| #3 | 6" |
| #4 | 8" |
| #5 | 10" |
| #6 | 12" |
| #7 | 13" |
| #8 | 15" |
| #9 | 17" |
| #10 | 19" |
| #11 | 22" |

1. SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2½"
2. END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2"

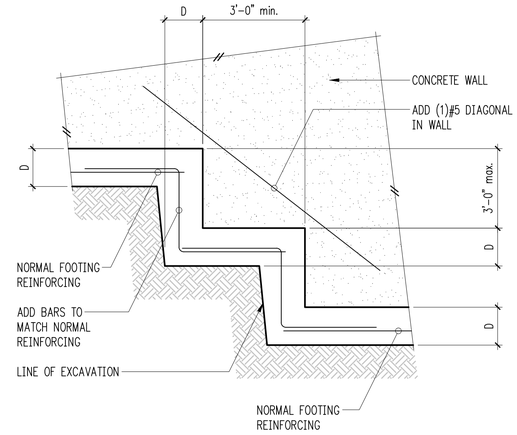
Reinforcing Splice Length & Development Length (3000psi) 10

7

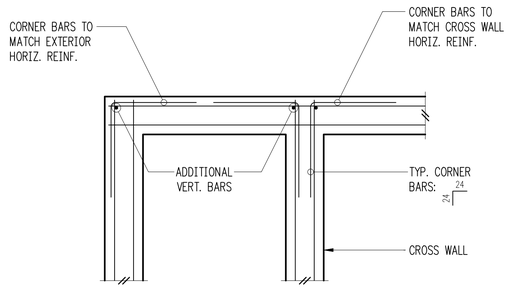



NOTES:
1. REINFORCING SHOWN IS MINIMUM. SEE PLANS FOR ANY ADDITIONAL REQUIRED REINFORCING.

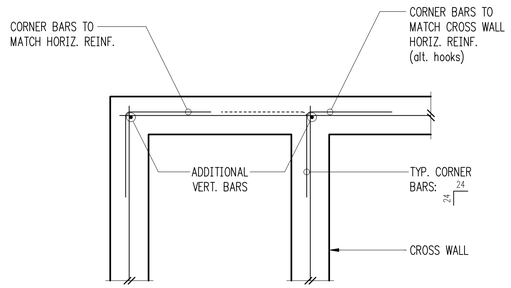
Typical Reinforcing for Opening in Foundation 8




Typical Stepped Footing 9




Double Curtain




Single Curtain

Typical Corner Bars at Concrete Walls and Footings 12


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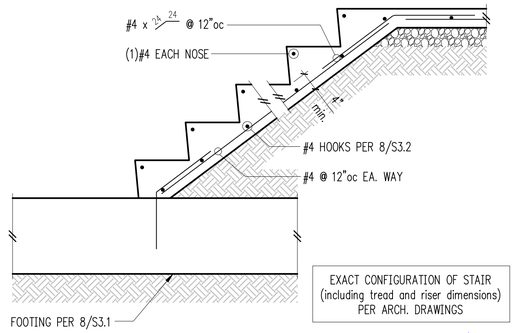
ISSUE: Permit

SHEET TITLE: Foundation Details

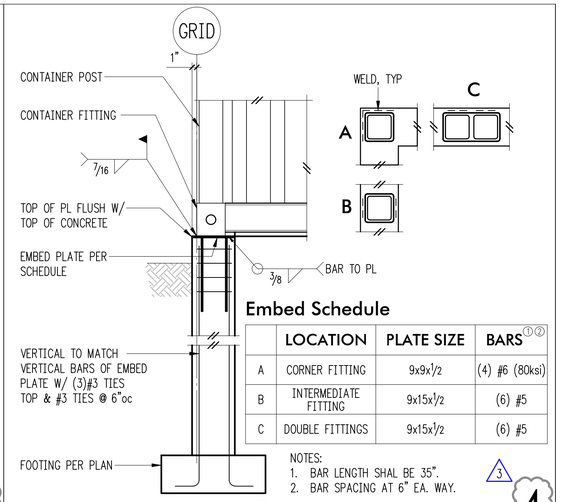
SCALE: 3/4" = 1'-0" U.N.O.
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO: S3.1

1

2




Typical Stair On Grade 3




Embed Schedule

| | LOCATION | PLATE SIZE | BARS ①② |
|---|---|---|---|
| A | CORNER FITTING | 9x9x1/2 | (4) #6 (80ksi) |
| B | INTERMEDIATE FITTING | 9x15x1/2 | (6) #5 |
| C | DOUBLE FITTINGS | 9x15x1/2 | (6) #5 |

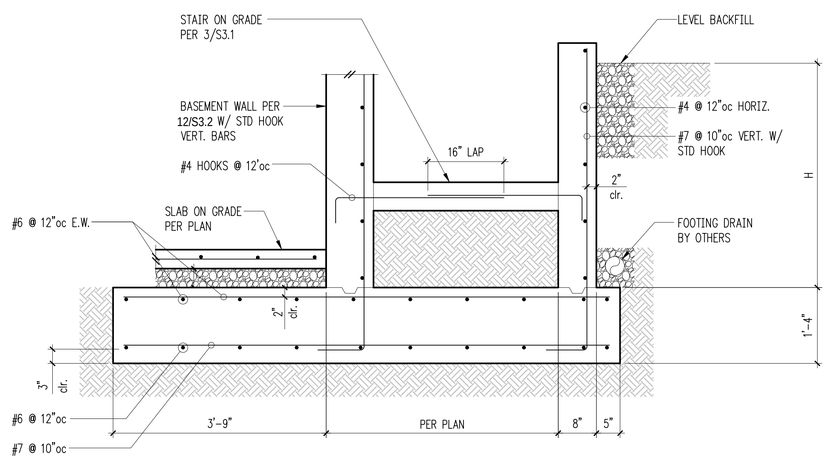
NOTES:
1. BAR LENGTH SHAL BE 35".
2. BAR SPACING AT 6" EA. WAY.

Container Fitting Anchorge 4

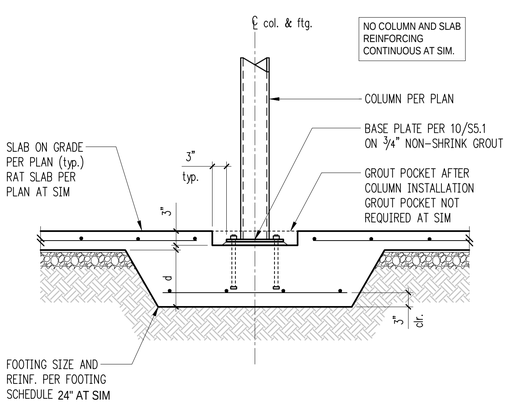
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3 5

6

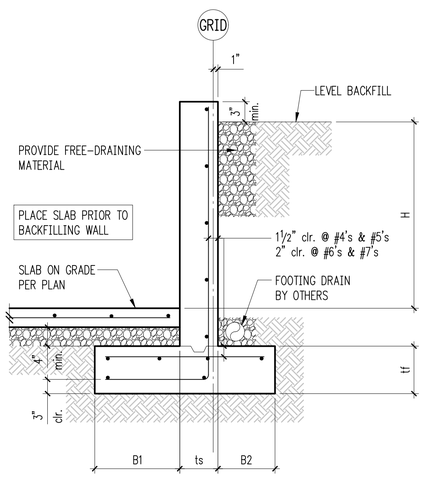



3 8




3 9

Typical Thickened Interior Footing 10




Retaining Wall Schedule W/ Slab

| H (ft.) | B1 | ts | B2 | tf | Stem Reinforcing | | Footing Reinforcing | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Vert. | Horiz. | Top | Longit. |
| 8'-9" | 3'-9" | 10" | 1'-6" | 14" | #7 @ 10"oc | #4 @ 12"oc | #6 @ 12"oc | (6)#6 |

EQUIVALENT FLUID PRESSURE = 40 PCF
PASSIVE SOIL RESISTANCE = 250 PCF (F.S. = 1.5)
SEISMIC SURCHARGE = 14H PSF

3 12

Standard Retaining Wall


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ISSUE: Permit

SHEET TITLE: Foundation Details

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1

2

3

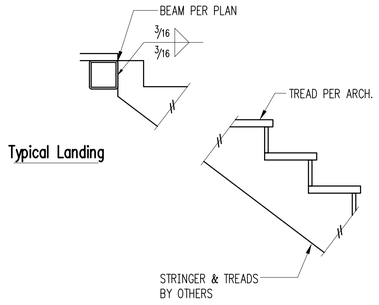
4

5

3 6

3 7

8




Typical Landing

Typical Rise

ALL TREAD AND RISER
DIMENSIONS PER ARCH.

Typical Stair and Landing Detail 9

10

3 12

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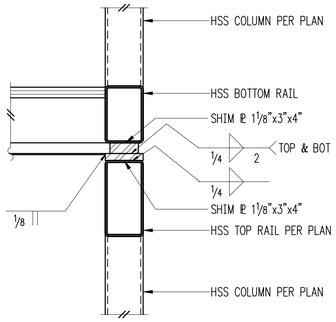
SHEET TITLE:
Typical Wood Framing Details

SCALE: 3/4" = 1'-0" U.N.O.

DATE: Nov. 19, 2024

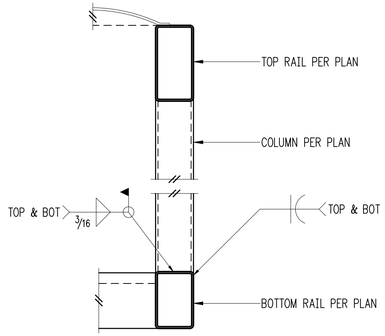
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SHEET NO:
S4.1




1½" = 1'-0"

## Container Shims 1



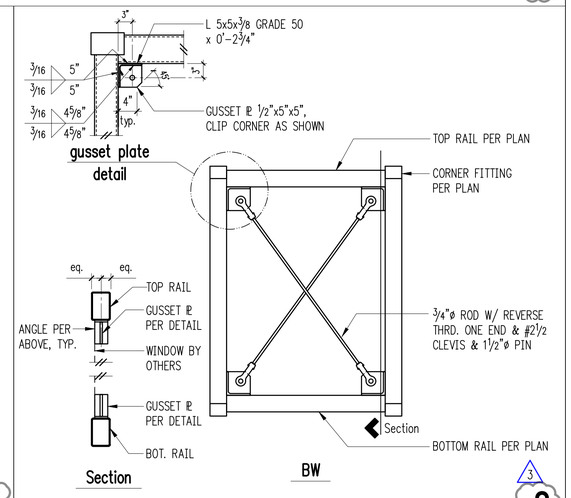

3

1½" = 1'-0"

## HSS Column Connection to Container Top & Bottom Rails 2

3

4




3

## Tension Rod End Panel 8

3

5




1½" = 1'-0"

## HSS Column Cap 6

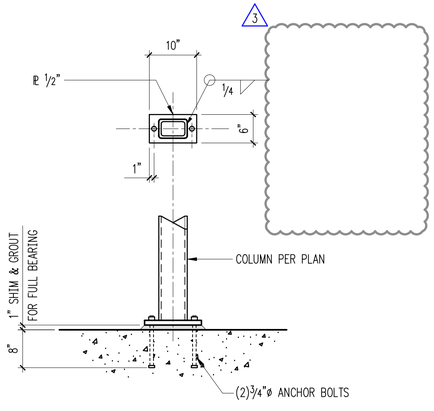
3

7

1

3

9




## Baseplate Connections 10

3

11

1

3

12


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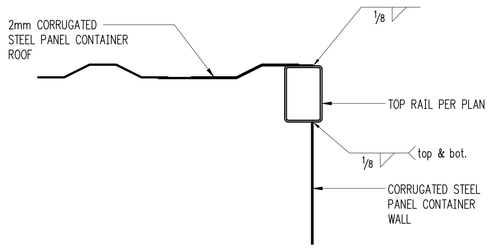
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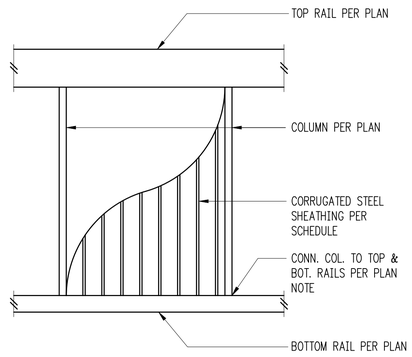
SHEET TITLE: Column Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO: S5.1

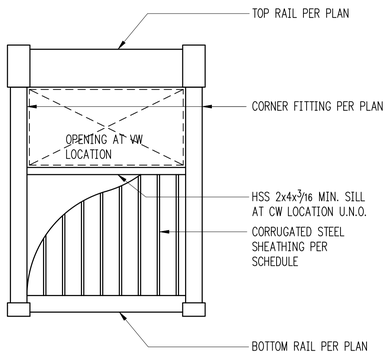



1½" = 1'-0"

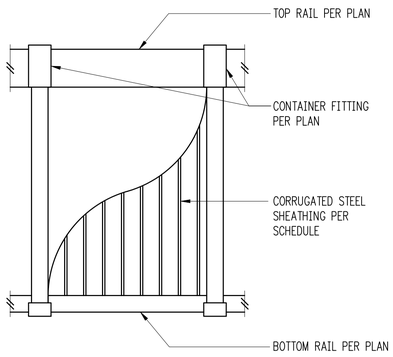
## Container Roof Conn. 1




SWA



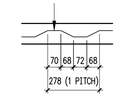

CW




EW

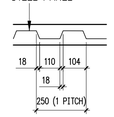
**PANEL TYPE A**

1.6 mm CORRUGATED STEEL PANEL




**PANEL TYPE B**

2 mm CORRUGATED STEEL PANEL

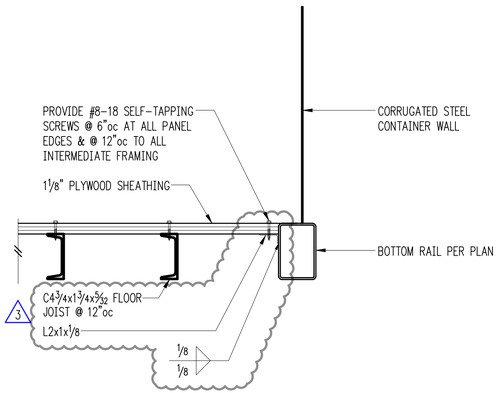



**Shearwall Schedule**

| MARK | PANEL TYPE |
|---|---|
| SWA | A |
| EW | B |
| CW | A |

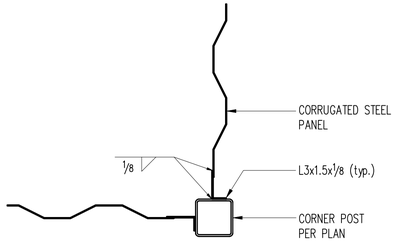
¾" = 1'-0"

## 4




1½" = 1'-0"

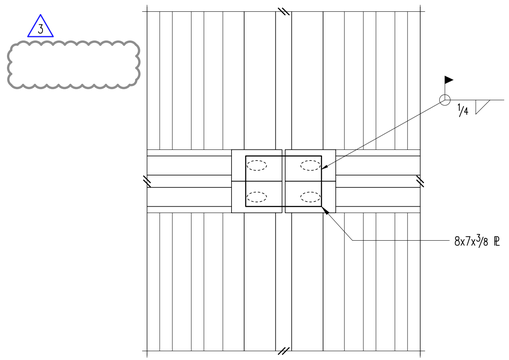
## Container Floor Conn. 5




Plan View

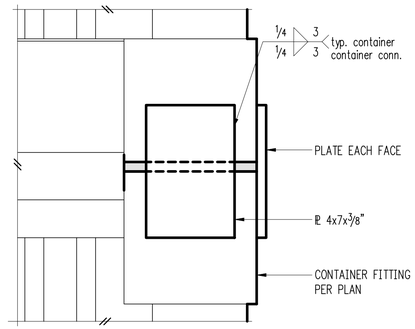
1½" = 1'-0"

## Wall & Corner Post Conn. 6




1" = 1'-0"

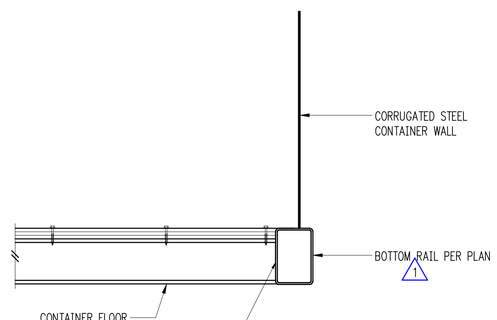
## Container - Container End Connections 7




INTERMEDIATE CONNECTION AT SIM WITH PLATE ON FRONT FACE ONLY

3" = 1'-0"

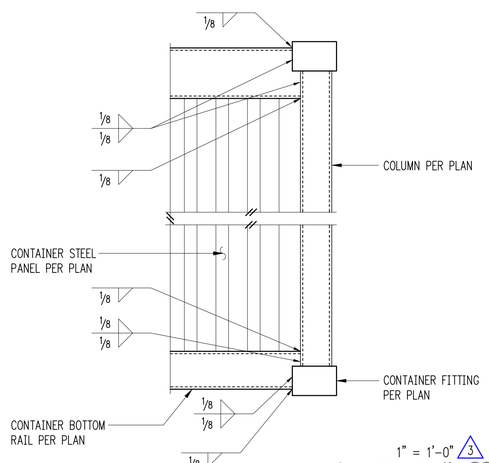
## Cont. -To- Cont. Corner Connection 8




FOR CALLOUTS IN COMMON SEE 5/S5.2

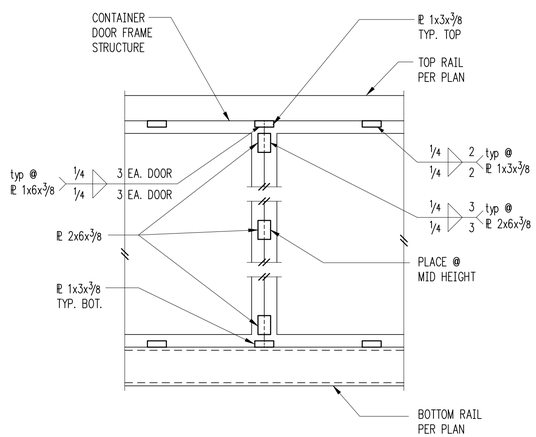
1½" = 1'-0"

## Container Floor Joist to Bottom Rail Conn. 9



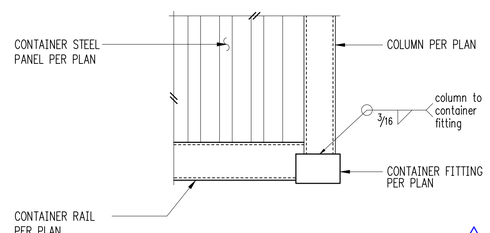

1" = 1'-0"

## Top & Bottom Rail Connections to Corner Casting & Column 10




1" = 1'-0"

## Container Door Welding 11




1" = 1'-0"

## Container Corner Column to Container Fitting Connection 12


SSF STRUCTURAL ENGINEERING

SEATTLE
2124 Third Avenue, Suite 100
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Tacoma, WA 98402

CENTRAL WASHINGTON
414 N Pearl Street, Suite 8
Ellensburg, WA 98926

206.443.6212
ssfengineers.com


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R. GREGORY COONS — STATE OF WASHINGTON — 23838 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

DESIGN: TWW/LTN
DRAWN: KIB
CHECKED: RGC
APPROVED: RGC

REVISIONS:

| | | |
|---|---|---|
| 1 | Permit Revisions | June 26, 2024 |
| 2 | Permit Revisions 2 | Oct. 31, 2024 |
| 3 | Plan and Permit Revisions 3 | Apr. 09, 2025 |

JURISDICTIONAL APPROVAL STAMP:

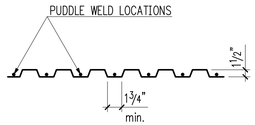
PROJECT TITLE:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE: Permit

SHEET TITLE: Container Details

SCALE: 1" = 1'-0" U.N.O.
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO: S5.2




## ASC DGB-36, G60 Galvanized w/Following Min. Properties

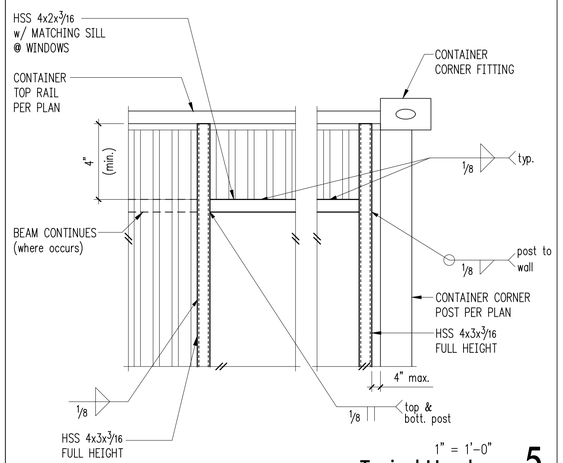
SHEAR CAPACITY REQ'D = 500 #/ft

**18 GA.**

I = 0.313 in.$^4$
S = 0.340 in.$^3$
Fy = 38 ksi

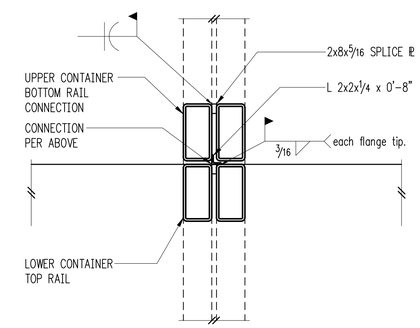
1. MAXIMUM DECK SPAN = 10'-0" c. TO c. (TWO OR MORE CONTINUOUS SPANS).
2. PROVIDE (4)½" DIAMETER PUDDLE WELDS PER SHEET TO ALL SUPPORTS PERPENDICULAR TO DECK FLUTES.
3. PROVIDE ½" DIAMETER PUDDLE WELDS AT 12"oc TO ALL STRUTS PARALLEL TO DECK FLUTES
4. CONNECT DECK SEAMS WITH BUTTON PUNCHES @ 12"oc.
5. DECK TYPE MUST STRICTLY MEET CRITERIA LISTED ABOVE INCLUDING RESEARCH REPORT ALLOWABLE SHEAR LOADS. SUBMIT DECK INFORMATION TO ENGINEER PRIOR TO BEGINNING SHOP DRAWINGS.
6. AT CONTRACTORS OPTION, .145"ø DRIVE PINS OR SDI RECOGNIZED #10 SELF DRILLING SCREWS MAY BE SUBSTITUTED AT SUPPORTS AND SIDELAP CONNECTIONS .

1 1/2" Roof Deck **2**




1" = 1'-0"

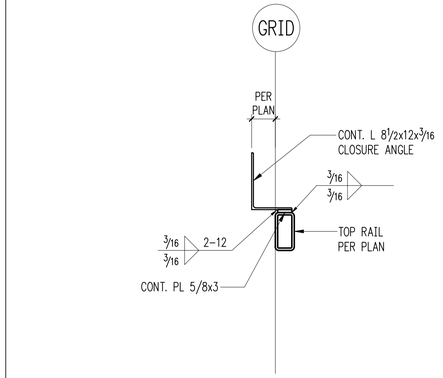
Typical Header **5**



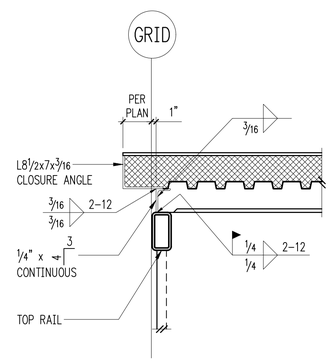

CONSTRUCTION SEQUENCE:
1. SET LOWER CONTAINERS AND WELD LOWER SPLICE PL.
2. SET FIRST UPPER CONTAINER AND WELD ANGLE.
3. SET UPPER CONTAINER AND WELD UPPPER SPLICE PL.

INVERT AT SIM.

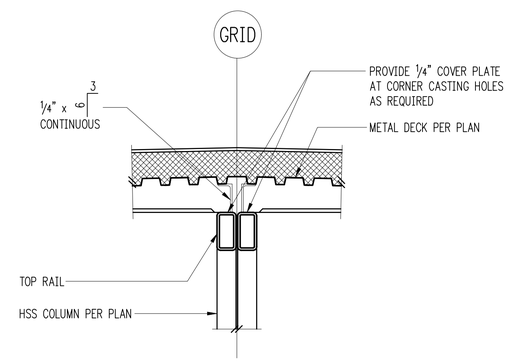
Container to Container Diaphragm Connection **7**




Roof Edge Deck Perpendicular **8**




Exterior Container Side Wall at Roof **11**




PROVIDE COVER PLATE
PER 10/S5.3

Inside Container Side Wall At Roof **12**


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ARCHITECT:
Adams Cargotechture
3508 96th ave SE
Mercer Island, WA 98040

ISSUE:
Permit

SHEET TITLE:
Roof Framing Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: Nov. 19, 2024
PROJECT NO: 13074-2022-01
SHEET NO:

S5.3