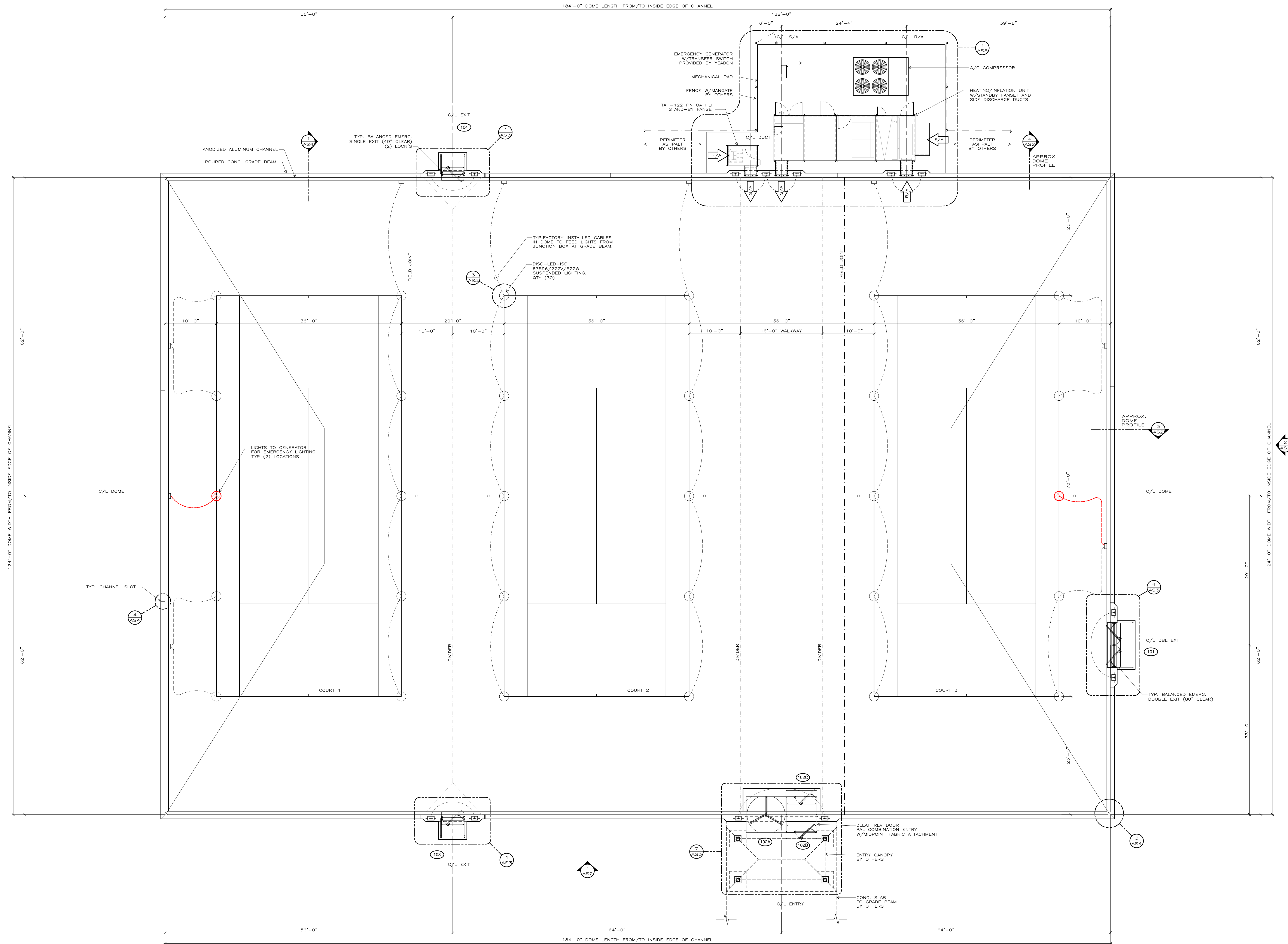


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1 DOME PLAN VIEW
1/8" = 1'-0"

| DOOR SCHEDULE | | | | | | | | | |
|---------------|---|----------|-------------|--------------|----------------------------------|-----------------------|--------------|--------------|--|
| DOOR # | DESCRIPTION | FRAME | | TYPE | CLEAR OPENING W' x H' (W/ APPL.) | GLAZING TYPE | HARDWARE | | |
| | | MATERIAL | FINISH | | | | PANIC BAR | LOCK SET | |
| 101 | BALANCED SELF CLOSING EMERGENCY DOUBLE EXIT | STEEL | POWDER COAT | INSUL. ALUM. | 103.38" x 96" | 1 1/4" LEXAN (TUFFAK) | MONARCH-19-R | MO-914KIL-KD | |
| 102A | 3-LEAF REVOLVING DOOR | ALUM. | BRUSHED | INSUL. ALUM. | 93" x 83" x 84" | 1 1/4" LEXAN (TUFFAK) | NA | SLIDING BOLT | |
| 102B | EGRESS (ARLOCK EXT.) | ALUM. | BRUSHED | INSUL. ALUM. | 72.5" x 83" x 84" | 1 1/4" LEXAN (TUFFAK) | MONARCH-19-R | MO-914KIL-KD | |
| 102C | EGRESS (ARLOCK INT.) | ALUM. | BRUSHED | INSUL. ALUM. | 40" x 80" | 1 1/4" LEXAN (TUFFAK) | MONARCH-19-R | MO-914KIL-KD | |
| 103 | BALANCED SELF CLOSING EMERG. EXIT | STEEL | POWDER COAT | INSUL. ALUM. | 53" x 96" | 1 1/4" LEXAN (TUFFAK) | MONARCH-19-R | MO-914KIL-KD | |
| 104 | BALANCED SELF CLOSING EMERG. EXIT | STEEL | POWDER COAT | INSUL. ALUM. | 53" x 96" | 1 1/4" LEXAN (TUFFAK) | MONARCH-19-R | MO-914KIL-KD | |

architecture incorporated
1902 campus commons drive
Suite 101
Reston, Virginia 20191
Tel: 703.476.3900
www.archinc.com

YEADON
121 BIRCH LANE SUITE 300 WINDSOR PARK DR. SUITE 300
128 WOODLICH ST. SUITE 201 GUELPH ONT. M1H 3V2

Construction Documents for:
**TOWN OF LEESBURG, VA
IDA LEE PARK
TENNIS BUBBLE**
70 IDA LEE DRIVE NW
LEESBURG, VA 20176

Project: 21136-01

Issue: 08/02/2021

PERMIT SUBMISSION

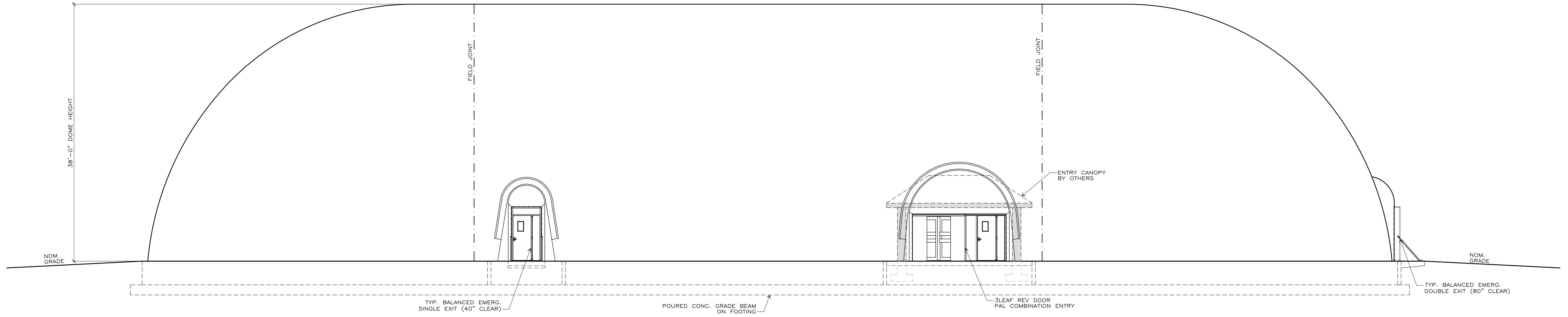
Revisions

DOME PLAN VIEW

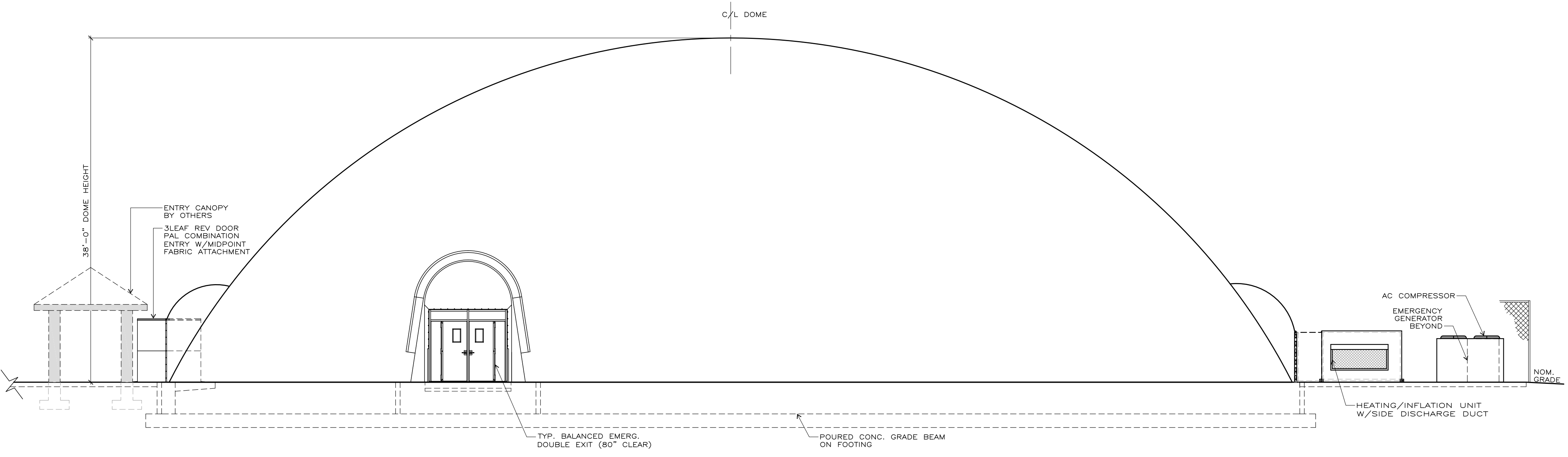
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AS.1

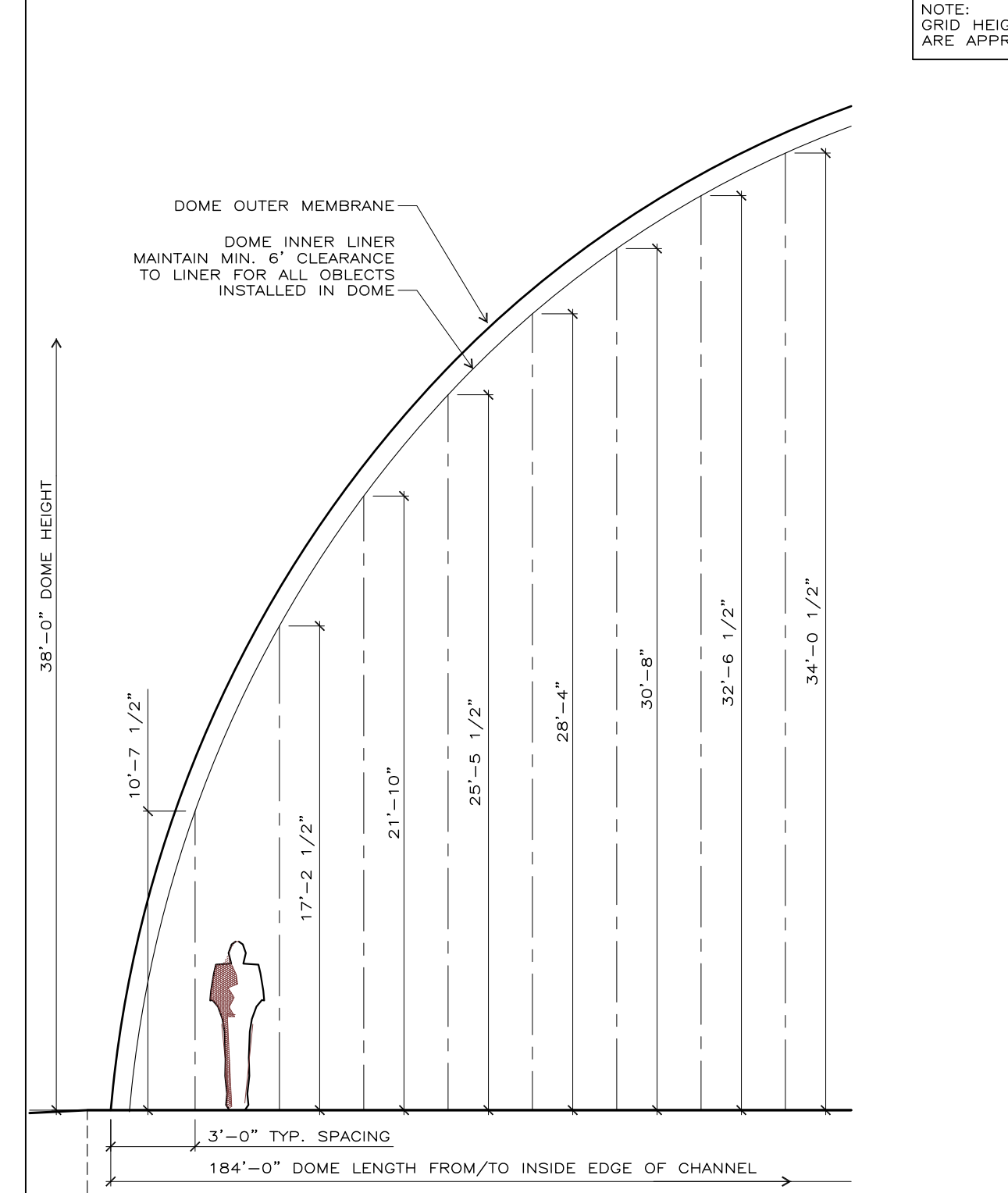
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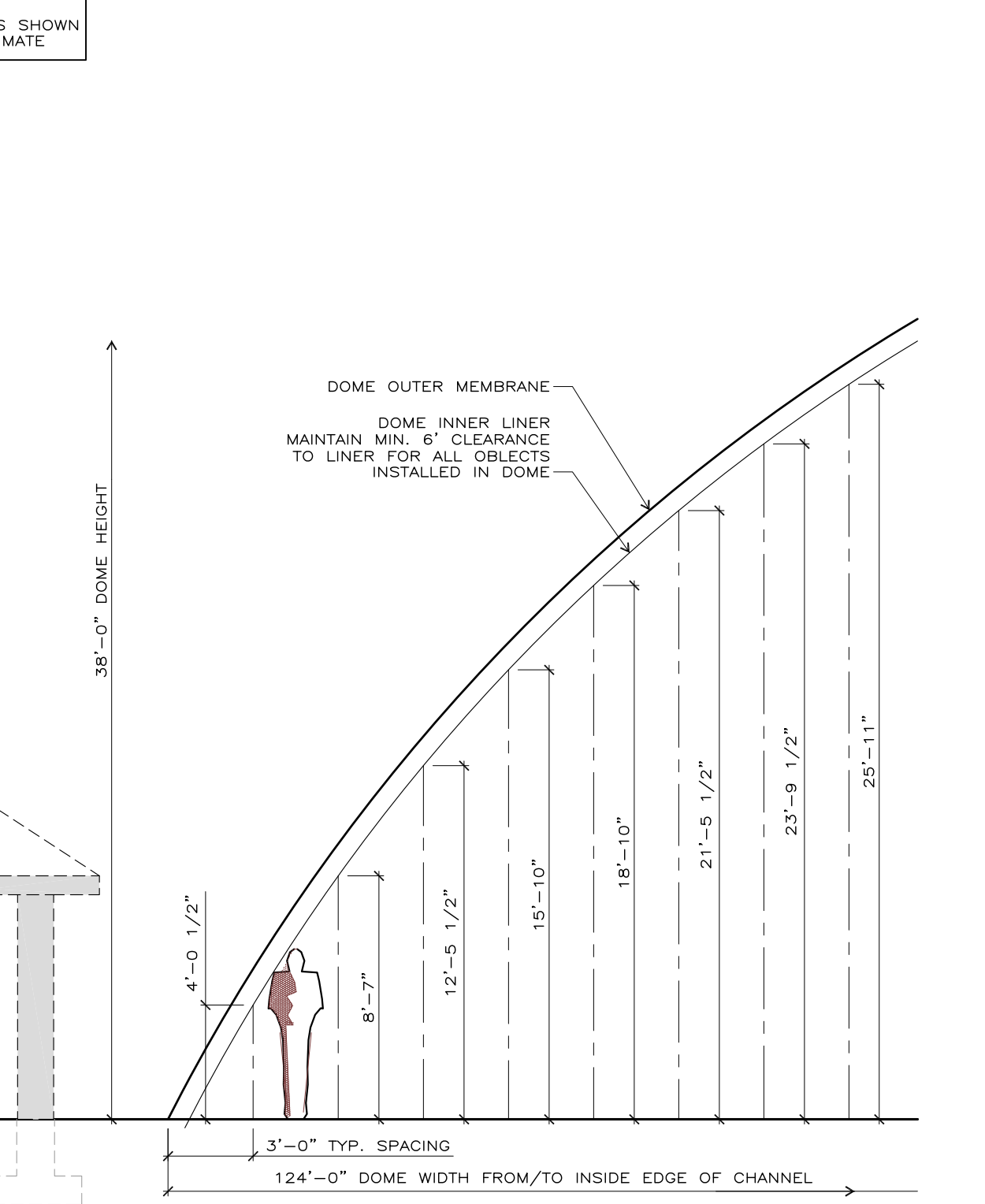
1 SIDE ELEVATION
1/8" = 1'-0"



2 END ELEVATION
1/8" = 1'-0"



3 APROX. DOME PROFILE AT END
3/16" = 1'-0"



4 APROX. DOME PROFILE AT SIDE
3/16" = 1'-0"

GENERAL NOTES:

1. DESIGN LOADS:

i) THIS STRUCTURE IS AN AIR-SUPPORTED STRUCTURE IN WHICH THE FABRIC IS SUPPORTED BY INTERNAL PRESSURE. THE INTERNAL PRESSURE IS MONITORED DAILY BY THE OWNER AND IS INCREASED PRIOR TO HIGHER WINDS OR TO SNOWFALLS, AS DIRECTED IN THE OWNER'S MANUAL, IN ORDER TO PROVIDE REQUIRED RESISTANCE TO THE WEATHER LOADS.

ii) WIND: IN ACCORDANCE WITH 2018 VIRGINIA CONSTRUCTION CODE AND 2018 ASCE-7, 115 MPH (ULT). EXPOSURE C. PRESSURE DISTRIBUTION TO 2018 ASCE 7. RISK CATEGORY II. MAXIMUM OCCUPANCY IN DOME < 300.

iii) INTERNAL DESIGN PRESSURE: INTERNAL DESIGN PRESSURE IS 0.64 PSF (1.85" W.C.). THIS IS REQUIRED IN ORDER TO MAINTAIN STRUCTURAL INTEGRITY DURING WEATHER EVENTS. DURING NON-WEATHER EVENTS, THE OWNER MAY REDUCE THE INTERNAL PRESSURE, AT THEIR OWN DISCRETION. MINIMUM INTERNAL PRESSURE IS 0.91 PSF (0.75" W.C.). STANDBY SET FOR 0.12 MPa (2.6 PSF, 0.5" W.C.) FOR THE "ON" VALUE.

iv) SNOW: SNOW TO BE MANUALLY REMOVED BY OWNER IF EXTREME CONDITIONS EXIST (ASCE 55-16 6.11). SNOW TO BE REMOVED FROM ALL SIDES OF DOME BY OWNER AFTER EVERY SNOWFALL. IF SNOW IS FORECAST, THE OWNER MUST HAVE PERSONNEL AVAILABLE TO MONITOR DOME OPERATION DURING THE SNOW EVENT.

v) DEAD LOAD: SELF WEIGHT OF DOME, INSULATION AND CABLES.

2. STRUCTURAL:

ALL WORK SHALL CONFORM TO THE APPLICABLE CODES, LOCAL REGULATIONS AND AUTHORITIES HAVING JURISDICTION. THE ENGINEER SHALL BE GIVEN 48 HOURS MINIMUM NOTICE BY THE CONTRACTOR FOR ALL REQUIRED INSPECTIONS OF FOUNDATION, REINFORCING STEEL, STRUCTURAL STEEL AND FRAMING. THIS SET OF DRAWINGS REPLACES ALL PREVIOUS DRAWINGS. ALL SITE DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. NO CHANGES SHALL BE MADE WITHOUT WRITTEN APPROVAL BY THE ENGINEER. ALL SURFACES OF STRUCTURES DIRECTLY EXPOSED TO THE INTERIOR OF THE AIR STRUCTURE SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 20 PSF OF AIR PRESSURE. FABRIC STRESS RELIEF CABLES ABOVE OPENINGS IN THE PRIMARY MEMBRANE SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 20 PSF OF AIR PRESSURE. FABRIC STRESS RELIEF CABLES ABOVE OPENINGS IN THE PRIMARY MEMBRANE SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 20 PSF OF AIR PRESSURE. THIS AIR STRUCTURE HAS BEEN DESIGNED USING CSA DOCUMENT CSA S367-12 AND ASCE 55-16 AS GUIDES.

3. EXCAVATION AND BACKFILL:

SOIL CONDITIONS SHALL BE REPORTED TO THE ENGINEER AT THE TIME OF EXCAVATION AND AT HIS DISCRETION THE ENGINEER MAY REQUIRE FURTHER SOILS INVESTIGATION, OR MODIFICATIONS TO THE GRADE BEAM DESIGN. REMOVE ALL TOP SOIL AND DELETERIOUS MATERIAL FROM BENEATH ALL STRUCTURE COMPONENTS. USE ONLY ENGINEER APPROVED COMPACTED FILL TO RAISE GRADES WHERE REQUIRED BENEATH STRUCTURES. COMPACT ALL GRANULAR FILL TO 98% SPDD. COMPACTATION TESTING SHALL BE CARRIED OUT BY A QUALIFIED GEOTECHNICAL CONSULTANT PRIOR TO INSTALLATION OF ANY STRUCTURES SUPPORTED ON FILL. SLOPE ALL GRADES AWAY FROM THE AIR STRUCTURE AND ITS COMPONENTS. PROTECT EXCAVATIONS AND GRADE BELOW SLABS FROM FROST PENETRATION BY PROPER USE OF STRAW, THERMAL BLANKETS AND TARRS.

4. CONCRETE:

ALL CONCRETE AND REBAR SHALL CONFORM TO ACI CODE 318-LATEST EDITION. CONCRETE STRENGTH SHALL BE 4000 PSI, 6% +/- 1% AIR ENT. IN ALL CASES, UNLESS OTHERWISE SPECIFIED. USE ONLY GRADE 60 (60,000 PSI) DEFORMED REBAR. APPROPRIATE MEASURES SHALL BE TAKEN TO PROTECT CONCRETE FROM EXCESSIVE EVAPORATIVE WATER LOSS AND ENSURE PROPER CURING. ALL CONCRETE SHALL BE TESTED BY AN ACI CERTIFIED CONCRETE TESTING LABORATORY. USE HIGH FREQUENCY VIBRATION TO PLACE ALL CONCRETE. APPROPRIATE MEASURES SHALL BE TAKEN TO PROTECT CONCRETE FROM EXPOSURE TO FREEZING TEMPERATURES FOR AT LEAST (7) DAYS FOLLOWING CONCRETE PLACEMENT. PROVIDE DROUT CLEANED RUBBED FINISH IN ACCORDANCE WITH ACI 301-10 FOR ALL FORMED CONCRETE SURFACES EXPOSED TO VIEW. ENSURE 2" MINIMUM COVER FOR ALL REBAR IN FORMED CONCRETE, 3" MINIMUM COVER FOR CONCRETE POURED AGAINST SOIL. PROVIDE VERTICAL CONTROL JOINTS @ 20'-0" O.C. MAX. LOCATE MID DISTANCE BETWEEN CABLE ANCHORAGE. KEY EA. FACE 1" MIN AND GASK. CUT EVERY OTHER HORIZ. BAR. RE-BAR LAP/SPLICE LENGTHS: #4 = 22" #5 = 28" #6 = 32"

5. ELECTRICAL NOTES:

(SEE ALSO ELECTRICAL DRAWINGS BY OTHERS ISSUED FOR THIS PROJECT)

EXITS: THE CONTRACTOR SHALL PROVIDE (1) 277V/15A DEDICATED CIRCUIT FOR EMERGENCY LIGHTING ONLY AND ALL EMERGENCY LIGHTS SHALL BE POWERED BY THIS CIRCUIT. POWER SUPPLY FOR EMERGENCY EXITS SHALL BE BROUGHT WITHIN 12" OF EACH EXIT DOOR OPENING AS LOCATED IN THE CONSTRUCTION DRAWINGS. WHERE THE POWER SUPPLY IS RUN IN CONDUIT CAST INTO THE FOUNDATION GRADE BEAM, 10" CLEARANCE MUST BE PROVIDED BELOW FINISHED CONCRETE SURFACE TO AVOID CONTACT WITH ANCHOR BOLTS. LIGHTING: POWER SUPPLY FOR LIGHT FIXTURES SHALL BE BROUGHT TO RECEPTACLE BOXES AS LOCATED AT A CONTROL POINT, LOCATED BY THE OWNER / DEVELOPER. ELECTRICAL CONTRACTOR TO TRIM AND INSTALL PLUG ENDS ON EACH LIGHT CORD IN PROPER LOCATIONS. VOLTAGE, AMPERAGE AND J-BOX LOCATIONS SHALL BE CONFIRMED BY THE CONTRACTOR TO YEADON FABRIC STRUCTURES, IN WRITING, PRIOR TO COMMENCEMENT OF ELECTRICAL WORK. IT IS RECOMMENDED THAT LIGHTING CONTRACTORS BE USED WITH REMOTE LOCATION SWITCHING OF THE FIXTURES ON THE INDIVIDUAL PANELS. VARIATIONS IN HEIGHT AND HORIZONTAL ALIGNMENTS MAY OCCUR. OTHER FACTORS SUCH AS DOME PRESSURE MAY ALSO AFFECT THE LOOK AND ALIGNMENT OF THE FIXTURES.

6. MECHANICAL EQUIPMENT:

SEE MECHANICAL DRAWINGS (BY OTHERS) ISSUED FOR THIS PROJECT. POWER SUPPLY FOR MECHANICAL EQUIPMENT SHALL BE BROUGHT TO LOCATIONS AS INDICATED ON THE CONSTRUCTION DRAWINGS. (NOTE: EQUIPMENT IS SUPPLIED WITH MAIN DISCONNECT). VOLTAGE AND AMPERAGE REQUIREMENTS SHALL BE CONFIRMED BY THE CONTRACTOR TO YEADON FABRIC STRUCTURES IN WRITING, PRIOR TO COMMENCEMENT OF ELECTRICAL WORK. THE ELECTRICAL CONTRACTOR SHALL COMPLETE ALL ELECTRICAL TERMINATIONS AND CONNECTIONS. THE INFLATION UNIT IS SLIT IN SECTIONS FOR SHIPPING, FIELD ASSEMBLY REQUIRED. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONNECTING THE ELECTRICAL SPLITS ON THE SECTIONS. ELECTRICAL CONTRACTOR SHALL TEST ROTATION PRIOR TO MANUFACTURER FACTORY STARTUP. FOR PRESSURE SENSING TUBING, ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 3/4" CONDUIT FROM CONTROL PANEL TO TUBE UP IN BOX INSTALLED IN GRADE BEAM IN DOME INTERIOR, AND FROM CONTROL PANEL TO ATMOSPHERE, TO TERMINATE IN BOX WITH SCREENED VENT. FOR BOTTOM DISCHARGE UNITS, ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL TEMPERATURE SENSORS IN THE DISCHARGE AND RETURN AIR DUCTS. FOR REMOTE PC/MOBILE ACCESS, ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND INSTALL ETHERNET CABLE FROM REMOTE PC LOCATION TO INFLATION UNIT. OWNER TO PROVIDE IP ADDRESS AND PC CONNECTED AT TIME OF INSTALL FOR REMOTE ACCESS OPTION.

7. FABRIC SPECIFICATIONS:

| | STYLE 8028 | STYLE 9032 |
|---|-------------------------------|-------------------------------|
| SHELTER RITE | POLYESTER | POLYESTER |
| BASE -TYPE | (7.5 oz/yd ²) | (10.0 oz/yd ²) |
| FABRIC -WEIGHT | (28 +/-1 oz/yd ²) | (32 +/-1 oz/yd ²) |
| ASTM D751 | | |
| TONGUE TEAR | (8" x10" SAMPLE @ 12"/MIN.) | (8" x10" SAMPLE @ 12"/MIN.) |
| ASTM D751 | (275/275 lbr) | (300/300 lbr) |
| TRAPEZOID TEAR | (85/85 lbr) | (100/100 lbr) |
| ASTM D4533 | | |
| GRAB TENSILE | (700/700 lbr) | (840/840 lbr) |
| ASTM D751 | | |
| STRIP TENSILE | (515/515 lbr/in) | (650/650 lbr/in) |
| ASTM D751 PROCEDURE B | | |
| ADHESION (MINIMUM) | (10 lbr/in) | (10 lbr/in) |
| ASTM D751 DIELECTRIC WELD | | |
| ASTM D751 PROCEDURE A | (500 psi) | (500 psi) |
| HYDROSTATIC RESISTANCE | | |
| ASTM D751 PROCEDURE A | | |
| DEAD LOAD | (2" SEAL, 4 HRS, 1" STRIP) | (2" SEAL, 4 HRS, 1" STRIP) |
| ML-T-5293SE (MODIFIED) | (266 lbr @ ROOM TEMPERATURE) | (266 lbr @ ROOM TEMPERATURE) |
| FABA 4.5-2.19 | (133 lbr @ 160° F) | (133 lbr @ 160° F) |
| LOW TEMPERATURE | | |
| ASTM D2136 | (LT): PASS @ -40° F | (LT): PASS @ -40° F |
| 1/8" MANDREL 4HRS | (LT): PASS @ -67° F | (LT): PASS @ -67° F |
| FLAME RESISTANCE | | |
| MEETS NFPA 701: CAN/ULC-S109; ASTM 6413-2 SECOND FLAMEOUT | | |
| REGISTERED BY CALIFORNIA FIRE MARSHAL (NO. F-10301); GB8624-2006; | | |
| ASTM E84 & ULC-S102 - FLAME SPREAD INDEX <25, SMOKE DEVELOPMENT RATING <450 | | |

architecture incorporated

1902 campus commons drive
suite 101
reston, virginia 20191
Tel: 703.476.3900
www.archinc.com

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571 9th St. E., Suite 201, Minneapolis, MN, USA
128 Woodloch St., Suite 201, Oshkosh, WI, USA

Construction Documents for:

**TOWN OF LEESBURG, VA
IDA LEE PARK
TENNIS BUBBLE**

70 IDA LEE DRIVE NW
LEESBURG, VA 20176

Project: 21136-01

Issue: 08/02/2021

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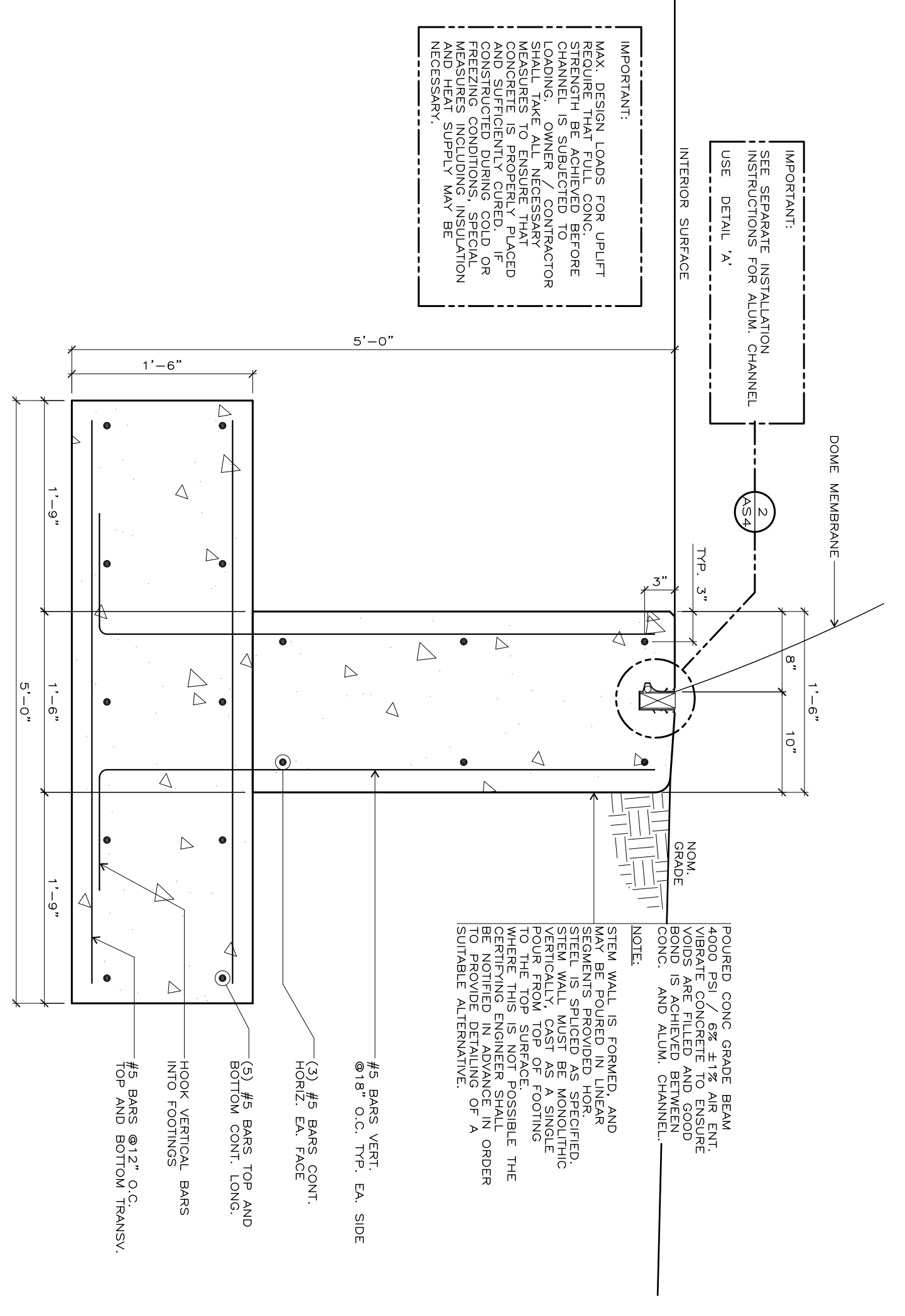
Revisions

DOMES ELEVATIONS GENERAL NOTES

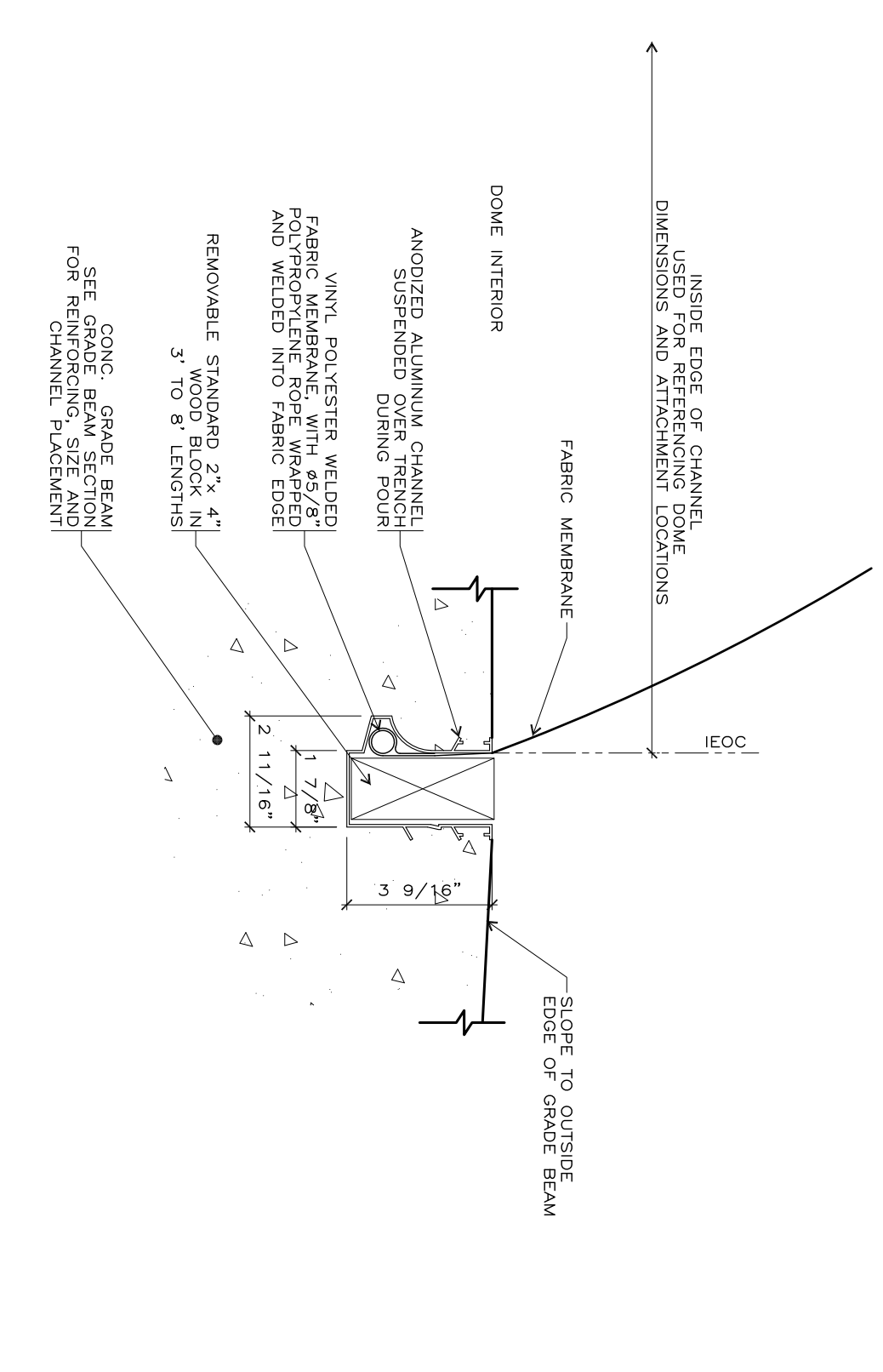
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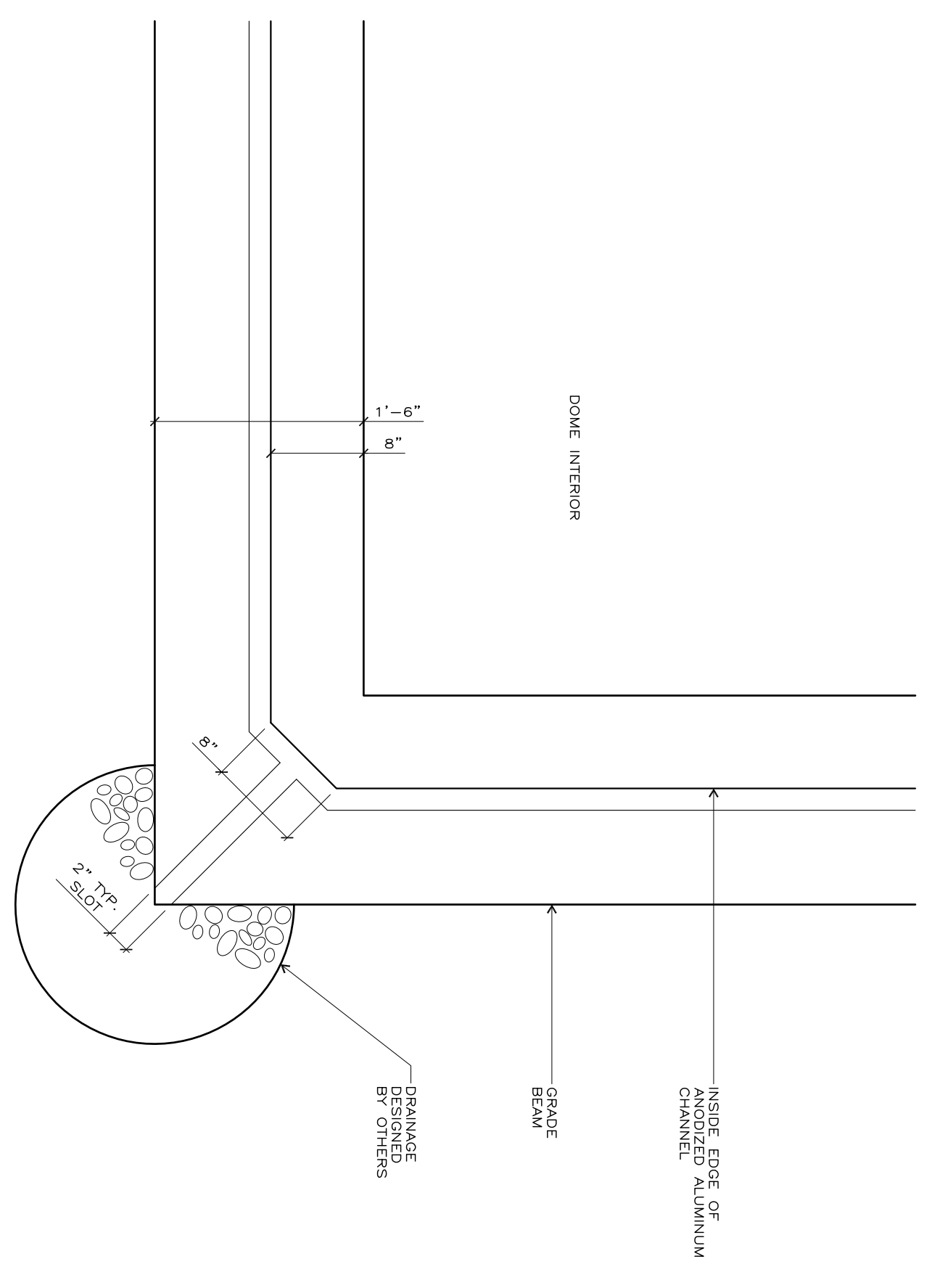
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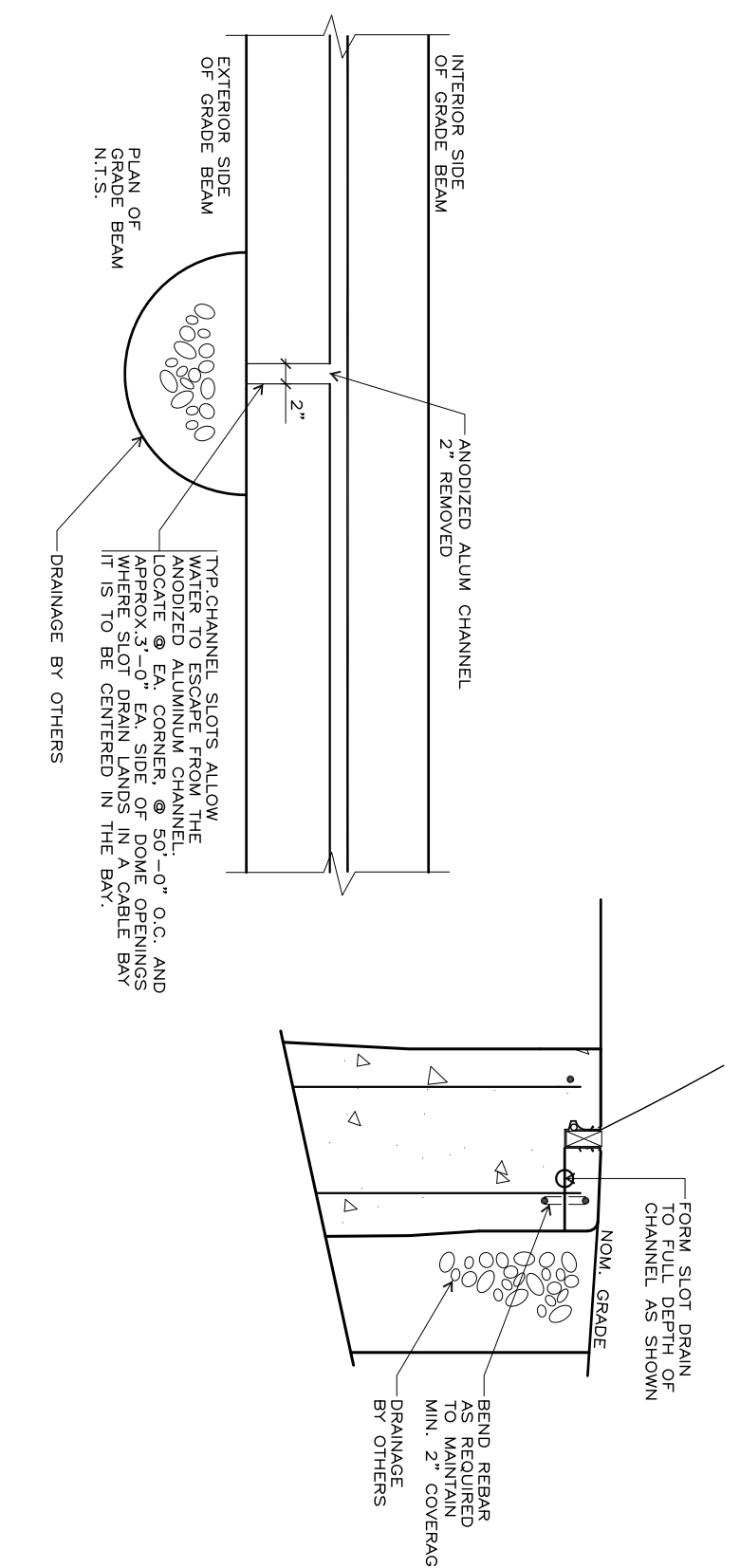
1 GRADE BEAM-SECTION
1" = 1'-0"



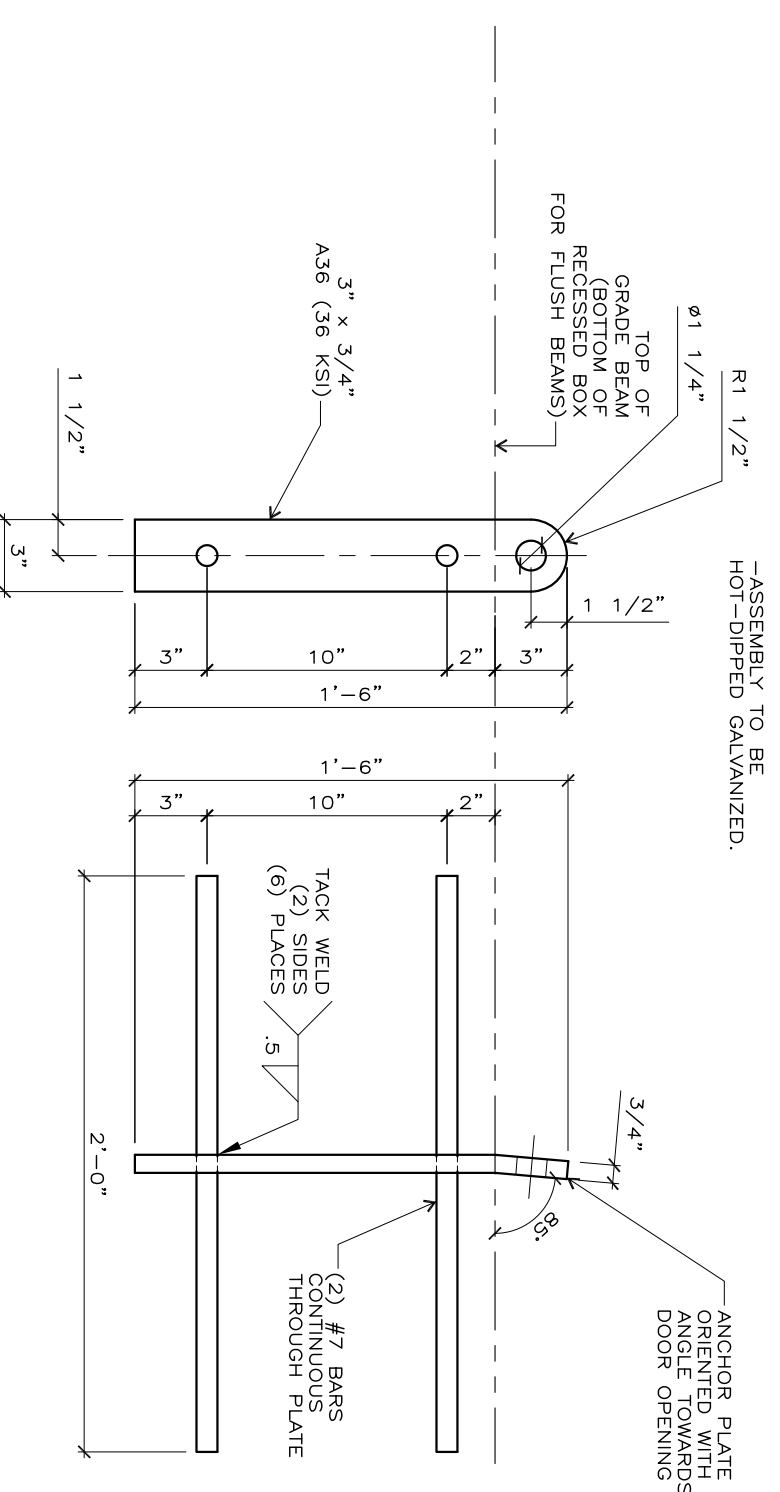
2 CHANNEL DETAIL
3/4" = 1'-0"



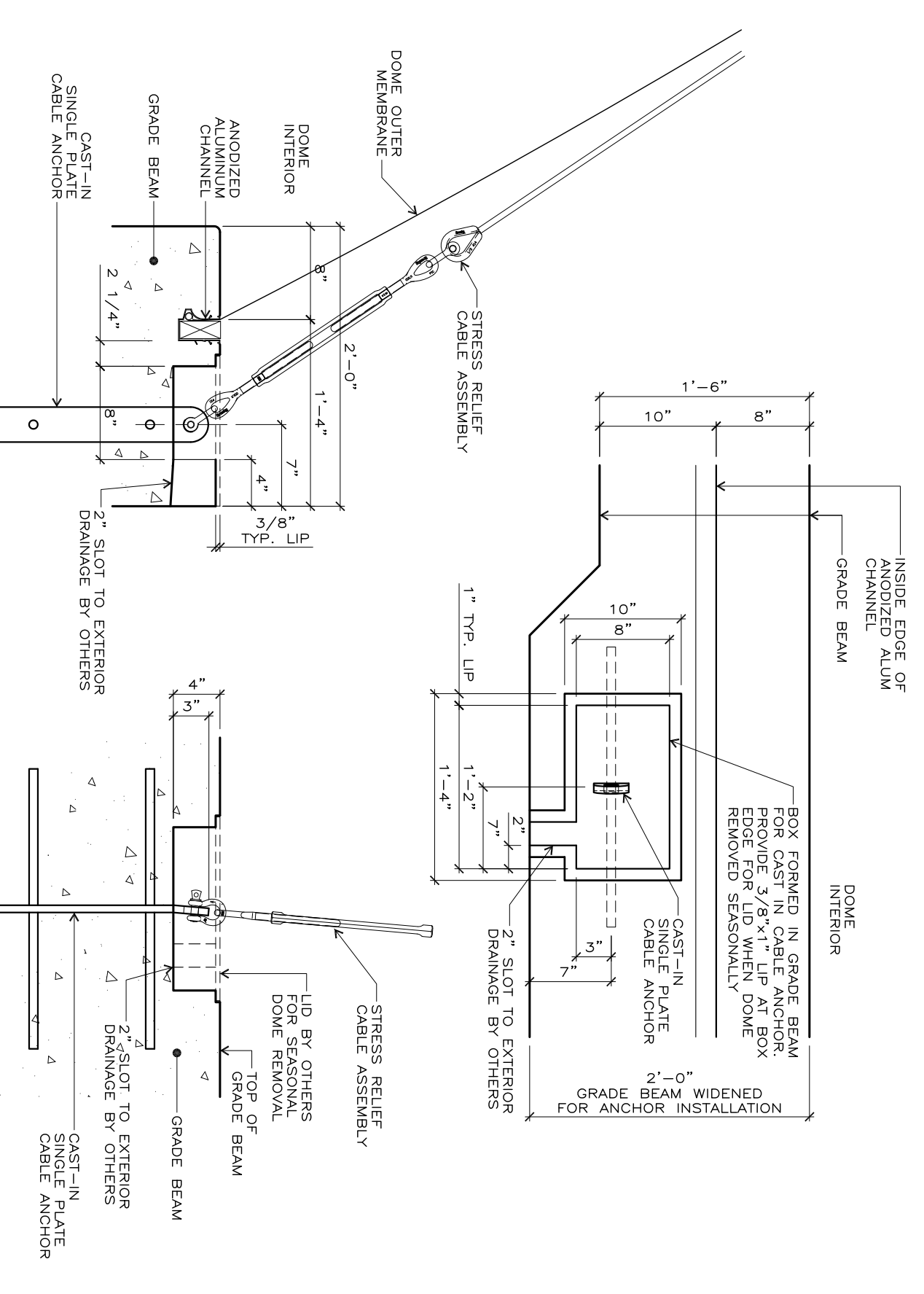
3 CHANNEL CORNER DETAIL
1" = 1'-0"



4 CHANNEL SLOT DRAIN DETAIL
NOT TO SCALE



5 STRESS RELIEF ANCHOR DETAIL
1-1/2" = 1'-0"



6 STRESS RELIEF ANCHOR PLACEMENT DETAIL
1" = 1'-0"

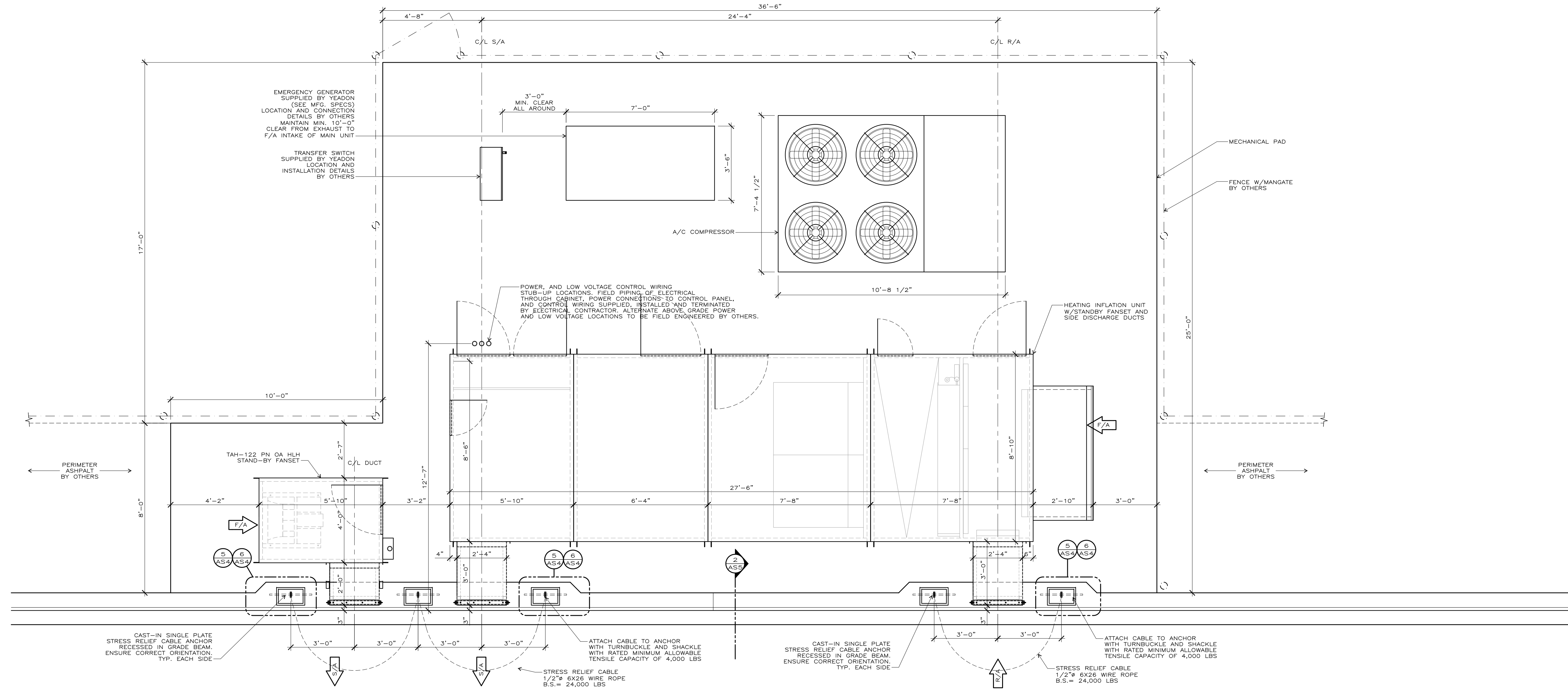
7 NOT USED

8 NOT USED

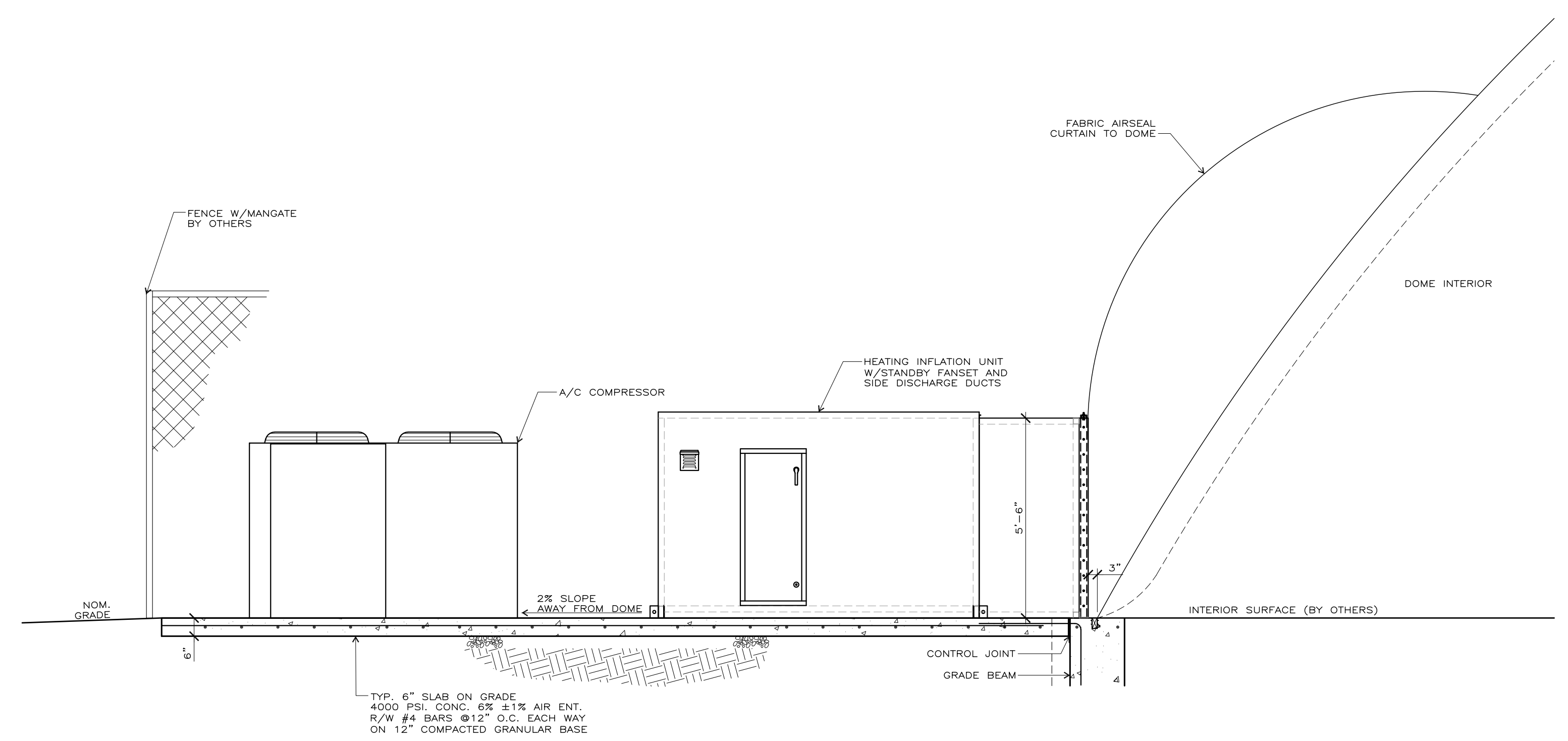
9 NOT USED

| | | | |
|--|--|---|---|
| <p>YEADON architecture incorporated 1902 campus commons drive suite 101 reson, virginia 20191 Tel. 703.476.3800 www.yeadon.com</p> | <p>Construction Documents for: TOWN OF LEESBURG, VA IDA LEE PARK TENNIS BUBBLE 70 IDA LEE DRIVE NW LEESBURG, VA 20176</p> | <p>Project: 21136-01 Issue: 09/02/2021 PERMIT SUBMISSION Revisions:</p> | <p>Scale: AS NOTED Drawn: DBK Checked: DBK AS.4</p> <p>GRADE BEAM AND ANCHOR DETAILS</p> |
|--|--|---|---|

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1 MECHANICAL PAD-PLAN VIEW 3/8" = 1'-0"



2 MECHANICAL PAD-SECTION 3/8" = 1'-0"

NOTES:

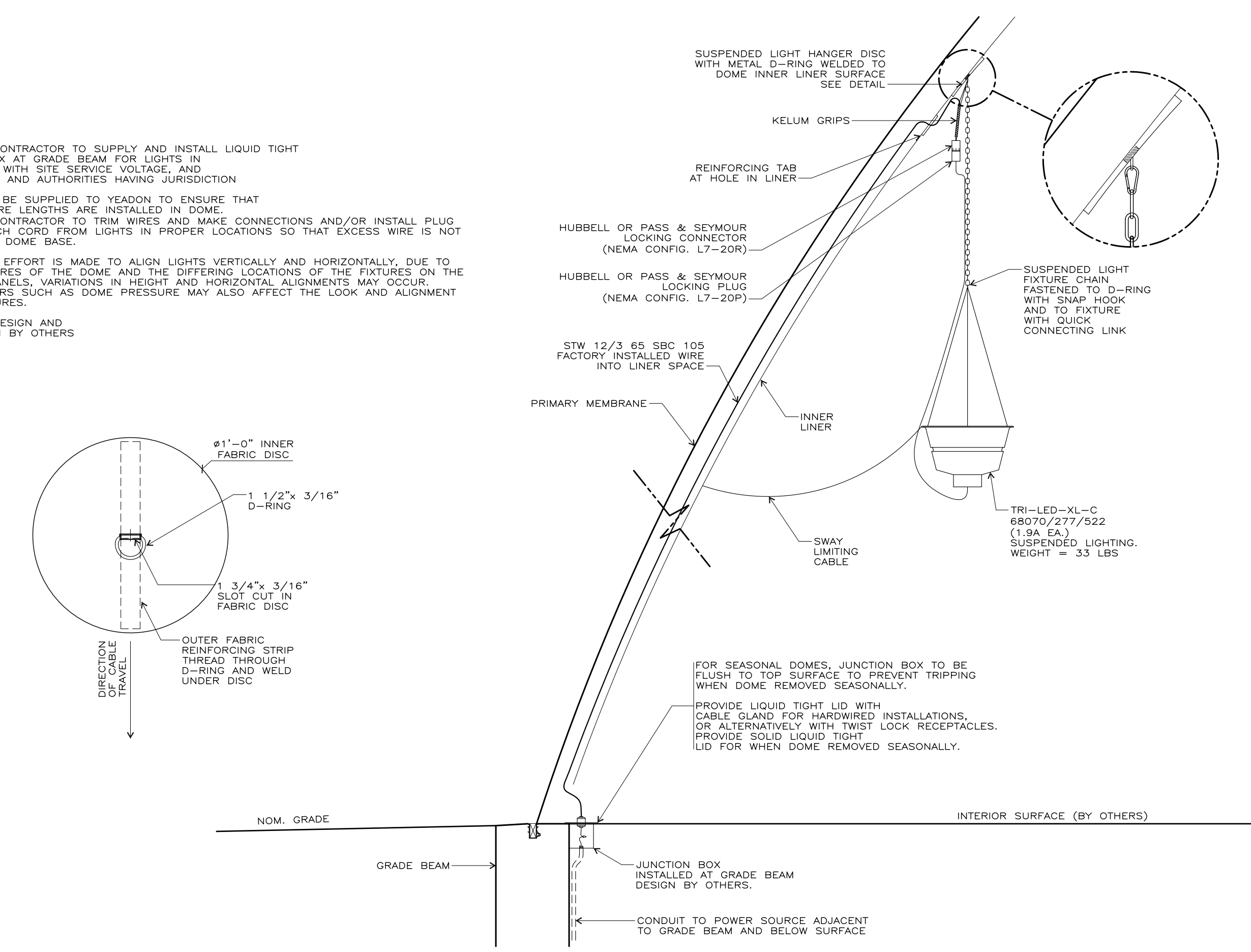
ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL LIQUID TIGHT JUNCTION BOX AT GRADE BEAM FOR LIGHTS IN ACCORDANCE WITH SITE SERVICE VOLTAGE, AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.

LOCATION TO BE SUPPLIED TO YEADON TO ENSURE THAT ADEQUATE WIRE LENGTHS ARE INSTALLED IN DOME.

ELECTRICAL CONTRACTOR TO TRIM WIRES AND MAKE CONNECTIONS AND/OR INSTALL PLUG ENDS ON EACH CORD FROM LIGHTS IN PROPER LOCATIONS SO THAT EXCESS WIRE IS NOT GATHERED AT DOME BASE.

WHILE EVERY EFFORT IS MADE TO ALIGN LIGHTS VERTICALLY AND HORIZONTALLY, DUE TO THE CURVATURES OF THE DOME AND THE DIFFERING LOCATIONS OF THE FIXTURES ON THE INDIVIDUAL PANELS, VARIATIONS IN HEIGHT AND HORIZONTAL ALIGNMENTS MAY OCCUR. OTHER FACTORS SUCH AS DOME PRESSURE MAY ALSO AFFECT THE LOOK AND ALIGNMENT OF THE FIXTURES.

ELECTRICAL DESIGN AND SPECIFICATION BY OTHERS



3 LIGHTING DETAIL 1/2" = 1'-0"

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TOWN OF LEESBURG, VA IDA LEE PARK TENNIS BUBBLE 70 IDA LEE DRIVE NW LEESBURG, VA 20176

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Issue 08/02/2021

PERMIT SUBMISSION

Revisions

MECHANICAL DETAILS

Scale AS NOTED Drawn DBK Checked DBK

AS.5

PERMIT SUBMISSION