

Site Plan Review for City Council - SP16-075

New Farmers Market Enclosure

at Ann Arbor Farmers Market

315 Detroit Street, Section 29, City of Ann Arbor, Washtenaw County, MI

owner | petitioner

ann arbor parks & recreation services
 301 east huron street, ann arbor, mi 48107
 contact: amy kuras, park planner | project manager
 ph: 734-845-0643 email: akuras@a2gov.org
 property is owned by the city.

architect:

kohler architecture inc.
 1118 w.front street, monroe, mi 48161
 contact: keith kohler, architect | project manager
 ph: 734-242-6880 email: kkohler@kohlerarchitect.net

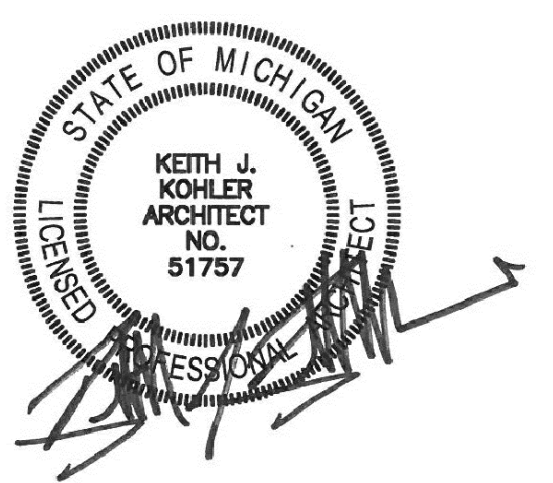
civil engineer:

zeimet wozniak & associates
 55800 grand river ave., suite 100, new hudson, mi 48165
 contact: julian wargo, engineer | project manager
 ph: 248-437.5099 email: jwargo@zeimetwozniak.com



PLEASE NOTE: THE SITE SECTIONS ON THIS SHEET ARE FOR GENERAL MASSING AND DESIGN CONCEPT ONLY. THESE VIEWS ARE NOT TO BE USED FOR CONSTRUCTION OR DETAIL PURPOSES.

PLEASE NOTE: THE EXTERIOR PERSPECTIVE ON THIS SHEET IS FOR GENERAL MASSING AND DESIGN CONCEPT ONLY. THIS VIEW SHALL NOT TO BE USED FOR CONSTRUCTION OR DETAIL PURPOSES - PLEASE REFER TO CONSTRUCTION DOCUMENTS.

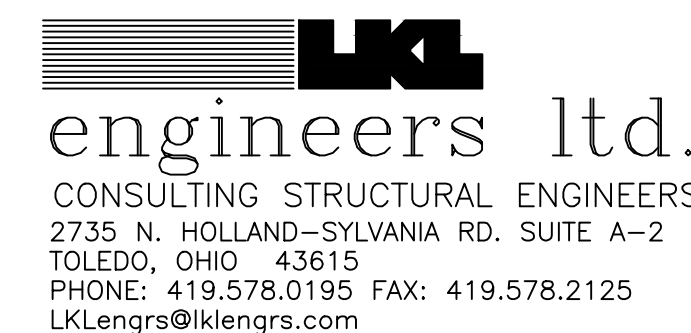
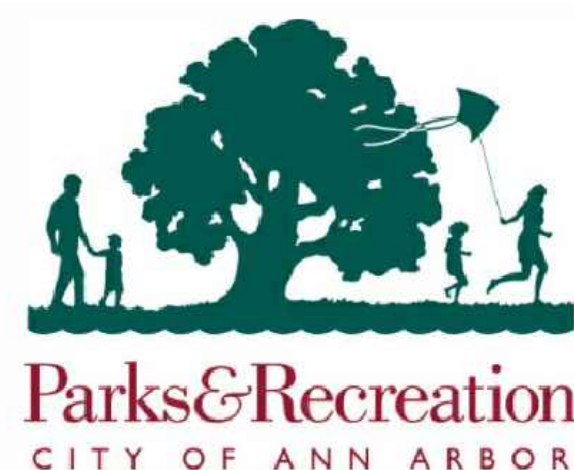


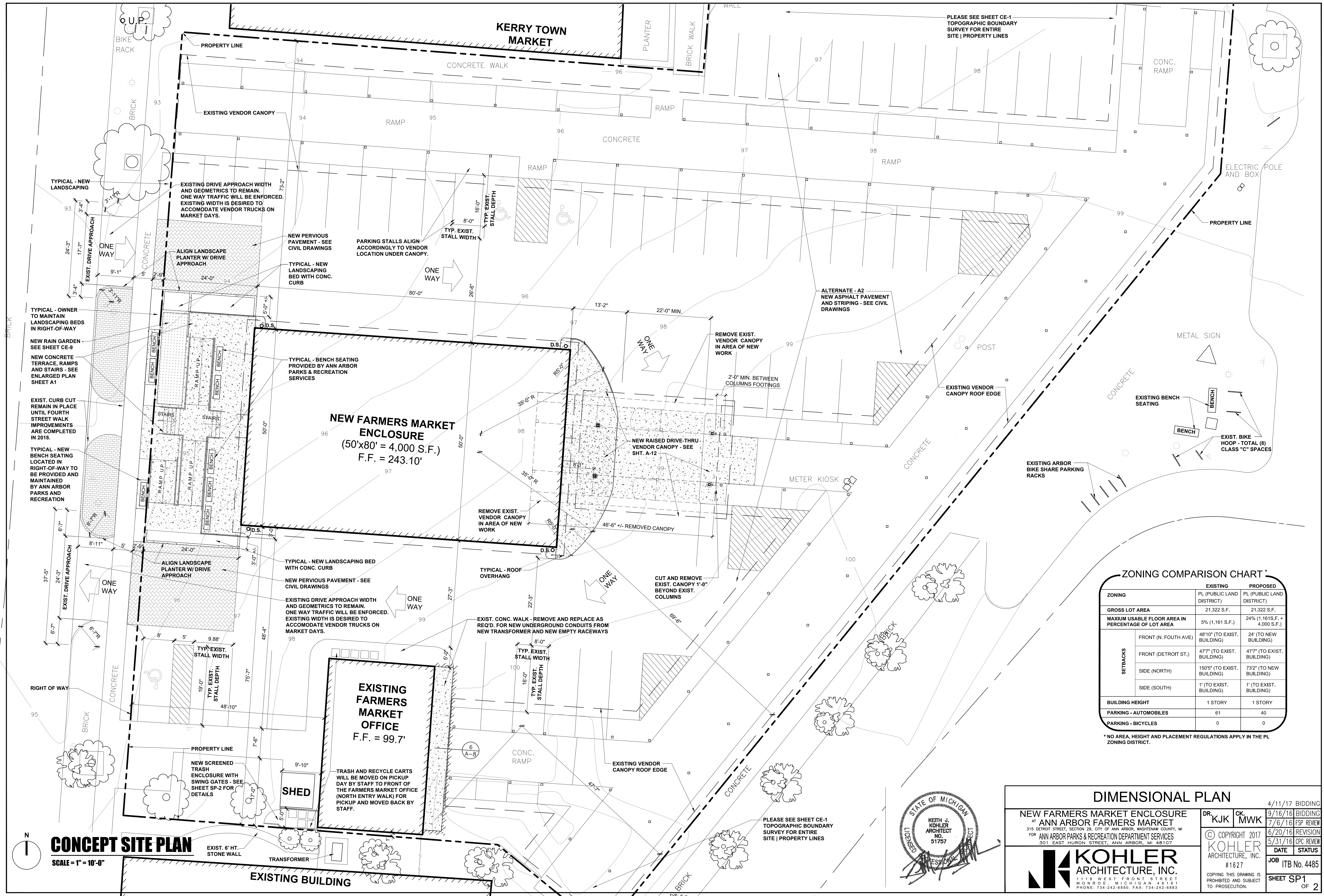
GENERAL NOTES

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH APPLICABLE SECTIONS OF THE FEDERAL, STATE AND LOCAL BUILDING CODES, ZONING ORDINANCES, HEALTH AND FIRE REGULATIONS AS ADOPTED BY THE LOCAL GOVERNING BUILDING AUTHORITY.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY BUILDING PERMITS FROM ALL GOVERNING AGENCIES INCLUDING THE CITY / TOWNSHIP AND SUBMIT FOR THEIR USE ANY CERTIFICATES OF INSURANCE, BONDS, ESCROW ACCOUNTS, LICENSES, PAY ALL FEES OBTAIN ALL APPROVALS, ETC. ALL AS MAY BE REQUIRED TO COMPLETE THIS PROJECT.
- CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS BEFORE PROCEEDING WITH THE WORK.
- DETAIL SYMBOL DETAIL NUMBER SHEET REFERRED TO OR FROM
- THESE DOCUMENTS ARE DEVELOPED TO PROVIDE THE CONTRACTOR WITH A WORKING KNOWLEDGE OF THE SYSTEMS TO BE INSTALLED AND SCOPE OF WORK. WHERE THESE DETAILS ARE IN CONFLICT WITH THE STANDARD DETAILS OR SPECIFICATIONS OF THE MANUFACTURED COMPONENT, OR AFFECT THE GUARANTEE, THEY SHALL BE MODIFIED AS REQUIRED BY THE CONTRACTOR AND APPROVED BY THE ARCHITECT.
- PROVIDE AND MAINTAIN SUITABLE TEMPORARY FENCES, BARRICADES, LIGHTS, WARNINGS, ETC., FOR PROTECTION OF PUBLIC AND OTHERS HAVING ACCESS TO THE SITE. CONTRACTOR SHALL KEEP CLEAN AND ADEQUATELY PROTECT ALL STREETS, DRIVES, WALKS, BLDGS, ETC., FROM DAMAGE DUE TO ANY ITEM INVOLVED WITH THIS WORK. ANY DAMAGED WORK SHALL BE REPLACED / REPAIRED AT CONTRACTORS EXPENSE.
- CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BY CONTACTING "MISS DIG", RESPONSIBLE UTILITY COMPANY, REVIEW ALL SURVEYS, AS BUILT DRAWINGS, AND SEEK ANY OTHER INFORMATION FROM THE OWNER, PRIOR TO BEGINNING EXCAVATIONS.

COVER SHEET

| | | | |
|---|--|-----------------|--------------|
| NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET | | 4/11/17 BIDDING | |
| 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI | | DR. KJK | CK. MWK |
| FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES | | 9/16/16 | BIDDING |
| 301 EAST HURON STREET, ANN ARBOR, MI 48107 | | 7/6/16 | FSP REVIEW |
| | | 6/20/16 | REVISION |
| KOHLER ARCHITECTURE, INC. 1118 WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883 | | 5/31/16 | CPC REVIEW |
| DR. KJK CK. MWK COPYRIGHT 2017 KOHLER ARCHITECTURE, INC. #1627 | | DATE | STATUS |
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| | | SHEET 1 of 1 | |





PLEASE SEE SHEET CE-1
TOPOGRAPHIC BOUNDARY
SURVEY FOR ENTIRE
SITE | PROPERTY LINES

KERRY TOWN MARKET

NEW FARMERS MARKET ENCLOSURE
(50'x80' = 4,000 S.F.)
F.F. = 243.10'

EXISTING FARMERS MARKET OFFICE
F.F. = 99.7'

SHED

ZONING COMPARISON CHART

| ZONING | EXISTING PL (PUBLIC LAND DISTRICT) | PROPOSED PL (PUBLIC LAND DISTRICT) |
|---|---------------------------------------|---|
| GROSS LOT AREA | 21,322 S.F. | 21,322 S.F. |
| MAXIMUM USABLE FLOOR AREA IN PERCENTAGE OF LOT AREA | 5% (1,161 S.F.) | 24% (1,161 S.F. + 4,000 S.F.) |
| SETBACKS | FRONT (N. FOURTH AVE) | 48'10" (TO EXIST. BUILDING) / 24' (TO NEW BUILDING) |
| | FRONT (DETROIT ST.) | 47'7" (TO EXIST. BUILDING) / 47'7" (TO EXIST. BUILDING) |
| | SIDE (NORTH) | 150'5" (TO EXIST. BUILDING) / 73'2" (TO NEW BUILDING) |
| | SIDE (SOUTH) | 1' (TO EXIST. BUILDING) / 1' (TO EXIST. BUILDING) |
| BUILDING HEIGHT | 1 STORY | 1 STORY |
| PARKING - AUTOMOBILES | 61 | 40 |
| PARKING - BICYCLES | 0 | 0 |

* NO AREA, HEIGHT AND PLACEMENT REGULATIONS APPLY IN THE PL ZONING DISTRICT.

DIMENSIONAL PLAN

NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
301 EAST HURON STREET, ANN ARBOR, MI 48107

DR. **KJK** CK. **MWK**

4/11/17 BIDDING
9/16/16 BIDDING
7/6/16 FSP REVIEW
6/20/16 REVISION
5/31/16 CPC REVIEW

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#1627

DATE STATUS
JOB ITB No. 4485

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
MONROE, MICHIGAN 48161
PHONE: 734-242-6880, FAX: 734-242-6883

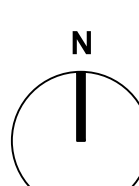
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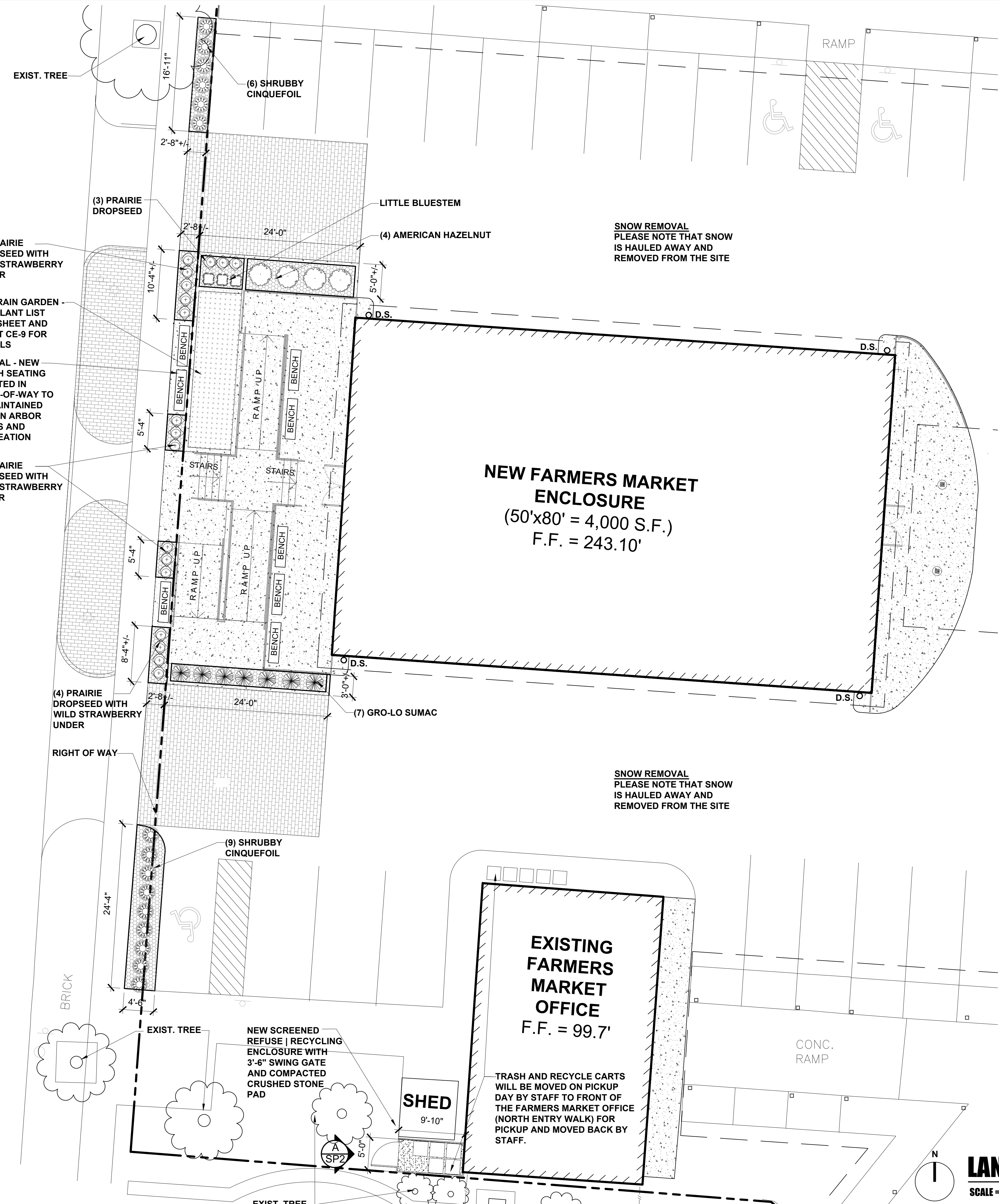
SHEET SP1 OF 2



CONCEPT SITE PLAN

SCALE = 1" = 10'-0"





2 SP2 LANDSCAPING LEGEND

PLANTING FOR LANDSCAPING BEDS

| QUANTITY | COMMON NAME | LATIN NAME | SPACING |
|----------|--------------------|-------------------------|-----------------|
| 15 | SHRUBBY CINQUEFOIL | POTENTILLA FRUTICOSA | 30" ON CENTER |
| 15 | PRAIRIE DROPSOED | SPOROBOLUS HETEROLEPSIS | 18" ON CENTER |
| 7 | GRO-LO SUMAC | RHUS AROMATIC 'GRO-LOW' | 4' ON CENTER |
| 4 | AMERICAN HAZELNUT | CORYLUS AMERICANA | 6' ON CENTER |
| 40 | WILD STRAWBERRY | FRAGARIA VIRGINIANA | 18" ON CENTER |
| 114 | LITTLE BLUESTEM | SCHIZACHYRIUM SCOPARIUM | SEEDS AND PLUGS |

AREA DESIGNATED FOR WEED BARRIER AND MULCH - INSTALL POLY EDGING ON ALL SIDES BORDERING GRASS

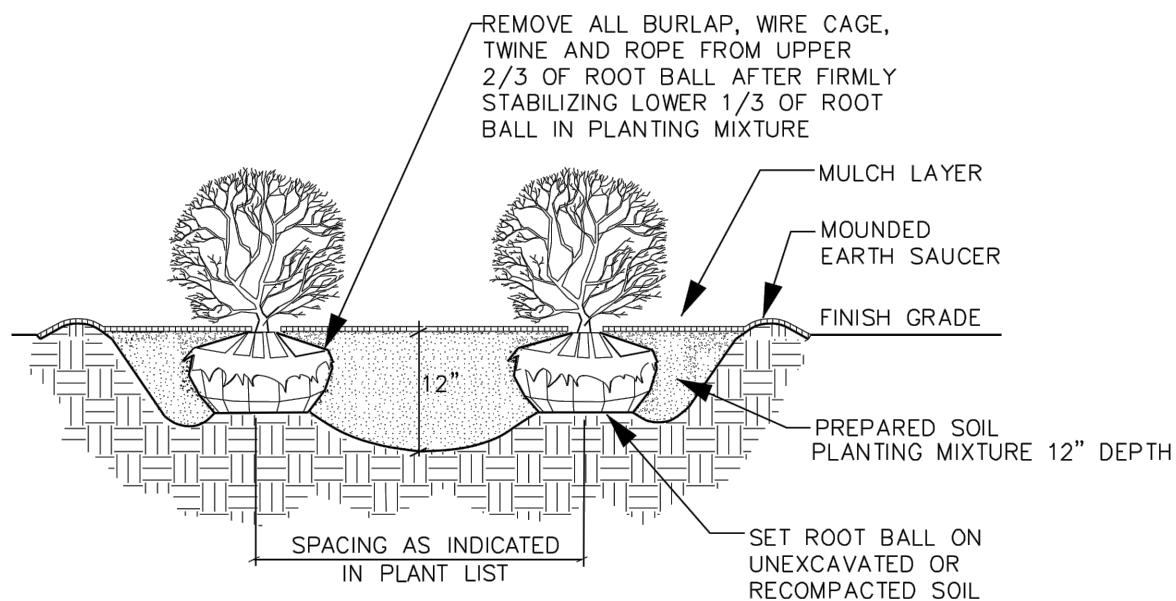
NOTES:

- ALL DISTURBED AREAS SHALL BE SEEDED OR PLANTED AS SHOWN.
- ON-SITE TOPSOIL SHALL BE STRIPPED, STOCKPILED, SCREENED AND RE-USED.
- PLANTING BEDS SHALL INCLUDE 15' OF PLANT MIX, COMPOSED OF 1/3 SCREENED TOPSOIL, 1/3 CERTIFIED COMPOST AND 1/3 SAND.
- ALL PLANTINGS OF TREES, PERENNIALS AND BOULDERS SHALL BE FIELD LOCATED AND VERIFIED WITH OWNER AND ARCHITECT PRIOR TO INSTALLING.

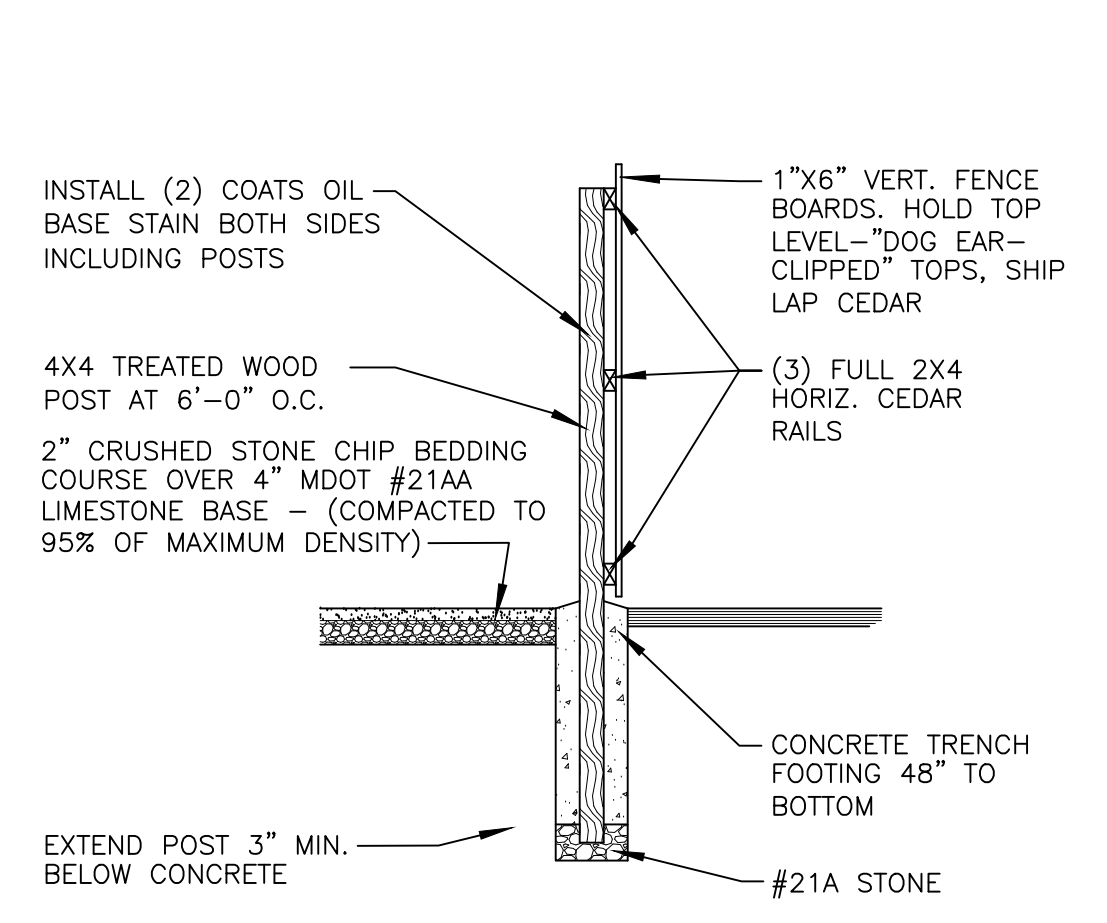
PLANTING FOR RAIN GARDEN

| QUANTITY | COMMON NAME | LATIN NAME |
|--|-----------------|-------------------------|
| 114 | LITTLE BLUESTEM | SCHIZACHYRIUM SCOPARIUM |
| (THE REST OF THE PLANTS INTERSPERSED IN THE RAIN GARDEN) | | |
| 38 | WILD STRAWBERRY | FRAGARIA VIRGINIANA |
| 38 | WILD ONION | ALLIUM CERUUM |
| 38 | SKY-BLUE ASTER | ASTER OOLENTANGIENSIS |

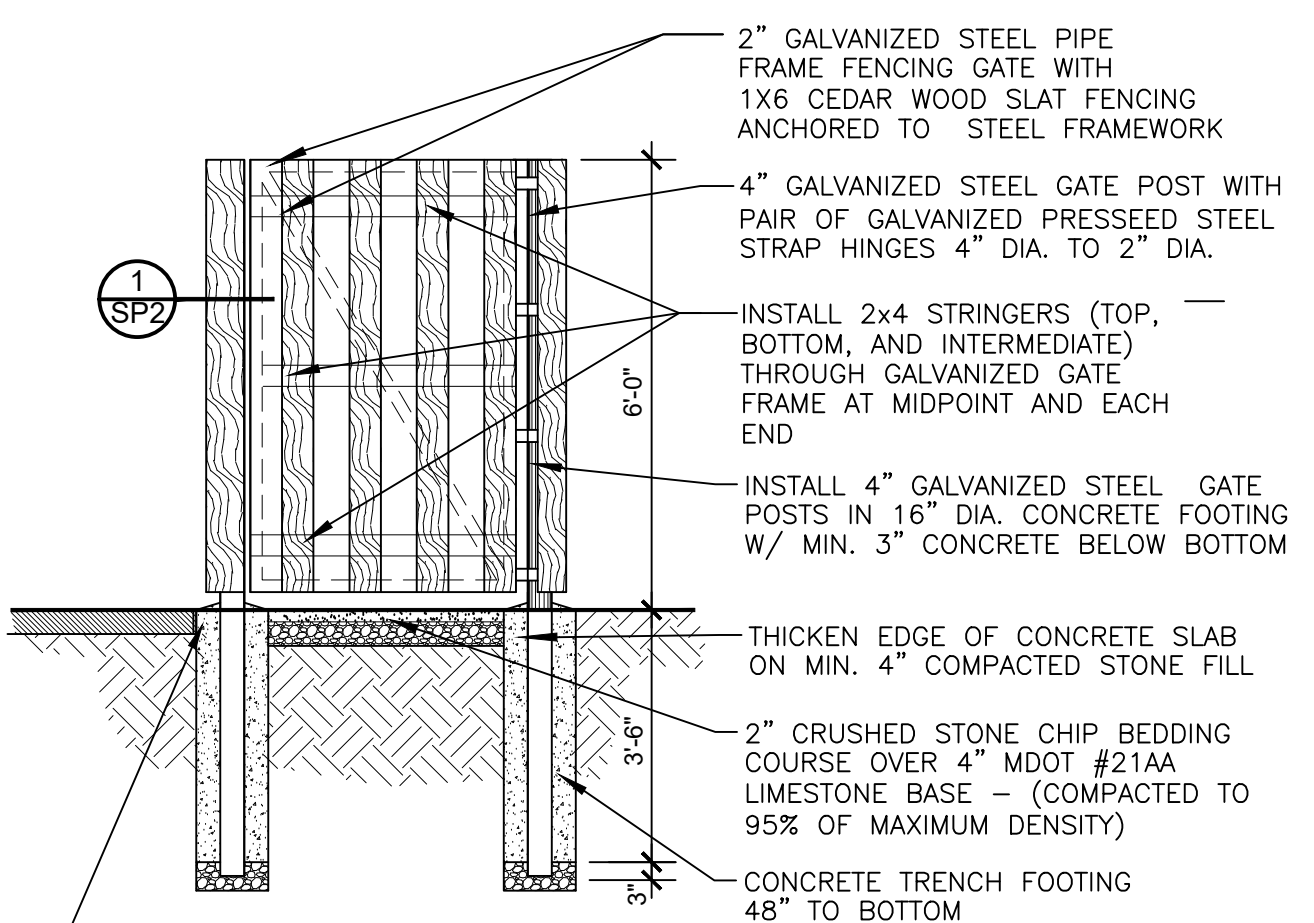
- ### LANDSCAPING NOTES
- ALL PLANTING SIZES SHOWN SHALL BE AT TIME OF PLANTING
 - ALL PLANT MATERIAL SHALL BE FREE OF DISEASE AND INSECTS AND SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
 - ALL LANDSCAPING SHALL BE MAINTAINED A HEALTHY CONDITION, ANY DEAD OR DISEASED PLANTINGS SHALL BE REPLACED WITHIN 1 YEAR.
 - ALL LANDSCAPE BEDS SHALL USE MULCH BEDS WITH CYPRUS MULCH - COLOR PER OWNER. INSTALL WEED BARRIER IN ALL BEDS EXCEPT RAIN GARDEN.
 - LANDSCAPE PLAN SHALL BE MINIMUM REQUIRED PLANTINGS. CONTRACTOR / OWNER MAY INSTALL MORE PLANTINGS AS DESIRED.
 - ALL DISEASED, DAMAGED OR DEAD MATERIALS SHALL BE REPLACED IN ACCORDANCE WITH CITY REQUIREMENTS.
 - ALL PLANTINGS SHALL BE COMPLETED WITHIN A THREE (3) MONTH TIME PERIOD AND SHALL NOT BE PLANTED LATER THAN NOVEMBER 30TH. NOR EARLIER THAN THE FIRST DAY OF APRIL.



2 SP2 MASS SHRUB PLANTING B&B OR CONTAINER



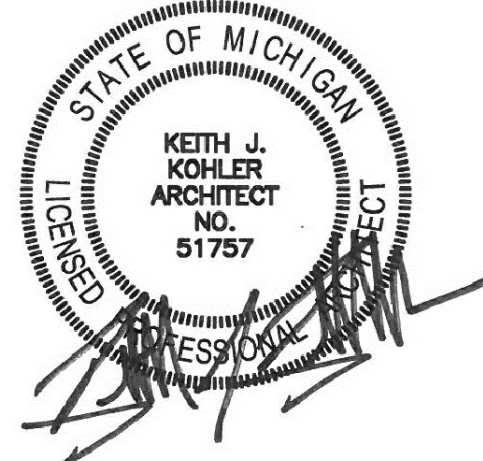
1 SP2 FENCE DETAIL SCALE: 3/8" = 1'-0"



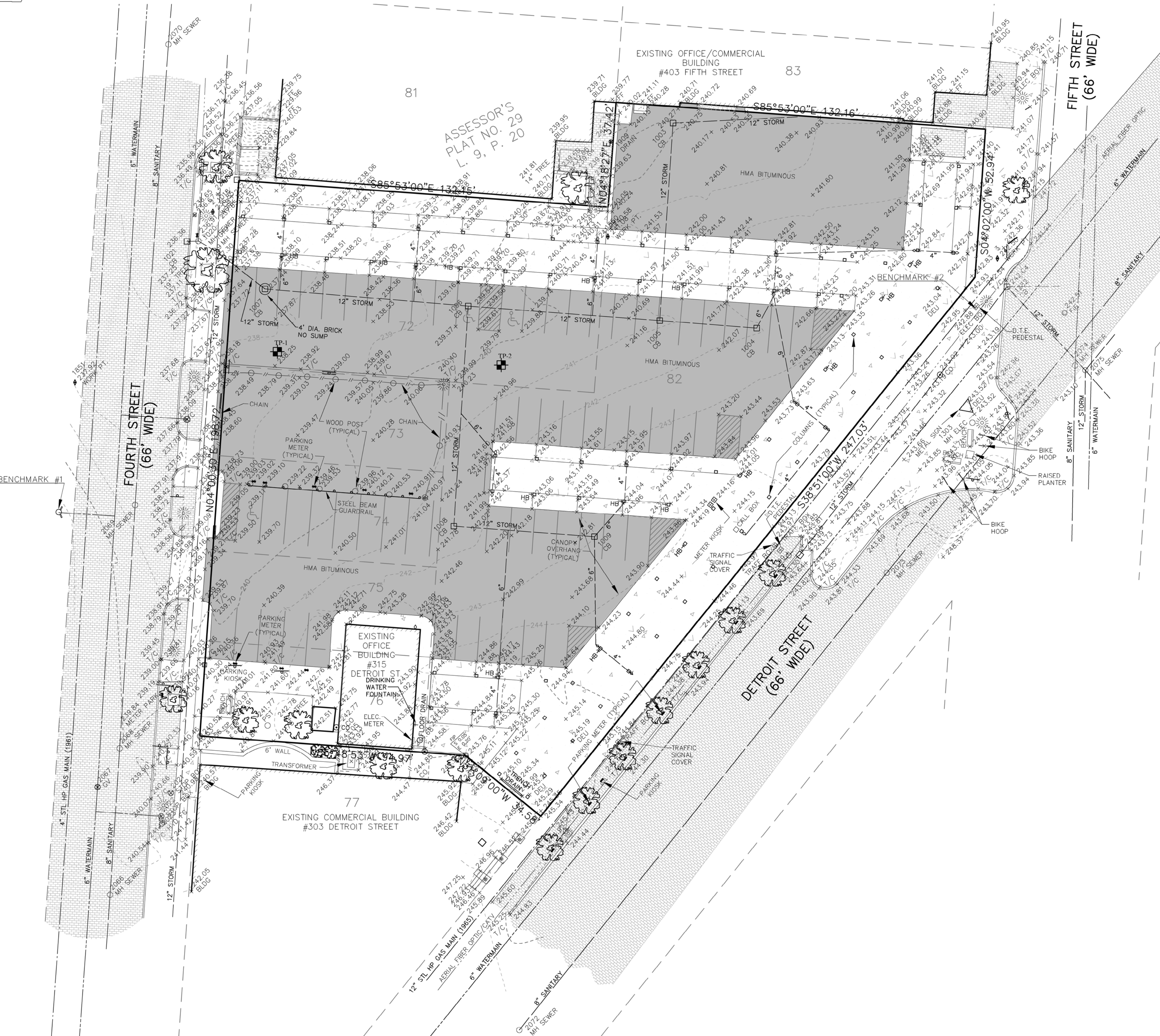
1 SP2 REFUSE | RECYCLING CONTAINER SCREENING SCALE: 3/8" = 1'-0"

LANDSCAPE PLAN

SCALE = 1/8" = 1'-0"



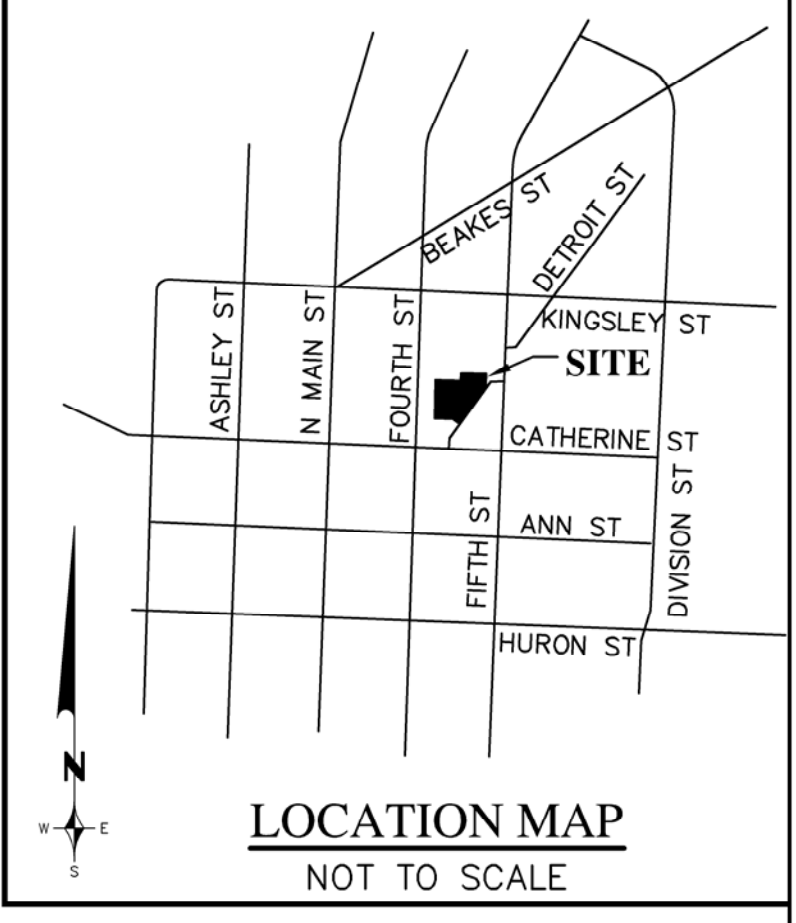
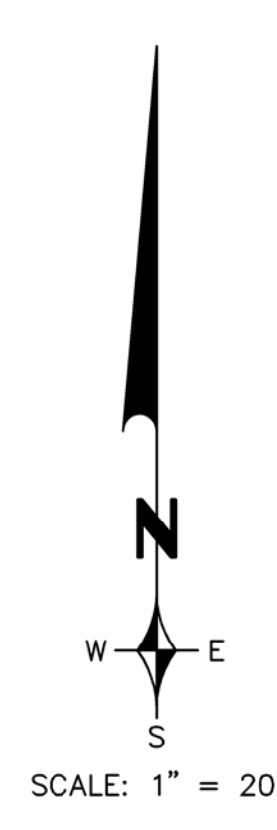
| | | | | |
|---|--|---|---------|---|
| NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET <small>315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI</small> FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES <small>301 EAST HURON STREET, ANN ARBOR, MI 48107</small> | | DR. KJK | CK. MWK | 4/11/17 BIDDING |
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| KOHLER ARCHITECTURE, INC. <small>1118 WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883</small> | | SHEET SP2 OF 2 | | |



LEGEND

- BOUNDARY LINE
- PARCEL LINE
- - - - FENCE LINE
- OVERHEAD WIRE
- GAS MAIN
- FIBER OPTIC
- SANITARY SEWER
- WATERMAIN
- STORM SEWER
- FIB, FCI, SCI
- FIP
- FCP
- SCI
- SET CAPPED IRON
- MANHOLE
- CATCH BASIN

- ⊗ GATE VALVE
- ⊗ HYDRANT
- ⊗ WATER SHUT-OFF
- ⊗ UTILITY POLE
- ⊗ GUY ANCHOR
- ⊗ LIGHT POLE
- ⊗ SIGN AND POST
- ⊗ GROUND SIGN
- ⊗ DOWNSPOUT
- ⊗ DECIDUOUS TREE
- ▨ CONCRETE PAVEMENT
- ▨ ASPHALT PAVEMENT
- ⊕ TEST PIT



LEGAL DESCRIPTION:
LOTS 72, 73, 74, 75, 76 AND 82, ASSESSOR'S PLAT NO. 29, A REPLAT OF BLOCKS 3 AND 4 NORTH, RANGES 4, 5 AND 6 EAST ON THE PLAT OF THE VILLAGE OF ANN ARBOR, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 9 OF PLATS, PAGE 20, WASHTENAW COUNTY RECORDS.

BENCHMARKS:
1. STEAMER VALVE ON HYDRANT WEST SIDE OF FOURTH STREET, IN FRONT OF HOUSE #347. ELEV. 241.31 NAVD 88.
2. P.K. NAIL IN CONCRETE BASE FOR A TRAFFIC CONTROL BOX. ELEV. 243.36 NAVD 88.

SURVEY NOTES:
DUE TO ADVERSE WEATHER CONDITIONS, AT TIME OF FIELD SURVEY ANY UTILITIES THAT ARE NOT OF PUBLIC RECORD, MAY NOT HAVE BEEN LOCATED.

SOIL CONDITIONS:
ACCORDING TO THE "USDA-SCS SURVEY FOR WASHTENAW COUNTY, MICHIGAN", AS ISSUED JUNE, 1977; THE SITE IS CLASSIFIED AS:
FOB - FOX SANDY LOAM, 2 TO 6 PERCENT SLOPES.

NATURAL FEATURES DESCRIPTION:
THERE ARE NO WOODLANDS, WETLANDS, WATERCOURSES, STEEP SLOPES, FLOODPLAINS AND/OR INDIGENOUS SPECIES HABITAT ON THIS PROPERTY. THERE ARE NO EXISTING LANDMARK TREES PRESENT.

STRUCTURE TABLE:

| POINT | DESCRIPTION | RIM | PIPESIZE | DIRECTION | INVERT |
|-------|---------------|--------|----------|-----------|--------|
| 1003 | CATCH BASIN | 239.91 | 12" | S | 236.31 |
| 1004 | CATCH BASIN | 241.88 | 12" | W | 236.88 |
| 1005 | CATCH BASIN | 240.82 | 12" | N | 236.23 |
| | | | 12" | W | 235.83 |
| | | | 12" | E | 235.83 |
| 1006 | CATCH BASIN | 239.10 | 12" | S | 234.80 |
| | | | 12" | W | 234.10 |
| | | | 12" | E | 234.00 |
| | | | 12" | E | 232.40 |
| 1007 | CATCH BASIN | 237.10 | 12" | NW | 232.60 |
| 1008 | CATCH BASIN | 241.56 | 12" | N | 236.36 |
| | | | 12" | E | 236.36 |
| 1009 | CATCH BASIN | 242.97 | 12" | W | 238.07 |
| 1019 | STORM MH | 237.18 | 12" | W | 231.88 |
| | | | 12" | SE | 231.98 |
| | | | 12" | NW | 231.78 |
| 1020 | STORM MH | 237.04 | 12" | SE | 231.74 |
| | | | 12" | N | 231.84 |
| | | | 12" | W | 232.44 |
| | | | 12" | E | 232.66 |
| | | | 12" | SW | 231.96 |
| 1282 | CATCH BASIN | 241.85 | 12" | E | 239.45 |
| | | | 12" | SW | 239.55 |
| 2066 | SANITARY MH | 241.54 | 8" | N | |
| | | | 8" | S | |
| 2067 | WM GATE VALVE | 240.52 | 6" | N | |
| | | | 6" | S | |
| 2068 | SANITARY MH | 240.11 | 8" | N | 230.81 |
| | | | 8" | S | 230.81 |
| 2069 | SANITARY MH | 238.47 | 8" | N | 229.57 |
| | | | 8" | S | 229.57 |
| 2070 | SANITARY MH | 236.07 | 8" | N | 227.17 |
| | | | 8" | E | 227.17 |
| 2072 | SANITARY MH | 245.55 | 8" | NE | |
| 2073 | SANITARY MH | 243.61 | 8" | SW | 236.21 |
| | | | 8" | NE | 236.21 |
| | | | 8" | N | 233.86 |
| 2074 | SANITARY MH | 242.96 | 8" | S | 233.86 |
| | | | 8" | S | 238.64 |
| 2075 | STORM MH | 242.94 | 12" | SE | 238.44 |
| | | | 12" | NW | 238.64 |
| | | | 12" | SW | 238.60 |
| | | | 12" | S | 238.84 |

NOTE:
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

TOPOGRAPHIC SURVEY

ZEMET WOZNAK & ASSOCIATES
Civil Engineers & Land Surveyors
5880 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zemetwozniak.com
ZWA JOB NO. 16104

NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
301 EAST HURON STREET, ANN ARBOR, MI 48107

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PHONE: 734-242-8880, FAX: 734-242-8883

DR. PTC CK. JWJ

4/11/17 BIDDING
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6/20/16 REVISION
5/31/16 CPC REVIEW

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#1627

DATE STATUS
JOB: ITB No. 4454
SHEET CE-1

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Z:\Projects\16104\topo\16104_Topo.dwg, CE-1 TOPOGRAPHIC SURVEY, 3/23/2017 10:17:03 AM, ddimbyer

COMMUNITY ANALYSIS:

PROPOSED INFRASTRUCTURE IMPROVEMENTS FOR THE ANN ARBOR FARMERS MARKET...

- A. IMPACT PROPOSED DEVELOPMENT ON PUBLIC SCHOOLS - NO CHANGE
B. RELATIONSHIP OF INTENDED USE ON NEIGHBORING USES - NO CHANGE
C. IMPACT OF ADJACENT USES ON PROPOSED DEVELOPMENT - NO CHANGE
D. IMPACT OF PROPOSED DEVELOPMENT ON AIR AND WATER QUALITY AND ON EXISTING NATURAL FEATURES ON THIS SITE AND NEIGHBORING SITES - NO CHANGE
E. IMPACT OF PROPOSED DEVELOPMENT ON HISTORIC SITES AND STRUCTURES WITHIN A HISTORIC DISTRICT OR LISTED IN THE NATIONAL REGISTER OF HISTORIC PLACES - NO CHANGE

DEVELOPMENT PROGRAM / STATEMENT OF INTEREST:

THE CITY OF ANN ARBOR PARKS & RECREATION SERVICES IS COMMITTED TO IMPROVING THIS PARK SPACE WITHIN THE DOWNTOWN AREA OF THE CITY OF ANN ARBOR.

THE PHYSICAL LOCATION FOR THE PROPOSED STRUCTURE CURRENTLY FUNCTIONS AS AN UNSHELTERED, PAVED LOT THAT ACCOMMODATES UP TO 18 VENDORS DURING THE BUSIEST MONTHS OF THE MARKET SEASON.

THE BUILDING WILL ALSO PROVIDE SUFFICIENT SHELTER DURING THE COLDEST MONTHS OF THE YEAR. ON AVERAGE, 30 VENDORS ATTEND THE MARKET DURING THE MONTHS OF JANUARY THROUGH MARCH.

THE PROPOSED VENDOR STALL LAYOUTS MORE THAN DOUBLE THE NUMBER OF STALL SPACES CURRENTLY AVAILABLE IN THE PAVED LOT AREA.

THE PROJECT HAS AN ESTIMATED COST OF \$850,000.00.

TRAFFIC IMPACT STATEMENT:

THE PROPOSED PROJECT DOES NOT MEET THE THRESHOLD REQUIRING TRAFFIC ANALYSIS. THE PROJECT WILL GENERATE 1 TRIP PER ADDITIONAL VENDOR.

SOLID WASTE DISPOSAL:

UPON VACATING THE PREMISES EACH MARKET DAY, STALLS AND PARKING SPACES ARE CLEANED AND SWEEP BY THE VENDORS, AND ALL TRASH IS REMOVED BY THE VENDORS AND PROPERLY DISPOSED OF OR PLACED IN CONTAINERS DESIGNATED BY THE MARKET MANAGER.

NATURAL FEATURES IMPACT:

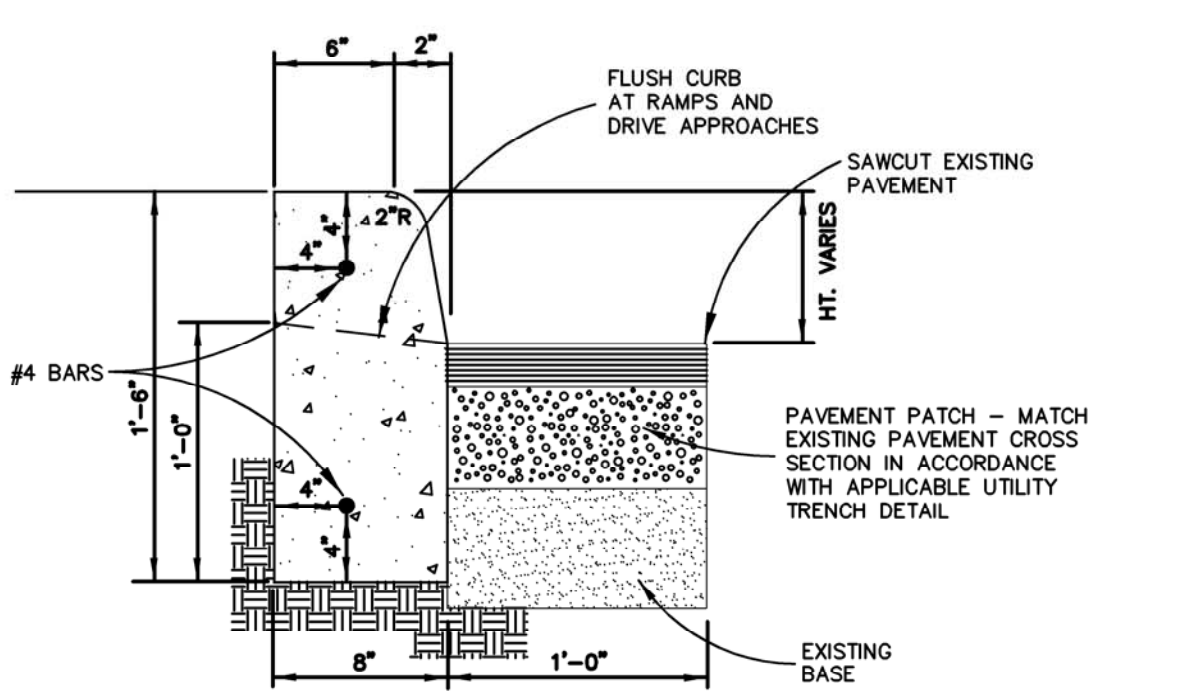
THERE ARE NO NATURAL FEATURES PRESENT ON THIS SITE TO BE IMPACTED BY THE PROPOSED PROJECT.

RACEWAY SPECIFICATIONS:

RACEWAYS: UNLESS NOTED OTHERWISE, ALL NEW LINE VOLTAGE WIRING SHALL BE INSTALLED IN SPECIFIED RACEWAYS. RACEWAYS INSTALLED OUTDOORS SHALL BE RIGID, METAL CONDUIT, SCHEDULE 40, HOT-DIPPED GALVANIZED, 1 INCH TRADE SIZE MINIMUM.

SIDEWALK REPAIR AND MAINTENANCE NOTE:

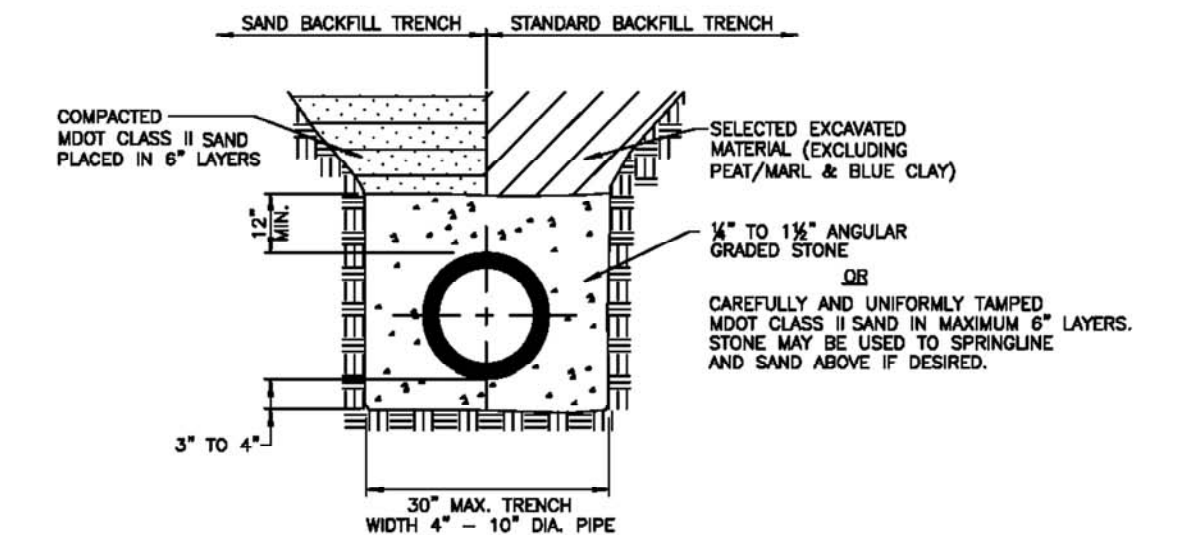
PER CHAPTER 49, SECTION 4:58 OF THE CITY CODE, ALL SIDEWALKS ARE TO BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING SAME.



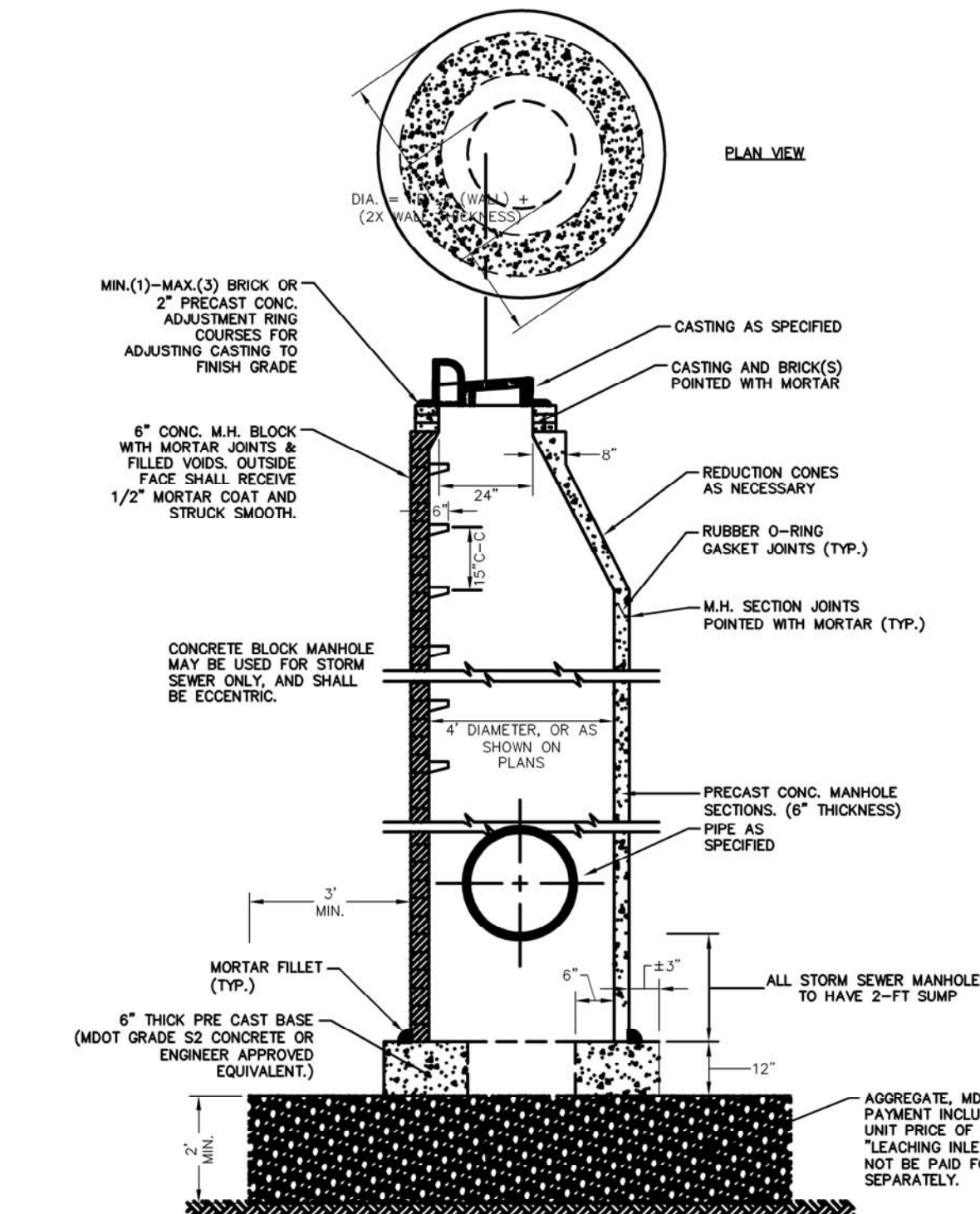
TYPE 'B' CURB CONCRETE CURB SECTION DETAIL NOT TO SCALE

GENERAL GRADING NOTES:

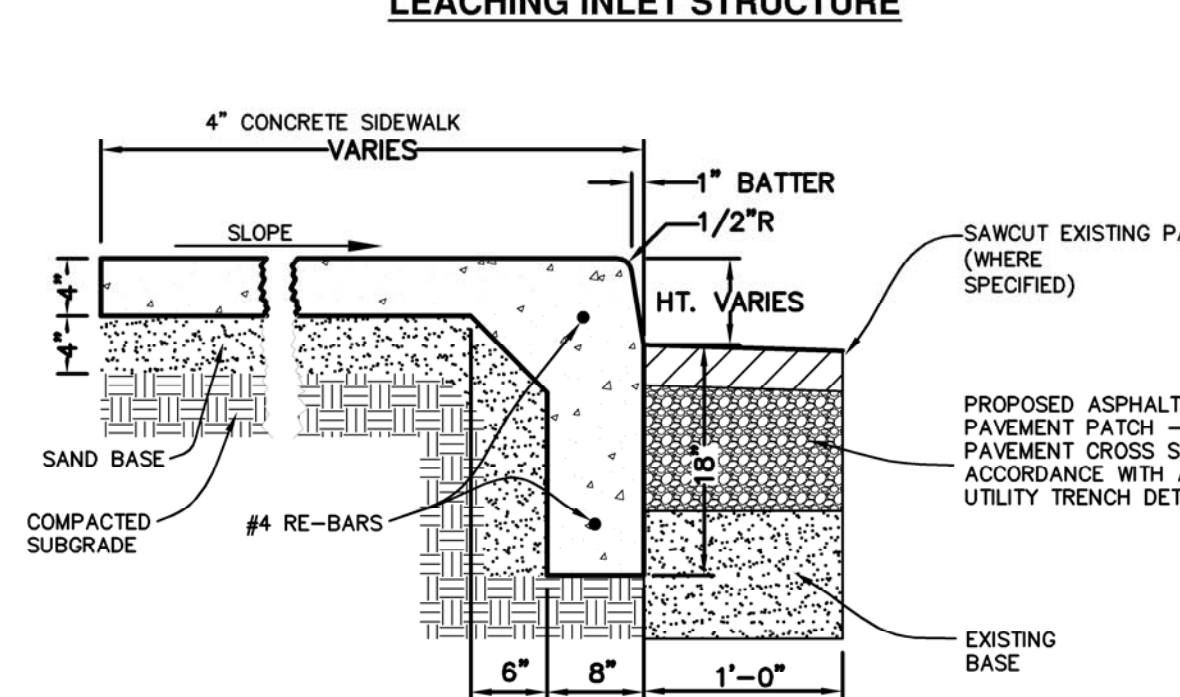
- 1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE THE SITE. REFER TO THE LANDSCAPE PLANS FOR DETAILS.
2. ALL PROPOSED GRADES ARE TOP OF PAVEMENT (T/P) UNLESS NOTED OTHERWISE.
3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE'S BOUNDARIES...



ABS (TRUSS AND SOLID WALL), PVC (TRUSS, SOLID WALL, A2000), ADS N-12 WT PIPE BEDDING DETAIL NO SCALE



LEACHING INLET STRUCTURE



TYPE 'A' CURB INTEGRAL CURB WALK SECTION DETAIL NOT TO SCALE

STORMWATER BMP ANALYSIS (REV 06-13-2016)

A. OVERVIEW
TOTAL SITE AREA = 46,265 SF OR 1.06 ACRES
AREA TO BE REDEVELOPED/DISTURBED = 13,639 SF OR 0.31 ACRES
% REDEVELOPMENT = 13,639 / 46,265 = 29.5%

B. REQUIREMENTS FOR SITE
RUNOFF SUMMARY FROM WORKSHEETS (FROM SHEET W9):
FIRST FLUSH VOLUME (Vf1) = 1,138 CF
BANKFULL VOLUME (Vbf) = 2,542 CF
100-YR VOLUME (V100) = 5,823 CF

C. RAIN GARDEN
THE ROOF AREA SHALL DISCHARGE TO THE RAIN GARDEN:
ROOF AREA = 4,000 SF
C = 0.95
Vf1 = 1' X 1/12 X 4,000 X 0.95 = 317 CF (FROM SHEET W2)

D. PERMEABLE PAVERS
THE PAVEMENT SHALL FLOW TO PERMEABLE PAVERS INSTALLED ALONG THE (2) FOURTH AVENUE ENTRANCES (ACTING AS MODIFIED TRENCH DRAINS).

W1 - DETERMINING COVER TYPES, AREAS, CURVE NUMBERS, AND RUNOFF COEFFICIENTS
A. TOTAL DISTURBED SITE AREA = 14,319 sf OR 0.33 ac.

W2 - FIRST FLUSH RUNOFF CALCULATIONS
A. Vf1 = (1') (1/12) (43560 sf/1Ac) (0.33)(0.95) = 1,138 cf

W3 - PREDEVELOPMENT BANKFULL RUNOFF CALCULATIONS
A. 2 YEAR / 24 HOUR EVENT P = 2.35%
B. IMPERVIOUS COVER CURVE NUMBER CN = 58 (FOR MEADOW)

W4 - PERVIOUS COVER POSTDEVELOPMENT BANKFULL RUNOFF CALCULATIONS
THERE IS NO PERVIOUS COVER ON THIS SITE:
Vbf-per-post = 0 cf

W5 - IMPERVIOUS COVER POSTDEVELOPMENT BANKFULL RUNOFF CALCULATIONS

A. 2 YEAR / 24 HOUR EVENT P = 2.35%
B. IMPERVIOUS COVER CURVE NUMBER CN = 98
C. S = (1000 / 98) - 10 = 0.20"

W6 - PERVIOUS COVER POSTDEVELOPMENT 100-YEAR STORM RUNOFF CALCULATIONS
THERE IS NO PERVIOUS COVER ON THIS SITE:
V100-per-post = 0 cf

W7 - IMPERVIOUS COVER POSTDEVELOPMENT 100-YEAR STORM RUNOFF CALCULATIONS
A. 100 YEAR / 24 HOUR EVENT P = 5.11%
B. IMPERVIOUS COVER CURVE NUMBER CN = 98
C. S = (1000 / 98) - 10 = 0.20"

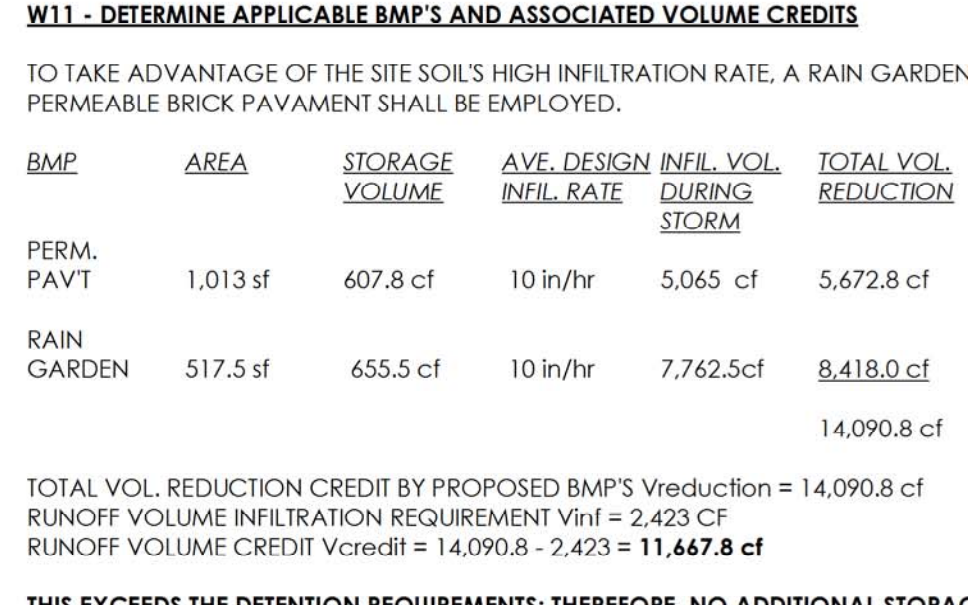
W8 - DETERMINE TIME OF CONCENTRATION FOR APPLICABLE FLOW TYPE
FLOW TYPE K CHANGE IN LENGTH SLOPE S^0.5 V Ic
SHEET 0.48 7.91 210 3.77 1.94 0.93 0.06

W9 - RUNOFF SUMMARY & ONSITE INFILTRATION REQUIREMENT
A. RUNOFF SUMMARY:
FIRST FLUSH VOLUME Vf1 = 1,138 cf
PREDEVELOPMENT BANKFULL RUNOFF VOLUME Vbf-pre = 119 cf

W10 - DETENTION / RETENTION REQUIREMENT
A. Qp = 238.6 (0.04)^-0.82 = 2,397 cfs/in^2
B. TOTAL SITE AREA EXCLUDING SELF-CREDDITING BMP'S A = 0.33 ac

W11 - DETERMINE APPLICABLE BMP'S AND ASSOCIATED VOLUME CREDITS
PERMEABLE BRICK PAVEMENT SHALL BE EMPLOYED.
TO TAKE ADVANTAGE OF THE SITE SOILS HIGH INFILTRATION RATE, A RAIN GARDEN AND PERMEABLE BRICK PAVEMENT SHALL BE EMPLOYED.

PERMEABLE BRICK PAVERS (FENOT ECO-CLASSIC OR APPROVED EQUAL SET IN HERRINGBONE PATTERN-COLOR TO BE SELECTED BY OWNER)



NEW PERMEABLE BRICK PAVER SECTION (AT DRIVEWAY APPROACH) NOT TO SCALE

STORMWATER MANAGEMENT SYSTEM NARRATIVE
THE CITY OF ANN ARBOR PARKS & RECREATION SERVICES PROPOSES TO DEVELOP A NEW MARKET STRUCTURE AT THE EXISTING FARMERS MARKET

SEAL CRACKS WITH HOT-POURED RUBBER ASPHALT (INSTALL BACKER ROD IF CRACK IS WIDER THAN 3/8")



MILL AND CAP NOT TO SCALE

CONSTRUCTION NOTES & DETAILS

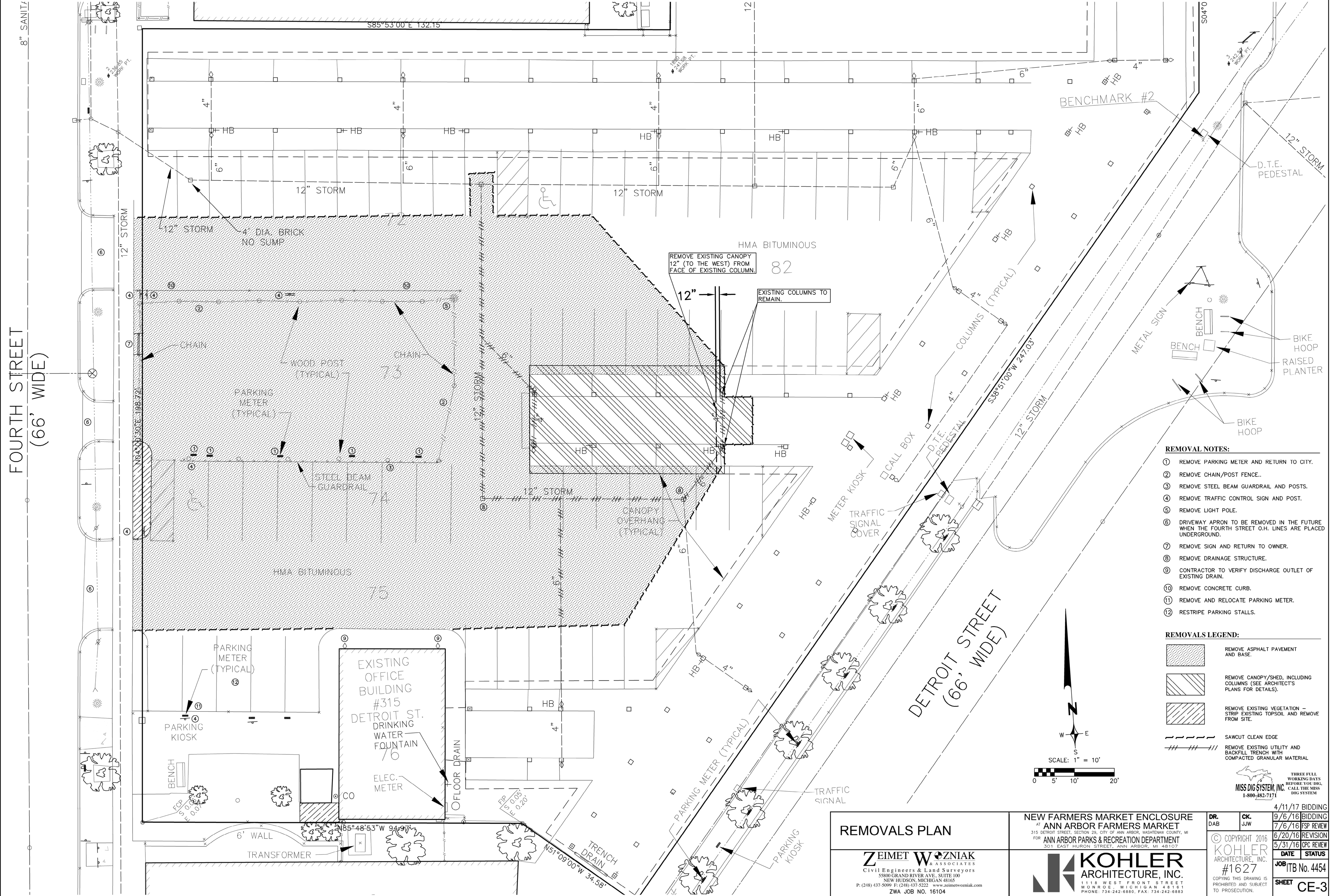
ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
5580 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48164

NEW FARMERS MARKET ENCLOSURE

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
MORRO, MICHIGAN 48161
PHONE: 734-242-8880, FAX: 734-242-8883

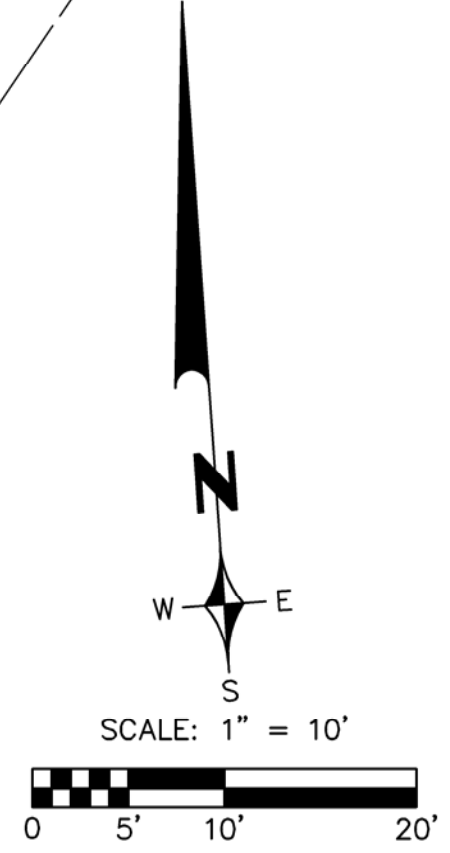
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4/11/17 BIDDING
9/6/16 BIDDING
7/6/16 FSP REVIEW
6/20/16 REVISION
5/31/16 CPC REVIEW
JOB: TB No. 4454
SHEET: CE-2



- REMOVAL NOTES:**
- ① REMOVE PARKING METER AND RETURN TO CITY.
 - ② REMOVE CHAIN/POST FENCE.
 - ③ REMOVE STEEL BEAM GUARDRAIL AND POSTS.
 - ④ REMOVE TRAFFIC CONTROL SIGN AND POST.
 - ⑤ REMOVE LIGHT POLE.
 - ⑥ DRIVEWAY APRON TO BE REMOVED IN THE FUTURE WHEN THE FOURTH STREET O.H. LINES ARE PLACED UNDERGROUND.
 - ⑦ REMOVE SIGN AND RETURN TO OWNER.
 - ⑧ REMOVE DRAINAGE STRUCTURE.
 - ⑨ CONTRACTOR TO VERIFY DISCHARGE OUTLET OF EXISTING DRAIN.
 - ⑩ REMOVE CONCRETE CURB.
 - ⑪ REMOVE AND RELOCATE PARKING METER.
 - ⑫ RESTRIPE PARKING STALLS.

- REMOVALS LEGEND:**
- REMOVE ASPHALT PAVEMENT AND BASE.
 - REMOVE CANOPY/SHED, INCLUDING COLUMNS (SEE ARCHITECT'S PLANS FOR DETAILS).
 - REMOVE EXISTING VEGETATION - STRIP EXISTING TOPSOIL AND REMOVE FROM SITE.
 - SAWCUT CLEAN EDGE
 - REMOVE EXISTING UTILITY AND BACKFILL TRENCH WITH COMPACTED GRANULAR MATERIAL



THREE FULL WORKING DAYS BEFORE YOU DIG. CALL THE MISS DIG SYSTEM 1-800-482-7171

REMOVALS PLAN

ZEIMET WOZNAK & ASSOCIATES
Civil Engineers & Land Surveyors
5580 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com
ZWA JOB NO. 16104

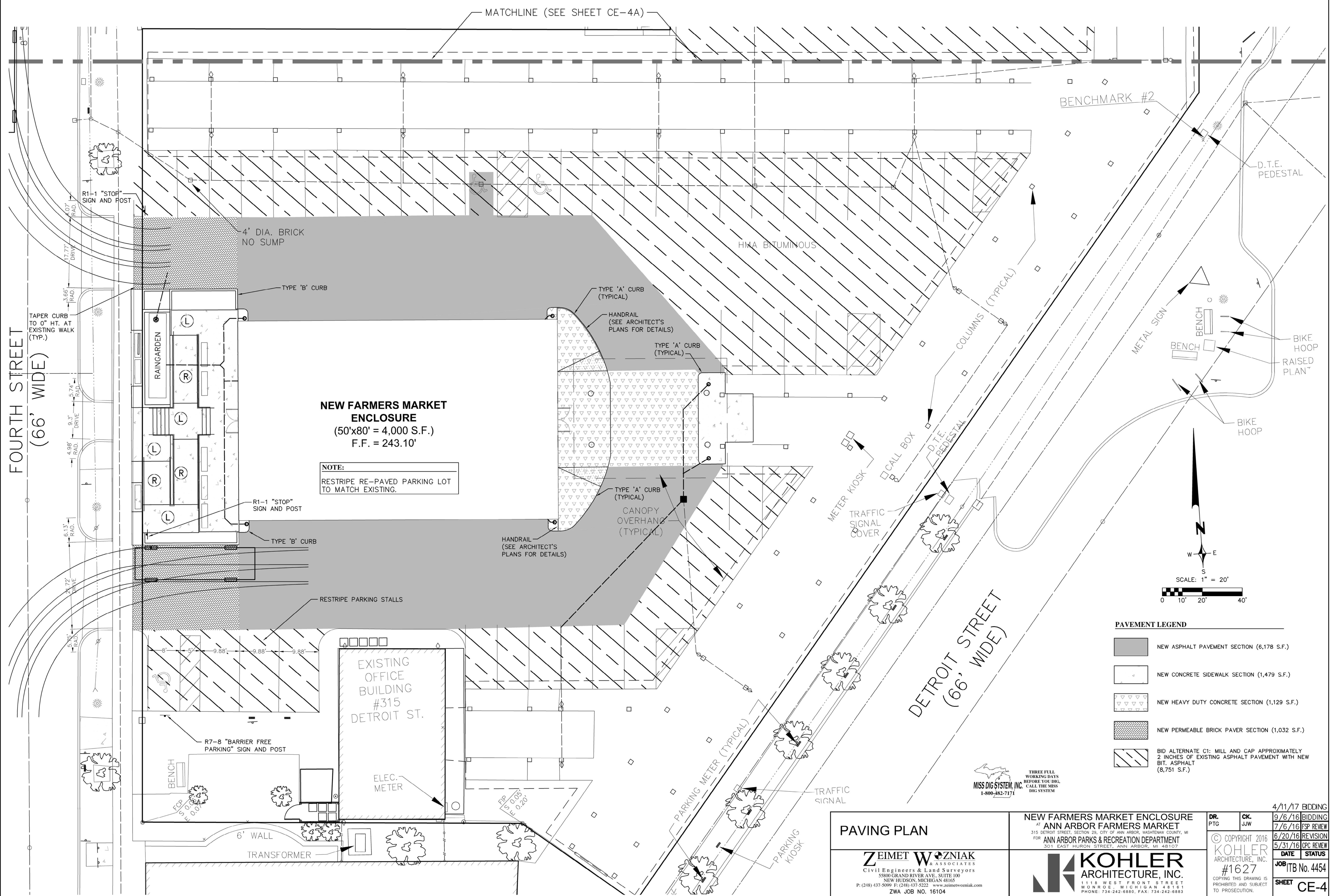
NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
MONROE, MICHIGAN 48161
PHONE: 734-242-8880, FAX: 734-242-8883

| | | |
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| DR. DAB | CK. JWW | 4/11/17 BIDDING |
| | | 9/6/16 BIDDING |
| | | 7/6/16 FSP REVIEW |
| | | 6/20/16 REVISION |
| | | 5/31/16 CPC REVIEW |
| | | DATE STATUS |
| | | JOB: ITB No. 4454 |
| | | SHEET CE-3 |

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NEW FARMERS MARKET ENCLOSURE
 (50'x80' = 4,000 S.F.)
 F.F. = 243.10'

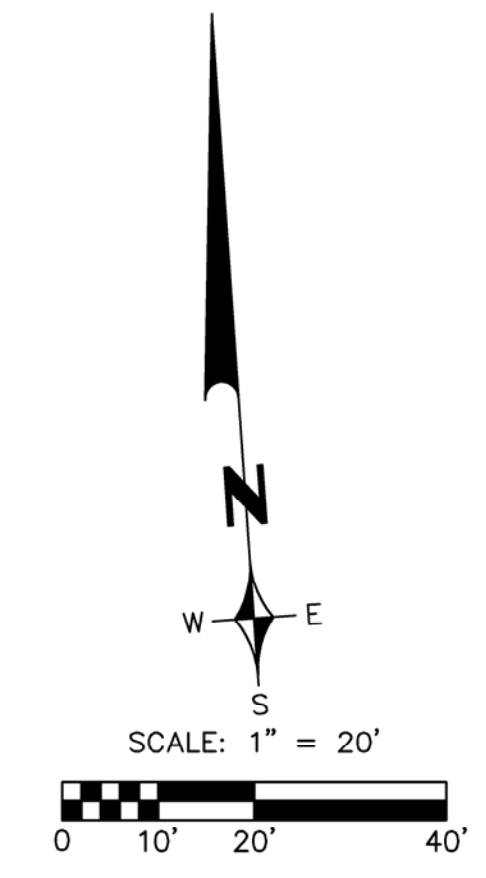
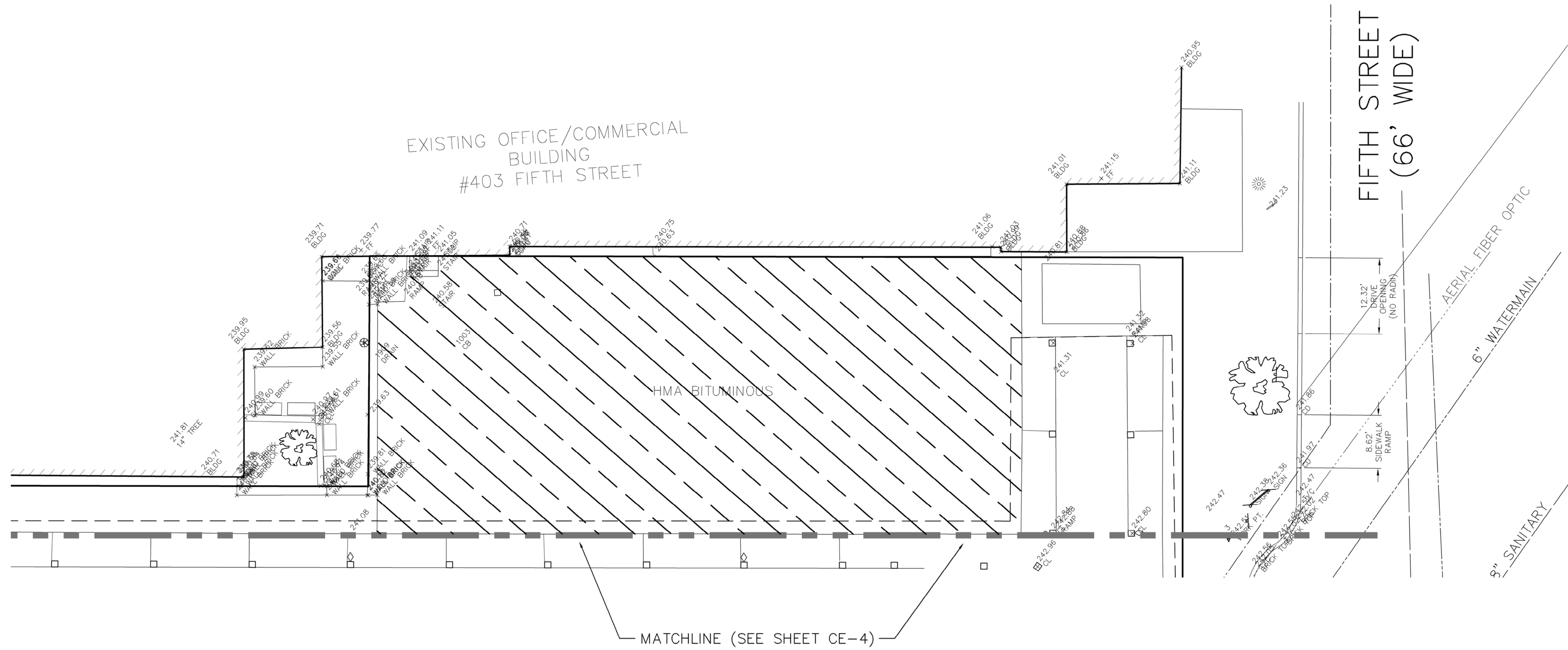
NOTE:
 RESTRIPE RE-PAVED PARKING LOT TO MATCH EXISTING.

PAVEMENT LEGEND

| | |
|--|---|
| | NEW ASPHALT PAVEMENT SECTION (6,178 S.F.) |
| | NEW CONCRETE SIDEWALK SECTION (1,479 S.F.) |
| | NEW HEAVY DUTY CONCRETE SECTION (1,129 S.F.) |
| | NEW PERMEABLE BRICK PAVER SECTION (1,032 S.F.) |
| | BID ALTERNATE C1: MILL AND CAP APPROXIMATELY 2 INCHES OF EXISTING ASPHALT PAVEMENT WITH NEW BIT. ASPHALT (8,751 S.F.) |

| | | | |
|--|---|---|---|
| <p>PAVING PLAN</p> <p>Z EIMET W O Z N I A K & ASSOCIATES Civil Engineers & Land Surveyors 5580 GRAND RIVER AVE., SUITE 100 NEW HUDSON, MICHIGAN 48165 P: (248) 437-5099 F: (248) 437-5222 www.zeimetwoznia.com ZWA JOB NO. 16104</p> | <p>NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT 301 EAST HURON STREET, ANN ARBOR, MI 48107</p> | <p>DR. PTC CK. JJW</p> | <p>4/11/17 BIDDING 9/6/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 CPC REVIEW</p> |
| | <p>K O H L E R ARCHITECTURE, INC. 1118 WEST FRONT STREET MORNOE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883</p> | <p>© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627 COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.</p> | <p>DATE STATUS JOB# ITB No. 4454 SHEET CE-4</p> |

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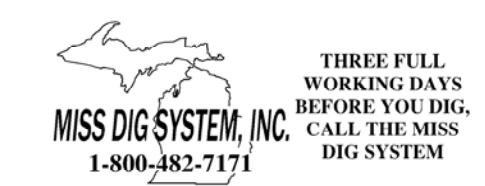


NOTE:
 RESTRIPE RE-PAVED PARKING LOT
 TO MATCH EXISTING.

PAVEMENT LEGEND

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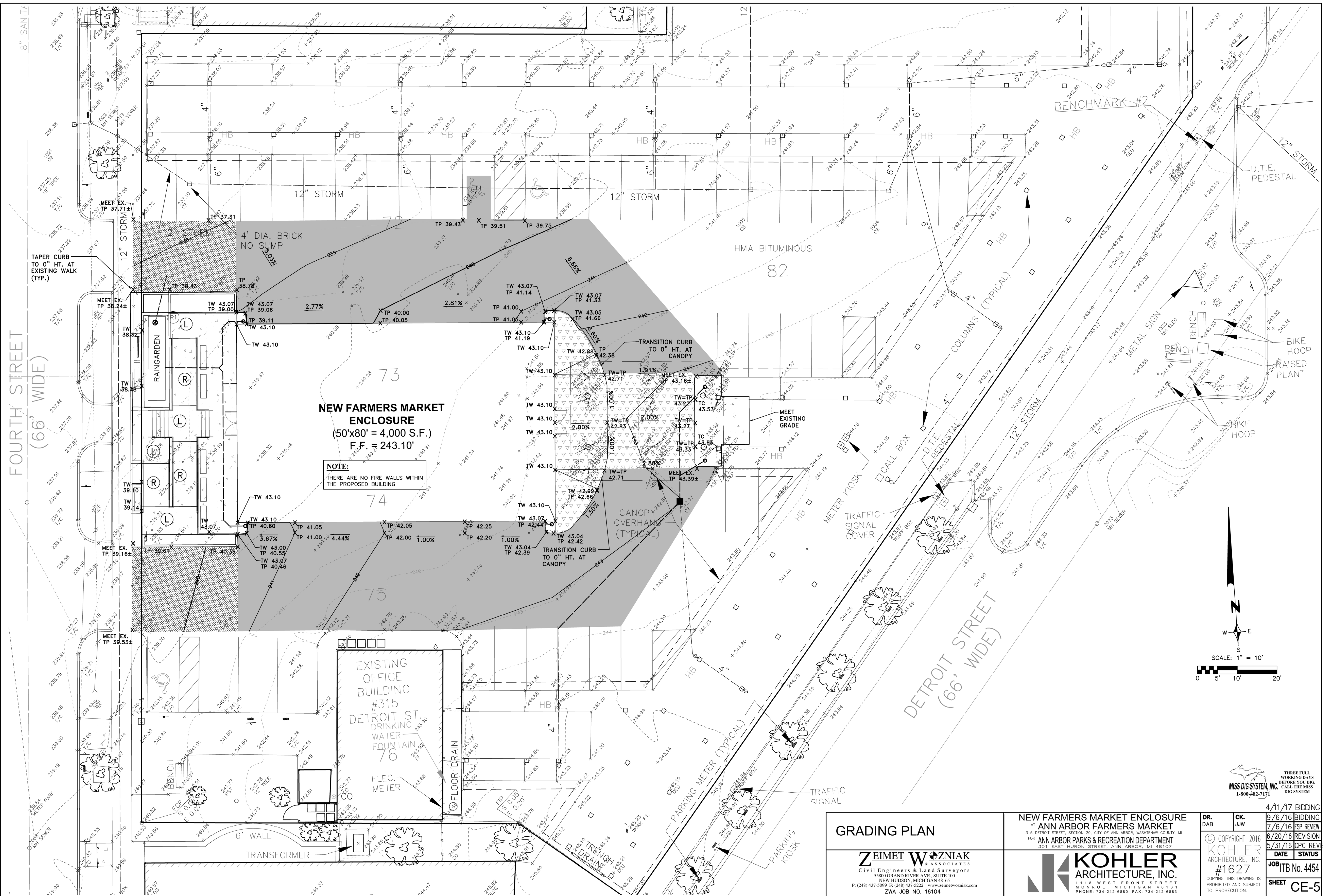
PAVING PLAN

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 & ASSOCIATES
 Civil Engineers & Land Surveyors
 5580 GRAND RIVER AVE., SUITE 100
 NEW HUDSON, MICHIGAN 48165
 P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com
 ZWA JOB NO. 16104

NEW FARMERS MARKET ENCLOSURE
 AT
ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR
ANN ARBOR PARKS & RECREATION DEPARTMENT
 301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER
 ARCHITECTURE, INC.
 #1627
 1118 WEST FRONT STREET
 MONROE, MICHIGAN 48151
 PHONE: 734-242-6880, FAX: 734-242-6883

| | | |
|---------|--------------|--------------------|
| DR. PTC | CK. JJW | 4/11/17 BIDDING |
| | | 9/6/16 BIDDING |
| | | 7/6/16 FSP REVIEW |
| | | 6/20/16 REVISION |
| | | 5/31/16 CPC REVIEW |
| DATE | STATUS | |
| JOB# | ITB No. 4454 | |
| SHEET | CE-4A | |



NEW FARMERS MARKET ENCLOSURE
 (50'x80' = 4,000 S.F.)
 F.F. = 243.10'

NOTE:
 THERE ARE NO FIRE WALLS WITHIN
 THE PROPOSED BUILDING

GRADING PLAN

ZEMET WOZNAK & ASSOCIATES
 Civil Engineers & Land Surveyors
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 NEW HUDSON, MICHIGAN 48165
 P: (248) 437-5099 F: (248) 437-5222 www.zemetwozniak.com
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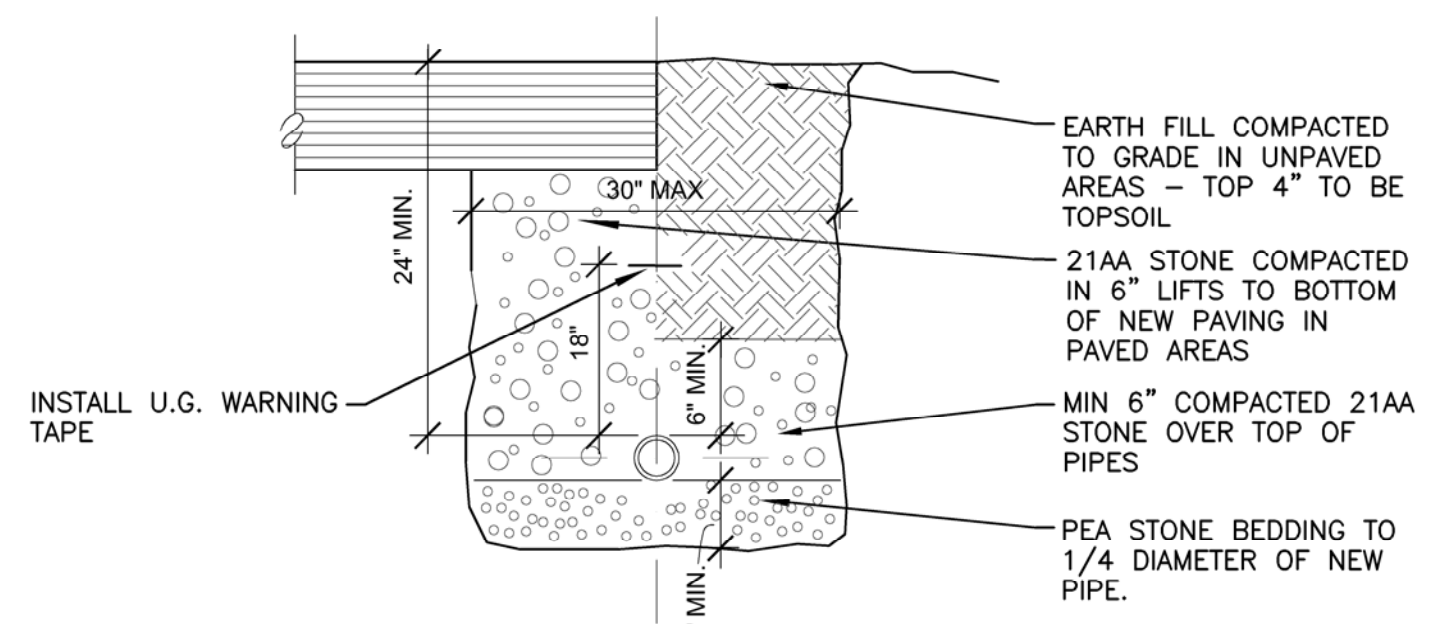
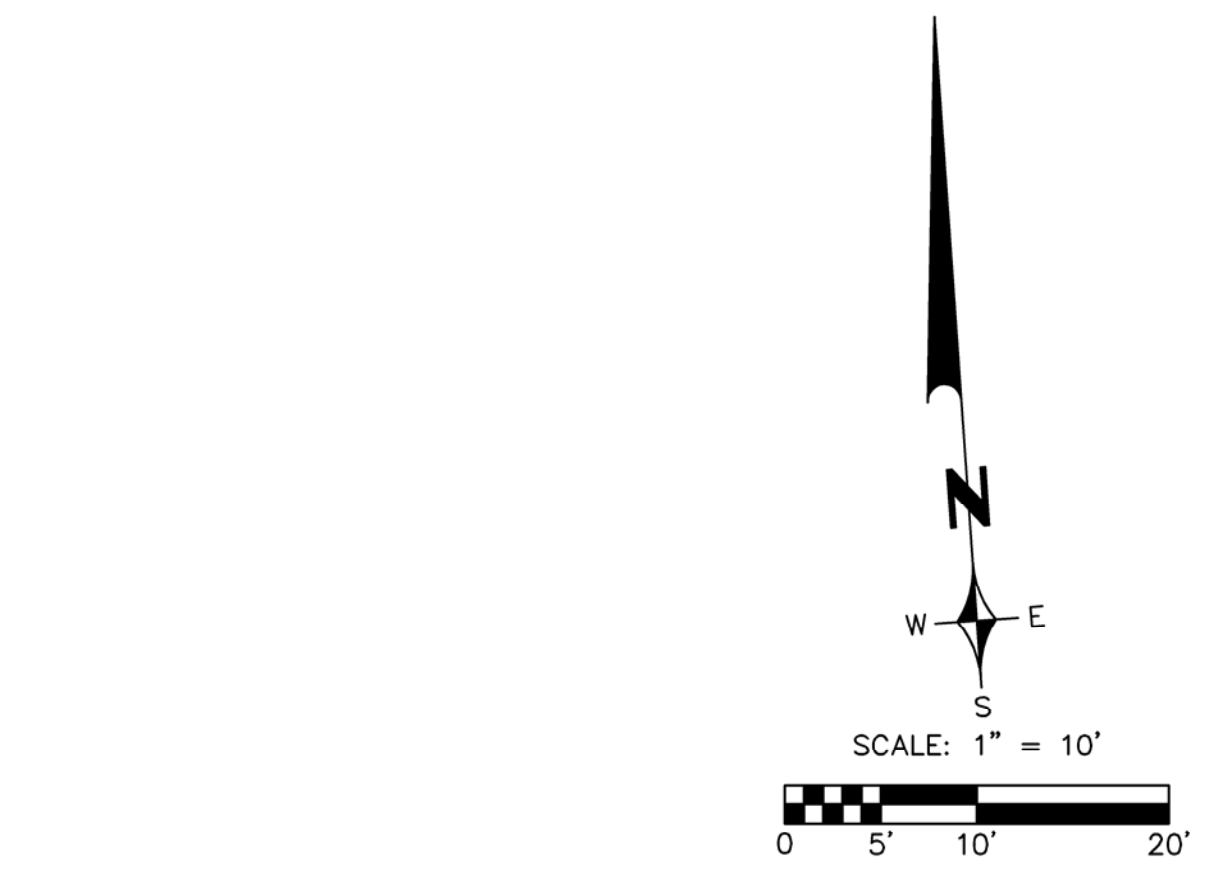
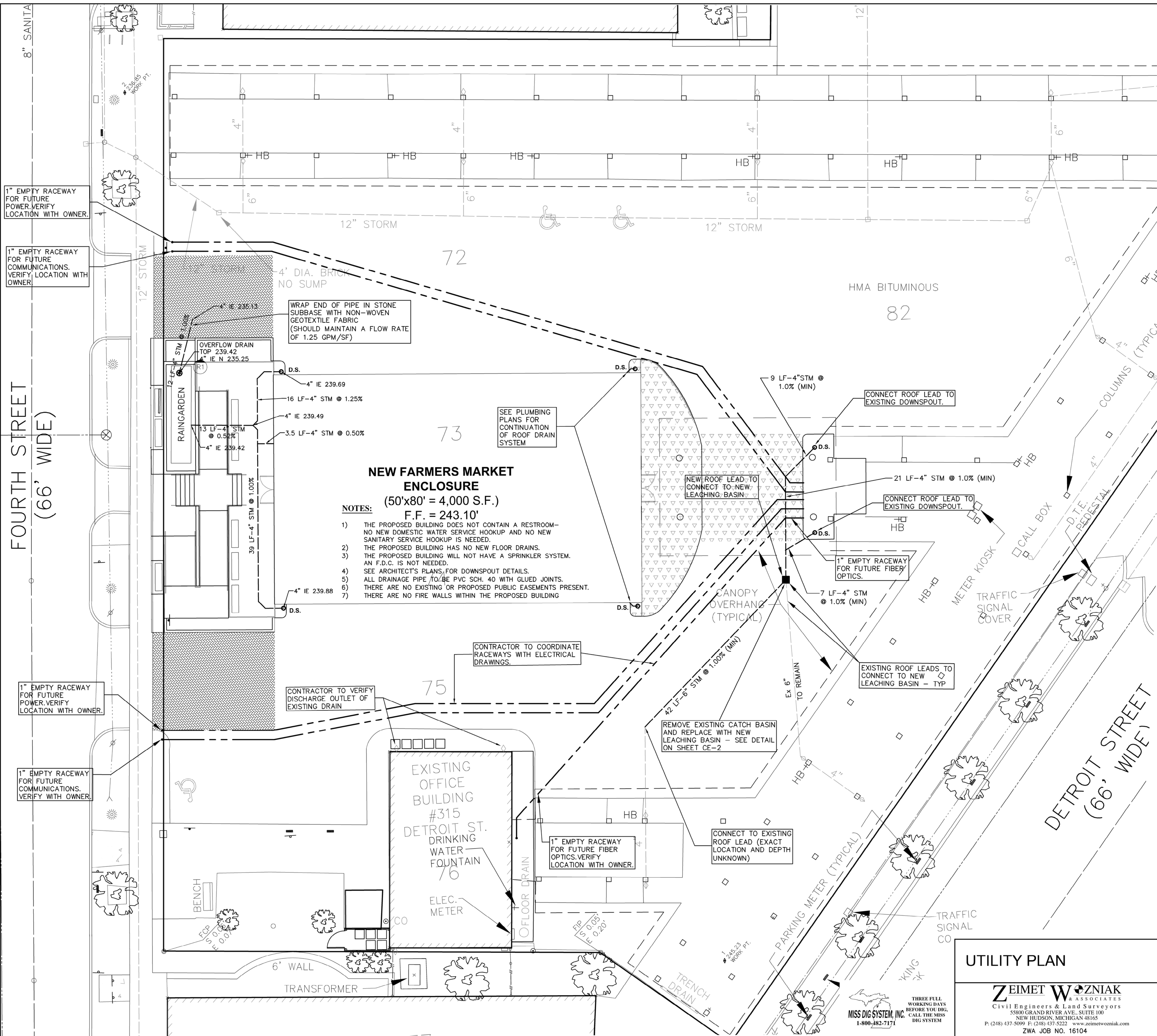
NEW FARMERS MARKET ENCLOSURE
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 ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR
 ANN ARBOR PARKS & RECREATION DEPARTMENT
 301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
 1118 WEST FRONT STREET
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| DR. DAB | CK. JWW | 4/11/17 BIDDING |
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| | | 7/6/16 SP REVIEW |
| | | 6/20/16 REVISION |
| | | 5/31/16 CPC REVIEW |
| | | DATE STATUS |
| | | JOB# ITB No. 4454 |
| | | SHEET CE-5 |

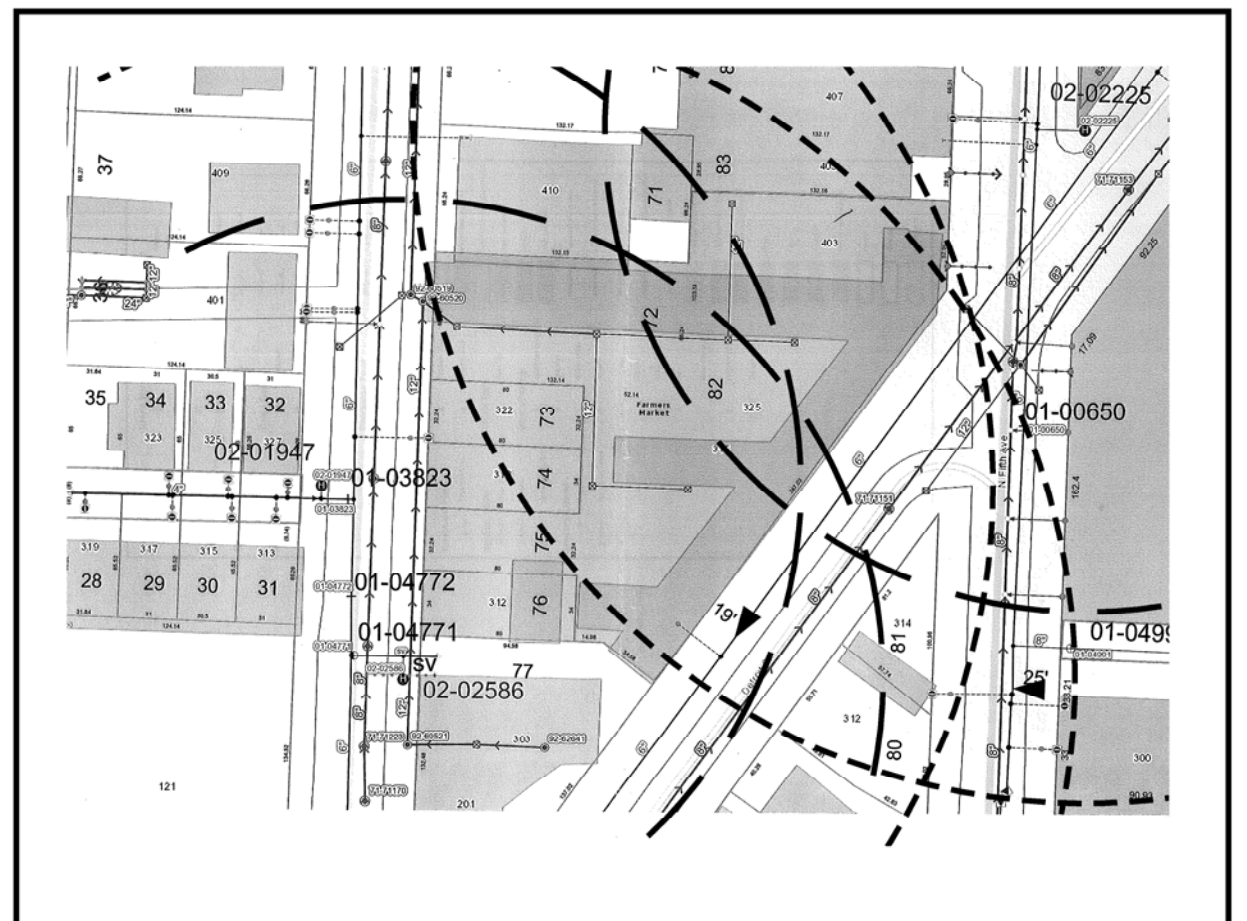
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RACEWAY BEDDING SECTION
SCALE: 3/4" = 1'

NOTE: SPLIT DETAIL HALF SHOWS UNDER PAVED AND STONE AREAS. OTHER HALF SHOWS UNDER EARTH AREAS.



EXISTING HYDRANT COVERAGE
SCALE: 1"=100'

NOTE: 250' RADIUS SHOWN AS ———
350' RADIUS SHOWN AS - - - - -

NEW FARMERS MARKET ENCLOSURE
(50'x80' = 4,000 S.F.)
F.F. = 243.10'

- NOTES:**
- 1) THE PROPOSED BUILDING DOES NOT CONTAIN A RESTROOM—NO NEW DOMESTIC WATER SERVICE HOOKUP AND NO NEW SANITARY SERVICE HOOKUP IS NEEDED.
 - 2) THE PROPOSED BUILDING HAS NO NEW FLOOR DRAINS.
 - 3) THE PROPOSED BUILDING WILL NOT HAVE A SPRINKLER SYSTEM. AN F.D.C. IS NOT NEEDED.
 - 4) SEE ARCHITECT'S PLANS FOR DOWNSPOUT DETAILS.
 - 5) ALL DRAINAGE PIPE TO BE PVC SCH. 40 WITH GLUED JOINTS.
 - 6) THERE ARE NO EXISTING OR PROPOSED PUBLIC EASEMENTS PRESENT.
 - 7) THERE ARE NO FIRE WALLS WITHIN THE PROPOSED BUILDING

UTILITY PLAN

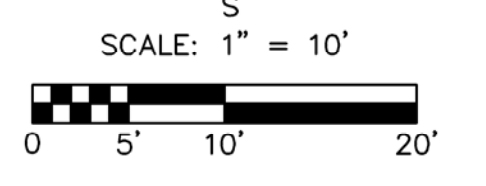
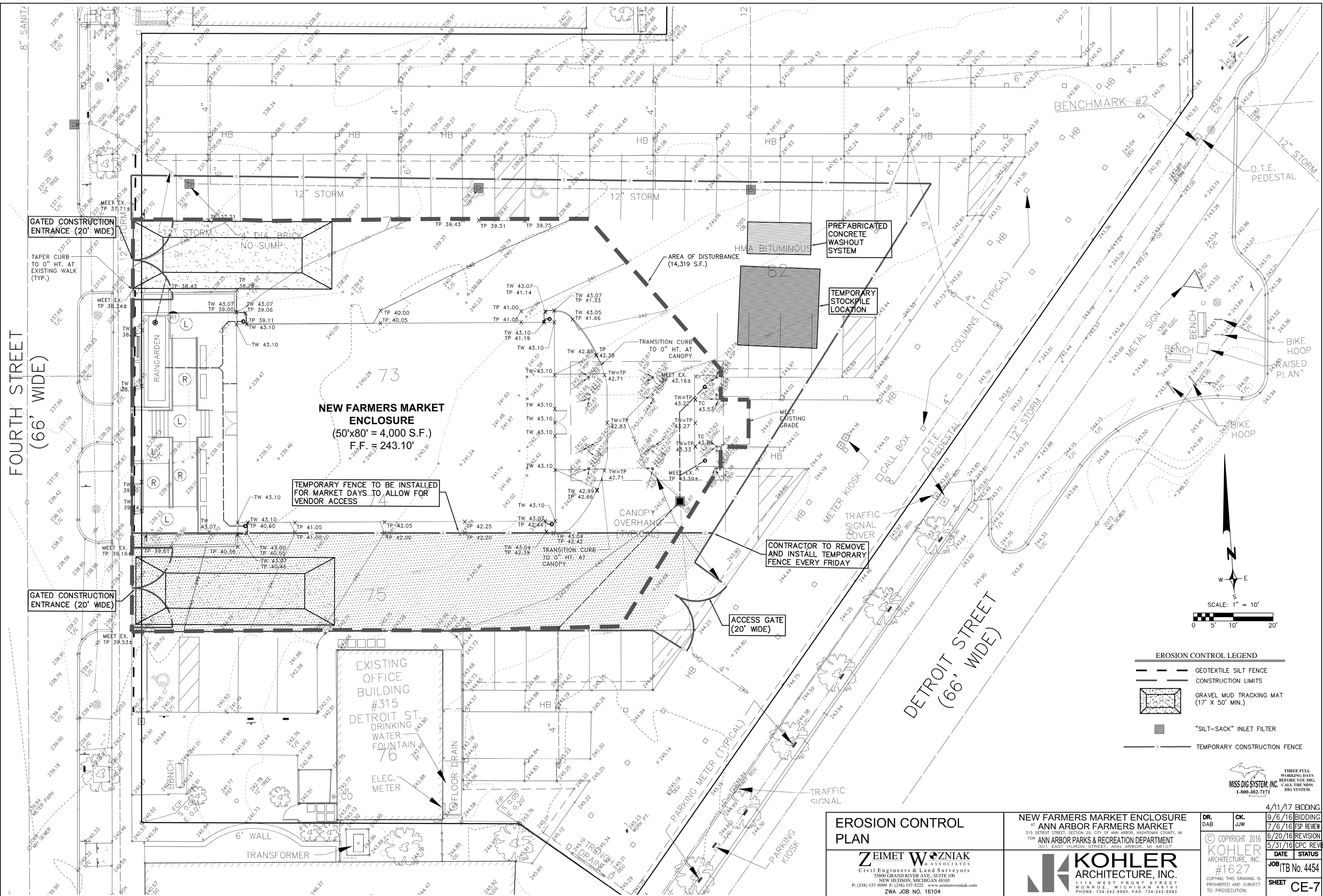
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Civil Engineers & Land Surveyors
5580 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
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NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
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301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
MONROE, MICHIGAN 48161
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| | | |
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| DR. DAB | CK. JWW | 9/6/17 BIDDING |
| | | 7/6/16 FSP REVIEW |
| | | 6/20/16 REVISION |
| | | 5/31/16 CPC REVIEW |
| | | DATE STATUS |
| | | JOB# TB No. 4454 |
| | | SHEET CE-6 |

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- EROSION CONTROL LEGEND**
- GEOTEXTILE SILT FENCE
 - CONSTRUCTION LIMITS
 - GRAVEL MUD TRACKING MAT (17' X 50' MIN.)
 - "SILT-SACK" INLET FILTER
 - TEMPORARY CONSTRUCTION FENCE

THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM 1-800-482-7171

EROSION CONTROL PLAN

ZEMET WOZNAK & ASSOCIATES
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NEW FARMERS MARKET ENCLOSURE
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 1118 WEST FRONT STREET
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 PHONE: 734-242-6880, FAX: 734-242-6883

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|---------|---------|--------------------|
| DR. DAB | CK. JWW | 4/11/17 BIDDING |
| | | 9/6/16 BIDDING |
| | | 7/6/16 FSP REVIEW |
| | | 6/20/16 REVISION |
| | | 5/31/16 CPC REVIEW |
| | | DATE STATUS |
| | | JOB# TB No. 4454 |
| | | SHEET CE-7 |

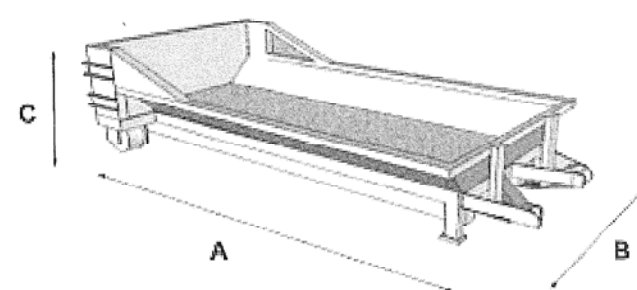
Z:\Projects\16104\eroc\16104.ENG.dwg, CE-7 EROSION CONTROL PLAN, 3/23/2017 10:26:33 AM, ddbmtyer

MAINTENANCE SCHEDULE (DURING CONSTRUCTION BY GC):

| TASK | COMPONENT | STORM SEWER SYSTEM | CATCH BASIN SUMPS | CATCH BASIN INLET CASTINGS | RAINGARDENS | PERMEABLE PAVERS | SCHEDULE |
|---|-----------|--------------------|-------------------|----------------------------|-------------|------------------|---------------------------------|
| INSPECT FOR SEDIMENT ACCUMULATION | X | X | | | X | X | WEEKLY |
| REMOVAL OF SEDIMENT ACCUMULATION | X | X | | | X | X | AS NEEDED AND PRIOR TO TURNOVER |
| INSPECT FOR FLOATABLES AND DEBRIS | X | X | | | | | QUARTERLY |
| REMOVAL OF FLOATABLES AND DEBRIS | X | X | | | | | QUARTERLY AND AT TURNOVER |
| INSPECT FOR EROSION | | | | | X | | WEEKLY |
| RE-ESTABLISH VEGETATION ON ERODED SLOPES | | | | | X | | AS NEEDED AND PRIOR TO TURNOVER |
| REPLACEMENT OF STONE | | | | | | X | AS NEEDED* |
| MOWING | | | | | | | WEEKLY |
| INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER) | X | X | X | X | X | X | ANNUALLY AND PRIOR TO TURNOVER |
| MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY PRE-TURNOVER INSPECTION | X | X | X | X | X | X | AS NEEDED |

MAINTENANCE SCHEDULE (POST CONSTRUCTION BY OWNER):

| TASK | COMPONENT | STORM SEWER SYSTEM | CATCH BASIN SUMPS | CATCH BASIN INLET CASTINGS | RAINGARDENS | PERMEABLE PAVERS | SCHEDULE |
|---|-----------|--------------------|-------------------|----------------------------|-------------|------------------|---------------------------------|
| INSPECT FOR SEDIMENT ACCUMULATION | X | X | | | X | X | WEEKLY |
| REMOVAL OF SEDIMENT ACCUMULATION | X | X | | | X | X | AS NEEDED AND PRIOR TO TURNOVER |
| INSPECT FOR FLOATABLES AND DEBRIS | X | X | | | | | QUARTERLY |
| REMOVAL OF FLOATABLES AND DEBRIS | X | X | | | | | QUARTERLY AND AT TURNOVER |
| INSPECT FOR EROSION | | | | | X | | WEEKLY |
| RE-ESTABLISH VEGETATION ON ERODED SLOPES | | | | | X | | AS NEEDED AND PRIOR TO TURNOVER |
| REPLACEMENT OF STONE | | | | | | X | AS NEEDED* |
| MOWING | | | | | | | WEEKLY |
| CLEAN STREETS, DRIVES AND PARKING AREAS | | | | | | X | 0 TO 2 TIMES PER YEAR |
| INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER) | X | X | X | X | X | X | ANNUALLY AND PRIOR TO TURNOVER |
| MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY PRE-TURNOVER INSPECTION | X | X | X | X | X | X | AS NEEDED |



| *Container Size | A Length | B Width | C Inside Height | Overall Height |
|-----------------|----------|---------|-----------------|----------------|
| 3-4 CY | 16' | 8' | 12" | 22" |

*Measurements are approximations

PREFABRICATED CONCRETE WASHOUT SYSTEM DETAIL

NOTES:

- Concrete washout shall occur only within the designated area.
- Concrete washout shall be conducted in an entirely self-contained prefabricated system.
- The system shall be removed when full or upon completion of project. Hardened concrete is considered to be waste material and shall be disposed of in an appropriate manner.

EROSION CONTROL NOTE:

ALL TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AND MAINTAINED IN COMPLIANCE WITH CHAPTER 63, SOIL EROSION AND SEDIMENTATION CONTROL, OF THE ANN ARBOR CODE OF ORDINANCES.

SESC QUANTITIES AND COST OPINION:

| | | | |
|---------------------------|-------|--------------|-----------|
| SILT FENCE | 61 LF | @ \$2.00 | = \$122 |
| CATCH BASIN INLET FILTERS | 4 EA | @ \$150.00 | = \$600 |
| GRAVEL MUD TRACKING MAT | 1 EA | @ \$1,200.00 | = \$1,200 |
| | | TOTAL | = \$1,922 |

THE TOTAL COST TO PROTECT THE ENTIRE SITE AND FULL RESTORATION IF CONSTRUCTION IS ABANDONED IS: \$1922.

2017 CONSTRUCTION SCHEDULE:

JANUARY 23 – FEBRUARY 10

- INSTALL TEMPORARY FENCING
- DEMOLITION OF EXISTING SITE AND VENDOR CANOPY
- INSTALL GRAVEL CONSTRUCTION MAT AND SESC CONTROLS
- INSTALL NEW UNDERGROUND UTILITIES

FEBRUARY 13 – MARCH 3

- INSTALL NEW BUILDING AND CANOPY FOUNDATIONS

MARCH 4 – MARCH 31

- INSTALL PRE-ENGINEERED METAL BUILDING FRAMING
- INSTALL PRE-ENGINEERED METAL CANOPY FRAMING
- INSTALL BUILDING INSULATION, METAL SIDING ROOFING AND LINER PANELS

APRIL 3 – APRIL 14

- INSTALL BUILDING CONCRETE SLAB AND APRON DECK

APRIL 17 – MAY 5

- INSTALL FINAL MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS
- INSTALL CONCRETE WALKS
- INSTALL O.H. DOORS FRAMING AND O.H. DOORS

MAY 8 – JUNE 2

- INSTALL PAVING BASE, GRADING, FINAL PAVING, STRIPING
- INSTALL RAIN GARDEN
- INSTALL LANDSCAPING
- FINAL DETAILS

JUNE 5 – JUNE 9

- PUNCH LIST ITEMS
- REMOVE TEMPORARY FENCING

GENERAL SESC NOTES:

- DURING DRY PERIODS ALL DISTURBED AREAS SHALL BE WATERED FOR DUST CONTROL.
- ALL DIRT AND MUD TRACKED ONTO ROADWAYS SHALL BE REMOVED IMMEDIATELY.
- THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451, OF 1994 AS AMENDED, THE SOIL EROSION AND SEDIMENT CONTROL ACT AND CHAPTER 63—THE CITY'S STORM WATER MANAGEMENT AND SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL SOIL EROSION CONTROL MEASURES ARE MAINTAINED AND IN PLACE UNTIL SITE IS COMPLETELY STABILIZED.
- DISTURBED AREA = 14,319 S.F.
- PARCEL IDENTIFICATION NUMBERS: 09-09-29-123-004, 09-09-29-123-005, 09-09-29-123-006, 09-09-29-123-007.
- THE ULTIMATE OUTLET FOR THIS PROJECT'S STORM DRAINAGE DISCHARGE IS HURON RIVER (APPROX. 2,300 L.F. AWAY).
- UPON COMPLETION OF THE BUILDING CONSTRUCTION, CLEAN PAVEMENT AND STORM SEWERS OF ANY ACCUMULATED SEDIMENT AND DEBRIS.
- NO STOCKPILING OF MATERIAL IS PERMITTED.
- THIS PLAN DESCRIBES THE MINIMUM EROSION CONTROL MEASURES NEED TO PREVENT SILT AND SEDIMENT FROM LEAVING THE SITE. ADDITIONAL SESC MEASURES MAY BE REQUIRED AS CONDITIONS IN THE FIELD WARRANT.
- IF DEWATERING IS ANTICIPATED OR ENCOUNTERED DURING CONSTRUCTION, A DEWATERING PLAN MUST BE SUBMITTED TO THE CITY'S ENGINEERING DIVISION FOR REVIEW.
- THERE ARE NO REGULATED WETLANDS PRESENT ON THIS SITE.
- STORAGE AREA FOR CONSTRUCTION MATERIAL SHALL NOT INTERFERE WITH FIRE/EMERGENCY SITE ACCESS.
- LONG TERM MAINTENANCE RESPONSIBILITIES SHALL BECOME A PART OF ANY SALES OR EXCHANGE AGREEMENT FOR THE LAND ON WHICH THE PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE LOCATED.

PERMEABLE BRICK/PERVIOUS PAVEMENT MAINTENANCE NOTES:

A. RESPONSIBILITY

MAINTENANCE OF PERVIOUS PAVEMENT WILL BE THE RESPONSIBILITY OF THE CITY'S PARK AND RECREATION DIVISION.

B. PREVENT CLOGGING OF PAVEMENT SURFACE WITH SEDIMENT

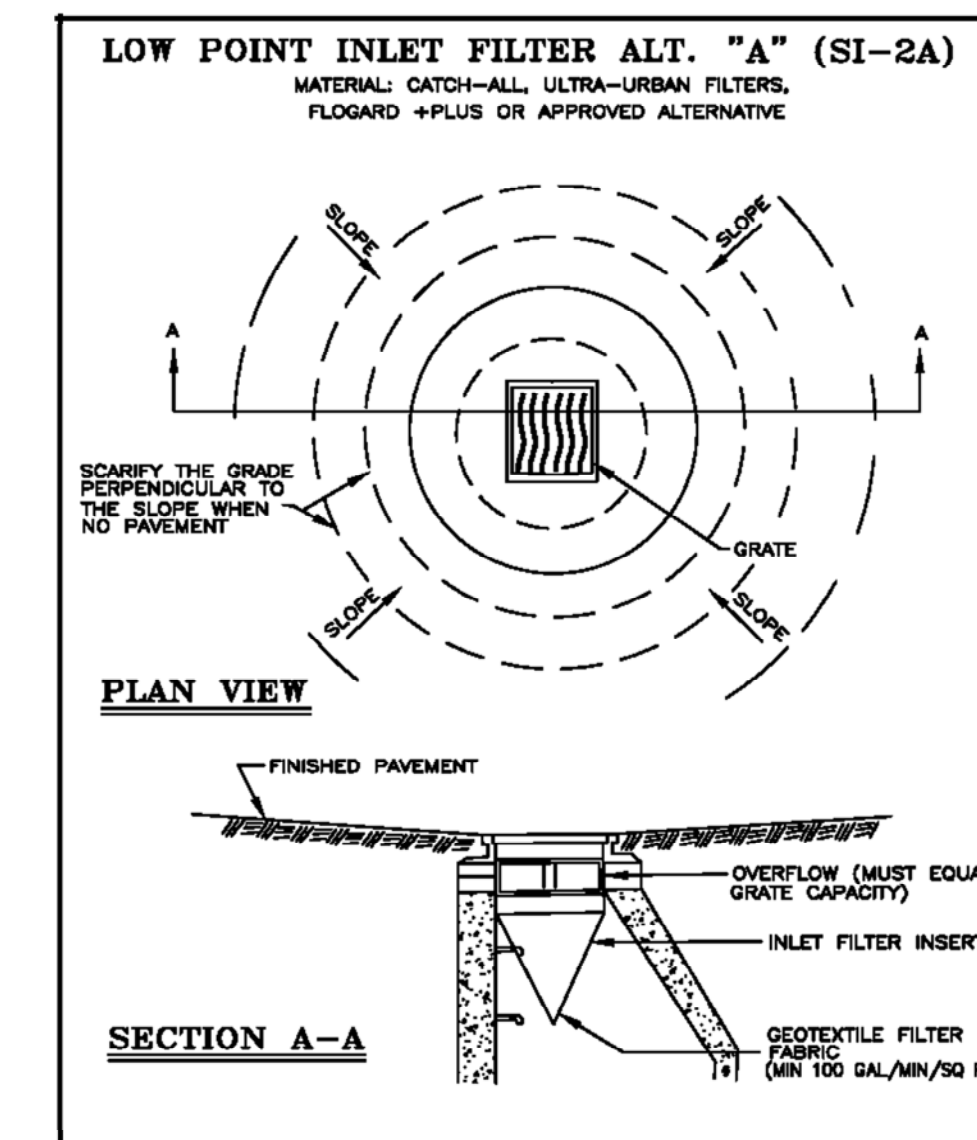
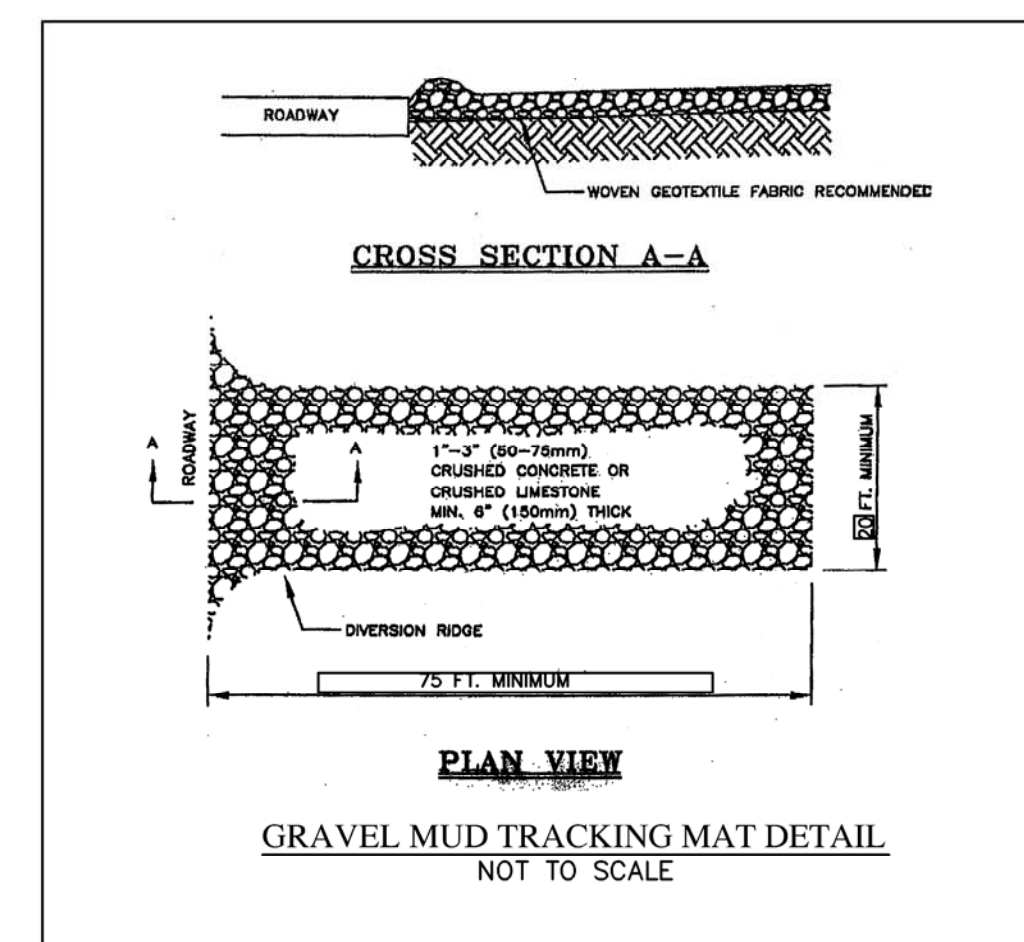
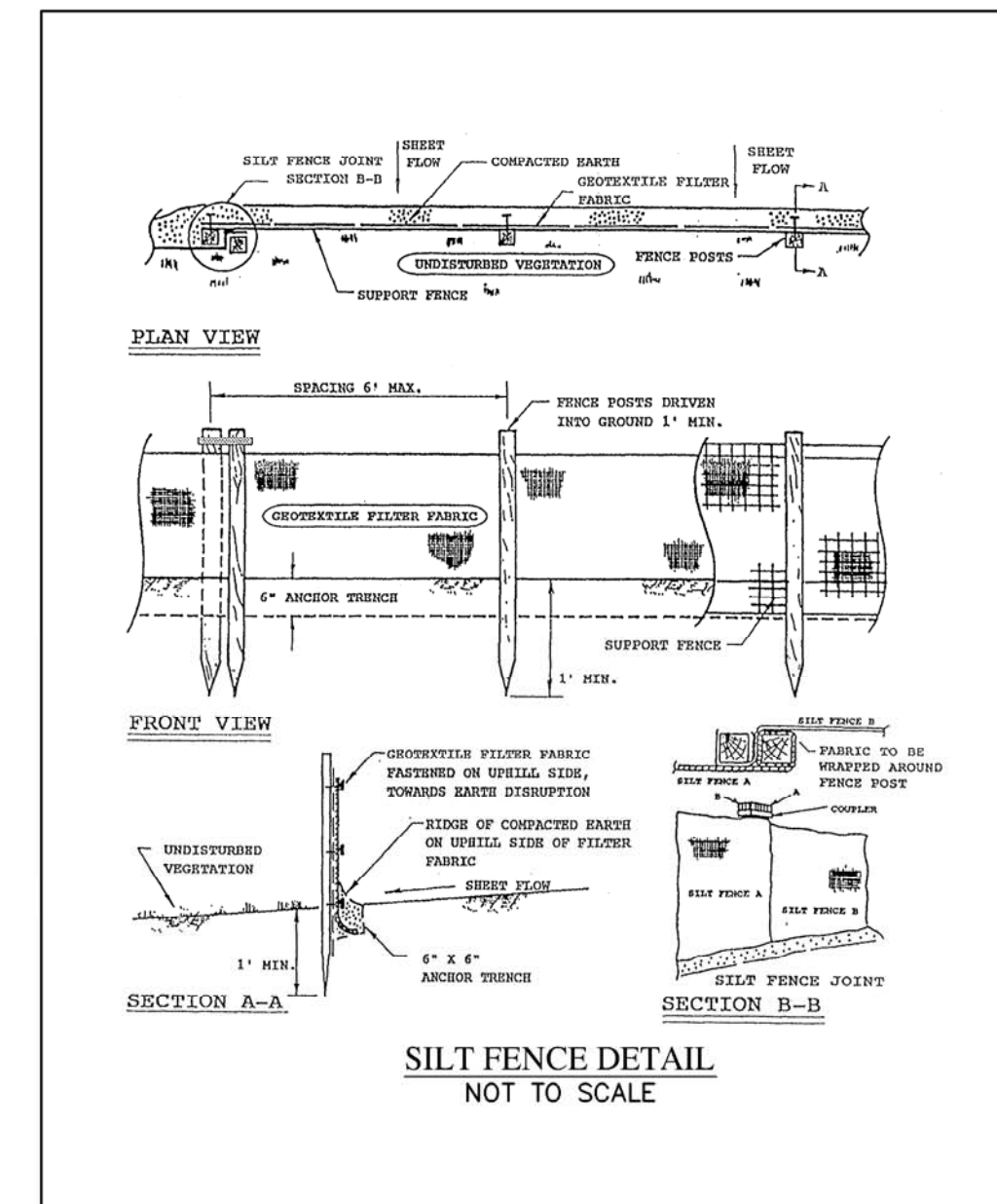
- VACUUM PAVEMENT TWICE PER YEAR.
- MAINTAIN PLANTED AREAS ADJACENT TO PAVEMENT.
- IMMEDIATELY CLEAN ANY SOIL DEPOSITED ON PAVEMENT.
- DO NOT ALLOW CONSTRUCTION STAGING, SOIL/MULCH STORAGE, ETC. ON UNPROTECTED PAVEMENT.

C. SNOW/ICE REMOVAL

- DO NOT APPLY ABRASIVES SUCH AS SAND OR CINDERS ON OR ADJACENT TO PERVIOUS PAVEMENT.
- SNOW PLOWING IS FINE BUT SHOULD BE DONE CAREFULLY (I.E. SET THE BLADE SLIGHTLY HIGHER THAN USUAL).
- SALT APPLICATION IS ACCEPTABLE, ALTHOUGH MORE ENVIRONMENTALLY-BENIGN DEICERS ARE PREFERABLE. THE NEED FOR APPLICATION OF SALT AND OTHER DEICERS SHOULD BE MINIMAL, AS WATER DOES NOT POND AND FREEZE ON TOP OF A PROPERLY OPERATING PERVIOUS PAVEMENT.

D. REPAIRS

- SURFACE SHALL NEVER BE SEAL-COATED.
- PERVIOUS PAVERS MUST BE REPAIRED/REPLACED WITH SIMILAR PERVIOUS PAVER BLOCK MATERIAL.
- PERVIOUS PAVERS MAY REQUIRE THE ADDITION OF AGGREGATE ON AN ANNUAL BASIS OR AS NEEDED IN ORDER TO REPLENISH MATERIAL USED TO FILL IN THE OPEN AREAS OF THE PAVERS.



THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM 1-800-482-7171

EROSION CONTROL DETAILS

ZEMET WOZNAK & ASSOCIATES
Civil Engineers & Land Surveyors
5800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zemetwozniak.com
ZWA JOB NO. 16104

NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
MORRO, MICHIGAN 48161
PHONE: 734-242-6860, FAX: 734-242-6883

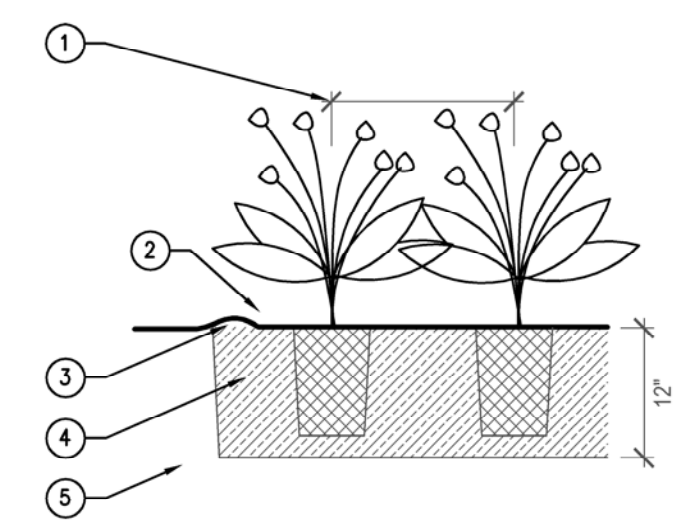
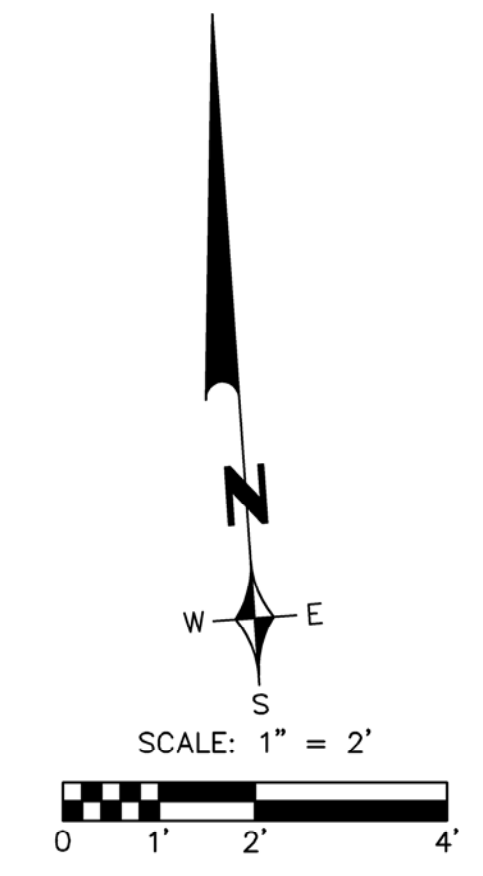
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|---------|---------|--------------------|
| DR. PTC | CK. JWW | 4/11/17 BIDDING |
| | | 9/6/16 BIDDING |
| | | 7/6/16 FSP REVIEW |
| | | 6/20/16 REVISION |
| | | 5/31/16 CPC REVIEW |
| | | DATE STATUS |
| | | JOB# TB No. 4454 |
| | | SHEET CE-8 |

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#1627
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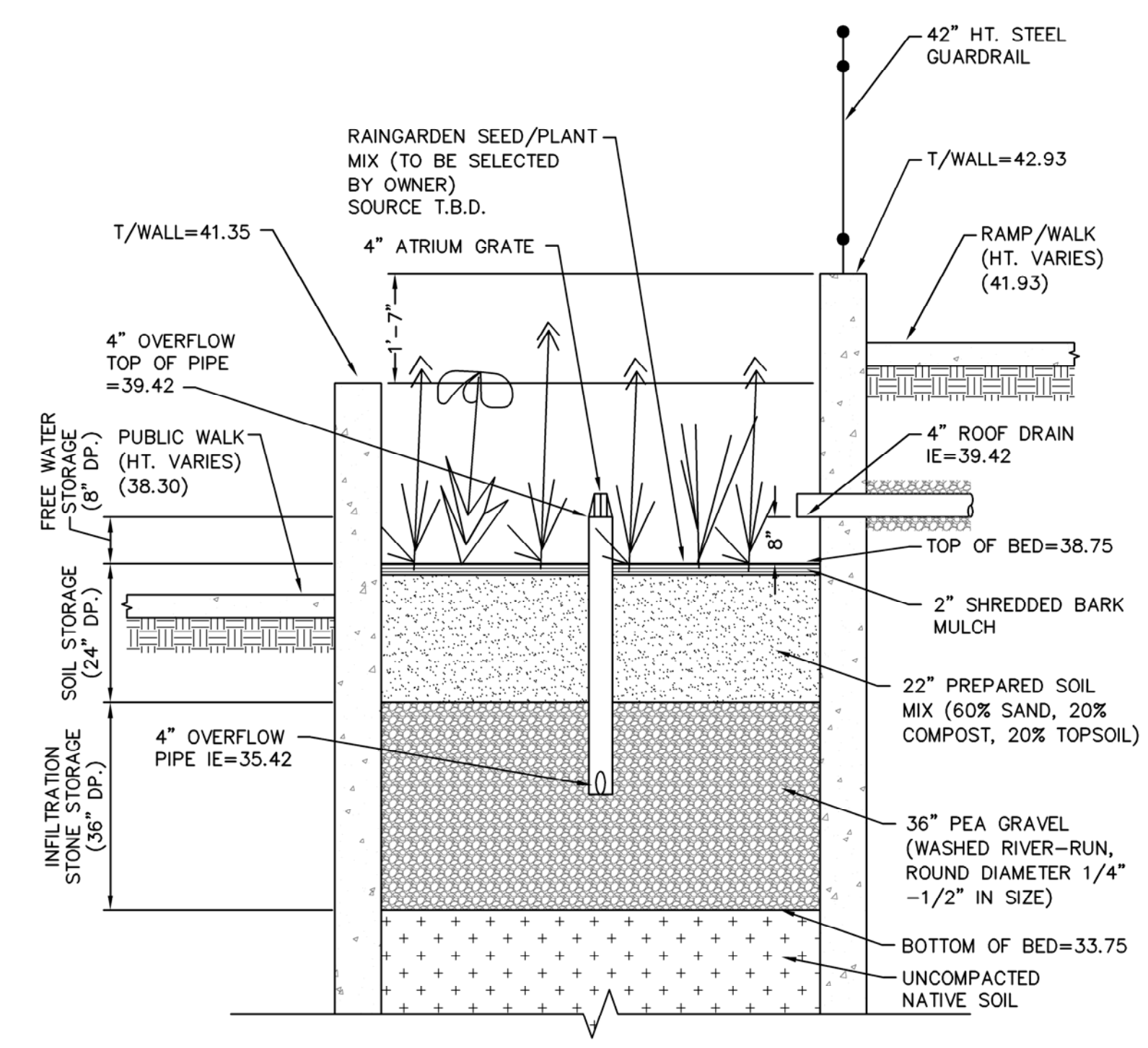


PLAN VIEW
SCALE: 1" = 2"



PERENNIAL / GROUNDCOVER PLANTING DETAIL
NOT TO SCALE

- 1 IRREGULAR PLANT SPACING
 - 2 2" DEPTH DOUBLE PROCESSED SHREDDED BARK MULCH
 - 3 MOUND TO FORM SAUCER - FORM SOIL SAUCER WITH 3" HT. CONTINUOUS RIM OR ALUM. EDGE. SEE PLAN
 - 4 EXCAVATE SOIL
 - 5 UNDISTURBED SUBGRADE
- NOTE:
REMOVE ALL FIBER, PLASTIC OR METAL CONTAINERS



RAIN GARDEN CROSS-SECTION
SCALE: 1" = 2"

RAINGARDEN PLANT MIX:

| NATIVE GRASS | | | |
|---|-----------------|-------------------------------|----------|
| 114 | SWITCHGRASS | PANICUM VIRGATUM "SHENANDOAH" | 18" O.C. |
| PERENNIAL PLANTS | | | |
| THE REST OF THE PLANTS INTERSPERSED IN THE RAIN GARDEN: | | | |
| 38 | WILD STRAWBERRY | FRAGARIA VIRGINIANA | |
| 38 | WILD ONION | ALLIUM CERUUM | |
| 38 | SKY-BLUE ASTER | ASTER OOLENTANGIENSIS | |
| PLANTS FOR RAINGARDEN - ALL PLUGS | | | |

- MULCH NOTES:**
1. MULCH TO BE DOUBLE SHREDDED HARDWOOD BARK MULCH.
 2. NO. GROUND WOOD PALLETTE MULCH PERMITTED.

Planting Notes:

The Contractor shall verify all rights of way, easements, property lines and limits of work, etc. prior to commencing work.

The Contractor shall be responsible for contacting and coordinating with all pertinent utility companies 72 hours in advance of any digging to make himself familiar with all underground utilities, pipes and structures. The Contractor shall take sole responsibility for any cost incurred due to damage of said utilities.

The Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist. Such conditions shall be immediately brought to the attention of the owner's representative and/or Landscape Architect. The Contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.

Any discrepancies between dimensioned layout and actual field conditions shall be reported to the Owner's representative and Landscape Architect. Failure to make such discrepancies known will result in Contractor's responsibility and liability for any changes and associated cost.

The Contractor shall be responsible for any coordination with subcontractors as required to accomplish construction installation operations.

Do not scale drawings. Refer to written dimensions only.

The Contractor shall provide and maintain positive surface drainage.

The Contractor shall be responsible for any existing materials that are damaged during construction.

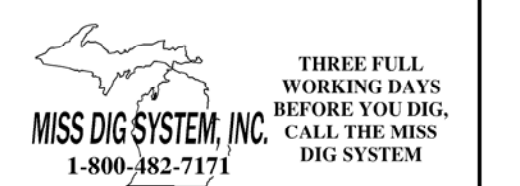
See plant list and planting details for planting requirements, materials and execution.

All plant material shall be approved by Owner's Representative and/or Landscape Architect prior to delivery to the site. Any plants delivered to the site not previously approved may be rejected and are the sole responsibility of the Contractor.

Final location of all plant material shall be subject to the approval of the Landscape Architect.

The Contractor to verify percolation of all planting pits prior to installation of plant material.

The Contractor shall place 2" depth of shredded bark mulch in all planting beds, unless otherwise indicated.



RAINGARDEN PLANTING DETAILS

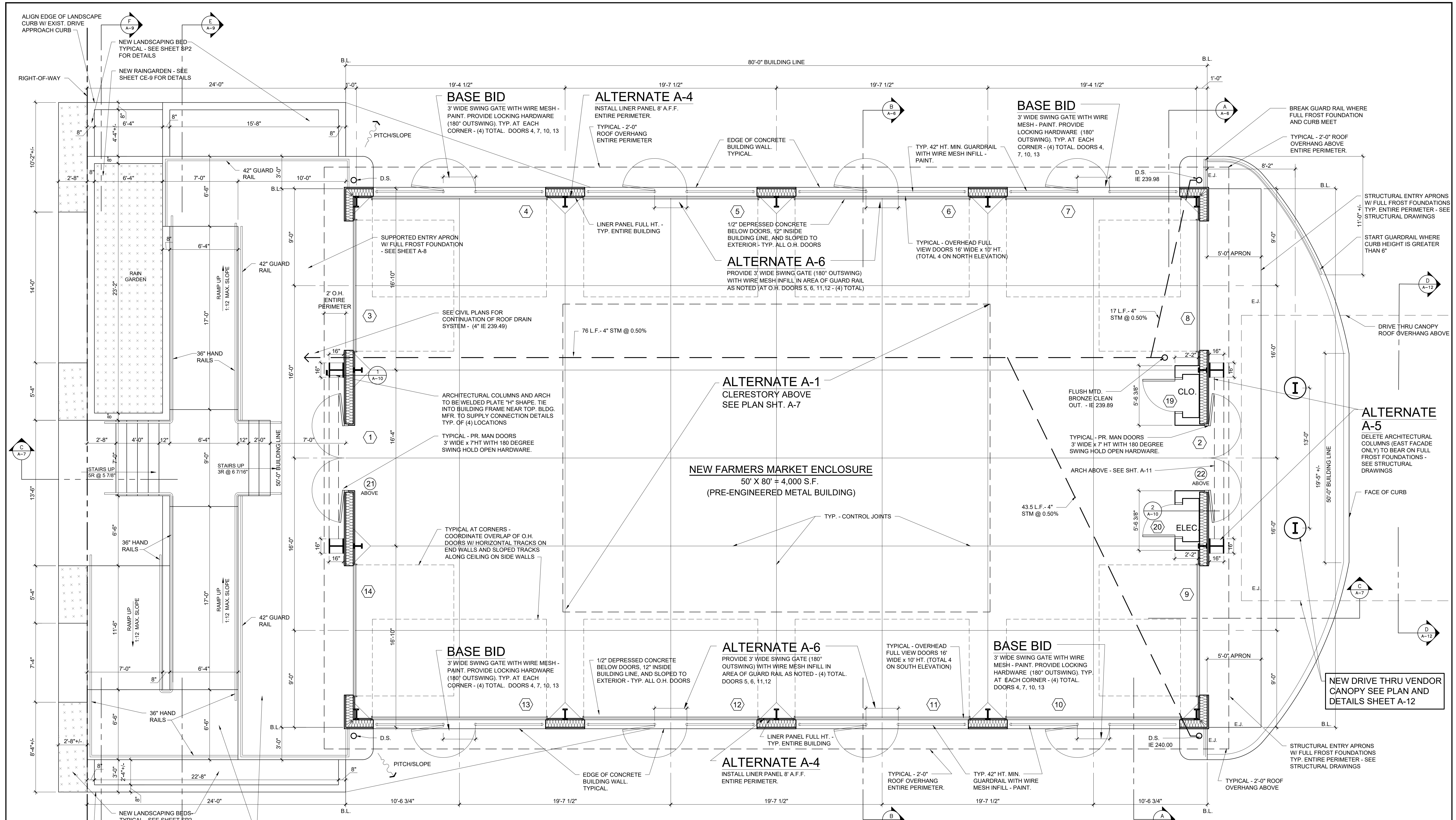
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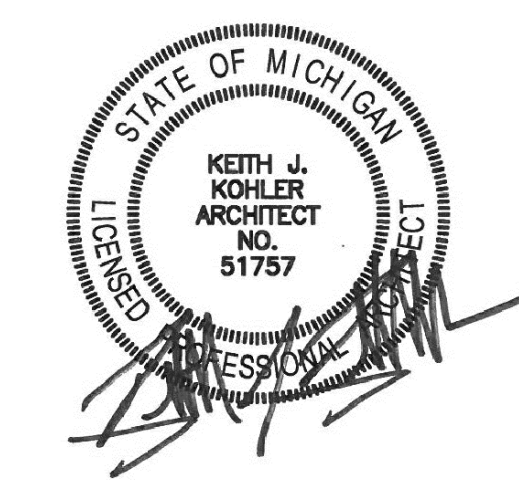
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| DR. DAB | CK. JJW | 4/11/17 BIDDING |
| | | 9/6/16 BIDDING |
| | | 7/6/16 FSP REVIEW |
| | | 6/20/16 REVISION |
| | | 5/31/16 CPC REVIEW |
| | | DATE STATUS |
| | | JOB# ITB No. 4454 |
| | | SHEET CE-9 |

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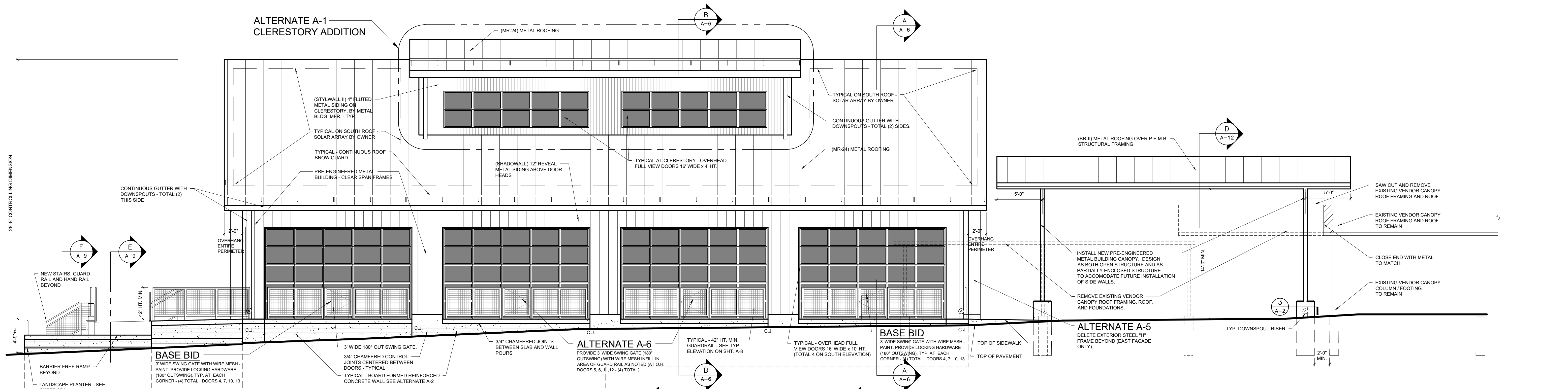
FLOOR PLAN
SCALE: 1/4" = 1'-0"

PLEASE NOTE: THE DRAWINGS ARE "DESCRIPTIVE" IN PRACTICE, PENDING SUBMITTAL AND ACCEPTANCE OF METAL BUILDING MANUFACTURER AS SELECTED BY SUCCESSFUL BIDDER, AND APPROVED BY THE ARCHITECT / OWNER. METAL BUILDING MANUFACTURER TO ENGINEER BUILDING SYSTEM AS REQUIRED TO ERECT BUILDING IN ACCORDANCE WITH THE GENERAL DESIGN AS INDICATED ON THE DRAWINGS. MODIFICATIONS TO THE STRUCTURAL FRAMING, WALL / ROOF PANELS AND OTHER BUILDING COMPONENTS, INCLUDING FINAL DETAILS, TO BE APPROVED BY THE ARCHITECT AND MANUFACTURERS BUILDING ENGINEER PRIOR TO SHOP DRAWING DRAWING APPROVAL.



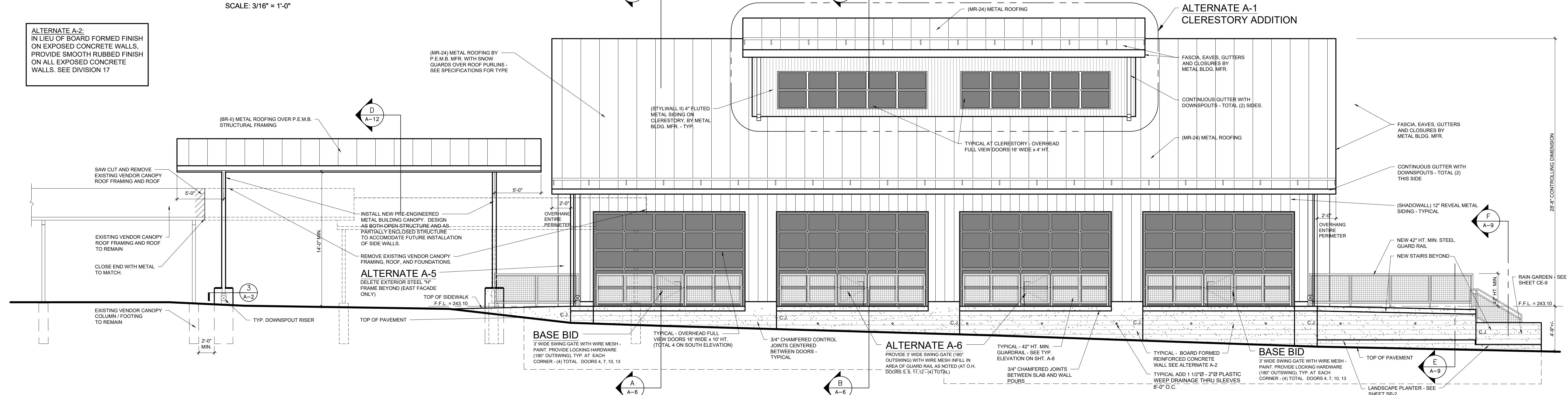
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| FLOOR PLAN NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107 | | DR. KJK | CK. MWK | 9/16/16 BIDDING |
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| | | 5/31/16 | CPC REVIEW | |
| | | JOB | ITB No. 4485 | |
| | | | | SHEET 1 OF 12 |

4/11/17 BIDDING

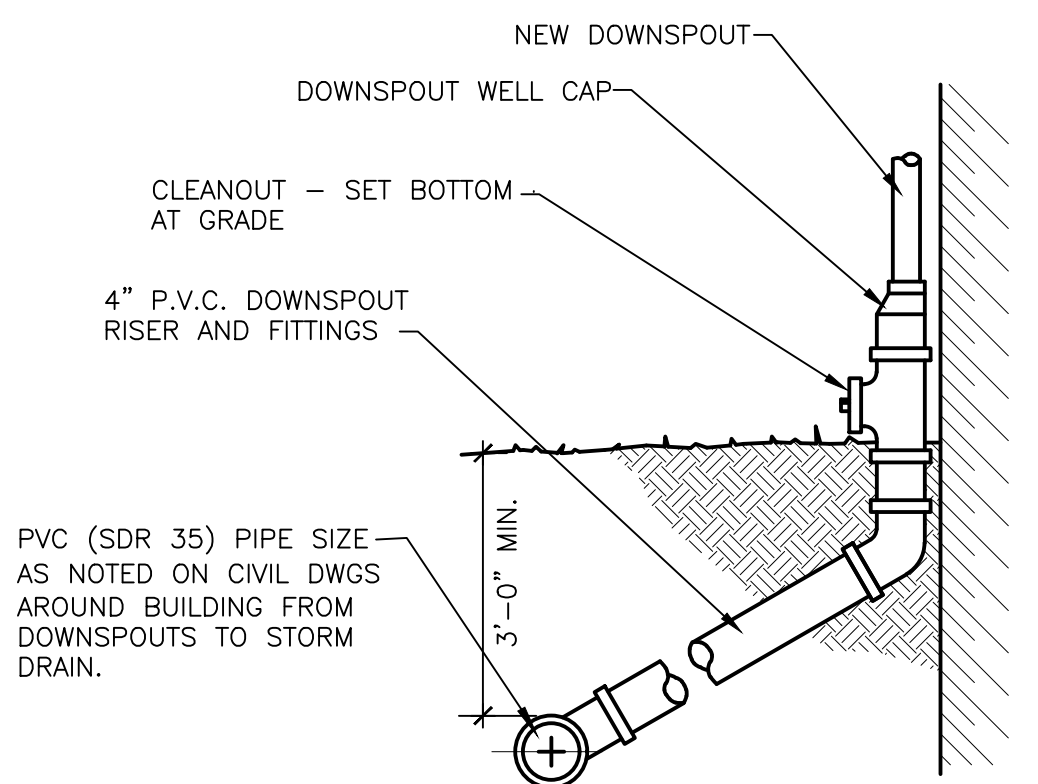


SOUTH ELEVATION
SCALE: 3/16" = 1'-0"

ALTERNATE A-2:
IN LIEU OF BOARD FORMED FINISH ON EXPOSED CONCRETE WALLS, PROVIDE SMOOTH RUBBED FINISH ON ALL EXPOSED CONCRETE WALLS. SEE DIVISION 17



NORTH ELEVATION
SCALE: 3/16" = 1'-0"



3 DOWNSPOUT RISER DETAIL
SCALE: 3/4" = 1'-0"

PLEASE NOTE: THE DRAWINGS ARE "DESCRIPTIVE" IN PRACTICE, PENDING SUBMITTAL AND ACCEPTANCE OF METAL BUILDING MANUFACTURER AS SELECTED BY SUCCESSFUL BIDDER, AND APPROVED BY THE ARCHITECT / OWNER. METAL BUILDING MANUFACTURER TO ENGINEER BUILDING SYSTEM AS REQUIRED TO ERECT BUILDING IN ACCORDANCE WITH THE GENERAL DESIGN AS INDICATED ON THE DRAWINGS. MODIFICATIONS TO THE STRUCTURAL FRAMING, WALL / ROOF PANELS AND OTHER BUILDING COMPONENTS, INCLUDING FINAL DETAILS, TO BE APPROVED BY THE ARCHITECT AND MANUFACTURERS BUILDING ENGINEER PRIOR TO SHOP DRAWING DRAWING APPROVAL.



| | | |
|--|--|--|
| EXTERIOR ELEVATIONS | | 4/11/17 BIDDING |
| NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107 | | 9/16/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 CPC REVIEW |
| KOHLER ARCHITECTURE, INC. 1118 WEST FRONT STREET ANN ARBOR, MICHIGAN 48106 PHONE: 734-242-6880, FAX: 734-242-6883 | | DR. KJK CK MWK COPYRIGHT 2017 KOHLER ARCHITECTURE, INC. #1627 |
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BUILDING CODE CHECKLIST
BUILDING CODE MICHIGAN 2012
Project Name New Ann Arbor Farmer's Market Enclosure
Address 315 Detroit Street, Ann Arbor, MI 48104
Section #1627

| ISSUE | REF | REQMT. | DATA / COMMENTS |
|--|---------|--------|---|
| USE AND OCCUPANCY CLASSIFICATION Chapter 3 | | | |
| Classification | 303.1 | | Group A-3 - Community Hall |
| GENERAL BUILDING HEIGHT & AREAS Chapter 5 | | | |
| General limits | 503.1.2 | | Type VB |
| Allowable limits | T503 | | Height: 1-story (40') Area: 6,000 S.F. |
| Area modifications | 506 | | Not Applicable New Enclosure is less than 6,000 S.F. |
| Buildings on Same Lot | 503.1.2 | | Two or more buildings on the same lot shall be considered as portions of one building if the aggregate building area of the buildings are within the limitations of table 503 as modified by sections 504 + 506. The provisions of this code applicable to the aggregate building shall be applicable to each building. |

| TYPES OF CONSTRUCTION Chapter 6 | | | |
|--|------|--|--|
| Construction Classification | 602 | | |
| Fire rating of building elements | T601 | | Primary Structural Frame 0Hr. Bearing Walls: Exterior 0Hr. Interior 0Hr. Non-Bearing Walls: Exterior 0Hr. Interior 0Hr. Floor Construction 0Hr. Roof Construction 0Hr. |

| INTERIOR FINISHES Chapter 8 | | | |
|------------------------------------|--------|--|--|
| Finish requirements by occupancy | T803.9 | | |

| FIRE PROTECTION SYSTEMS Chapter 9 | | | |
|--|-----------|--|---|
| Sprinklers | 903.2.1.3 | | Group A-3 - Not required if less than 12,000 S.F. and occupant load is less than 300. |
| Fire extinguishers | 906 | | Type 2-A (1 per 3,000 S.F.) Mount top at max. 60" above finished floor |
| Fire alarms | 907.2.1 | | Group A Not Required if less than 300 occupants |

BUILDING CODE CHECKLIST

| ISSUE | REF | REQMT. | DATA / COMMENTS |
|-------|-----|--------|-----------------|
|-------|-----|--------|-----------------|

MEANS OF EGRESS Chapter 10

| | | | |
|----------------------------|---------------------------|--|---|
| Elevation change | 1003.5, 1008.1.5 | | Floor elevation shall be the same on both sides of door |
| Floor area / Occupant Load | 1004, T1004.1.2, 1004.1.2 | | Assembly 1/15 S.F. gross (4000 / 15) = 267 300 people maximum |
| Posting occupant load | 1004.3 | | Every space that is assembly occupancy must have a sign posting occupant load. |
| Egress width | 1005.3 | | Egress = 0.27 Occupant without sprinklers Stairways = 0.37 Occupant without sprinklers |
| Accessible means of egress | 1007 | | Min. 1 accessible means of egress required |
| Doors | 1008 | | Min. 34" wide exit - (36" wide for ADA) |
| Stairways | 1009, 1022 | | 1009.10 - Max 12" rise between landings |
| Stair width | 1009.4 | | Min 44" width, 80" Headroom |
| Treads & risers | 1009.7.2 | | Risers - Min. 4", Max 7" Tread - Min. 11" |
| Exit signs | 1011 | | Required in areas that have more than 1 exit |
| Handrails | 1012 | | Must extend min 12" beyond top riser Must extend min 1 tread beyond bottom riser |
| Ramps | 1010 | | Max slope = 1:12, Max Rise 30" between landings |
| Number of exit access | T1015.1 | | 2 exits required > 49 people |
| Travel distance | 1016.1, T1016.2 | | 200 ft. without sprinkler system |
| Corridors | 1018, T1018.1 | | greater than 30 people - 1 hr. fire rating |
| Number of exits | 1021 | | 2 exits required |

INTERIOR ENVIRONMENT Chapter 12

| | | | |
|---------------------|--------|--|--|
| Natural ventilation | 1203.4 | | Min openable area is 4% of floor area being ventilated |
| Natural light | 1205.2 | | Min glazed area is 8% of floor area of room served |

ENERGY EFFICIENCY Chapter 13

See Envelope Compliance Certificate his Sheet.

| ISSUE | REF | REQMT. | DATA / COMMENTS |
|--|-----------|--------|--|
| ROOF ASSEMBLIES & ROOFTOP STRUCTURES Chapter 15 | | | |
| Fire classification | T1505.1 | | |
| Metal panel | T1507.4.3 | | 1. The minimum slope for lapped, non-soldered seam metal roofs without applied lap sealant shall be three units vertical in 12 units horizontal (25-percent slope). 2. The minimum slope for lapped, non-soldered seam metal roofs with applied lap sealant shall be one-half unit vertical in 12 units horizontal (4-percent slope). Lap sealants shall be applied in accordance with the approved manufacturer's installation instructions. 3. The minimum slope for standing seam of roof systems shall be one-quarter unit vertical in 12 units horizontal (2-percent slope). (Section 1507.4.2) |
| Shingles | T1507.8 | | Wood shingles shall be installed on slopes of three units vertical in 12 units horizontal (3:12) or greater. |
| "Flat" roofs | 1507.10 | | Built-up roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage, except for coal-tar built-up roofs that shall have a design slope of a minimum one-eighth unit vertical in 12 units horizontal (1-percent slope). (Section 1507.10.1) |

| STRUCTURAL DESIGN Chapter 16 | | | |
|-------------------------------------|---------|--|--------------------|
| Building classification | T1604.5 | | Review w/ engineer |
| Live loads | T1607.1 | | Review w/ engineer |

| SPECIAL INSPECTIONS & TESTS Chapter 17 | | | |
|---|-----------|--|---------------------------------------|
| Steel inspections | T1704.3 | | Applies if over 25,000 SF or 15' high |
| Concrete inspections | T1704.4 | | |
| Level 1 inspections | T1704.5.1 | | Applies to non-essential facilities |
| Level 2 inspections | T1704.5.3 | | Applies to essential facilities |

PLUMBING CODE CHECKLIST

| USE GROUP | REF | REQMT. | DATA / COMMENTS |
|-----------|-----|--------|-----------------|
|-----------|-----|--------|-----------------|

PLUMBING FIXTURES Chapter 4

| | | | |
|---------------------------------|---------|--|--|
| Location | 403.3.3 | | Public and employee toilet facilities shall be barrier free accessible and the path of travel to such facilities shall not exceed a distance of 500 feet. |
| Mercantile Group M (388 People) | T403.1 | | Market Days Water Closets 1 per 500 (Male Female) = 1 W.C. Lavatories 1 per 750 (Male Female) = 1 Drinking Fountain 1 per 1,000 Service Sink 1 |
| Assembly Group A-3 (300 Max.) | T403.1 | | Special Events/Weddings Water Closets 1 per 125 (Male) = 1 W.C. + 1 Urinal Water Closets 1 per 65 (Female) = 3 W.C. Lavatories 1 per 200 (Male Female) = 1 Drinking Fountains 1 per 500 Service Sink 1 |

Please note that the existing Farmers Market office building restrooms will be renovated by the city of Ann Arbor to update the required plumbing fixture count barrier free accessibility.



| Project Information | | | | | | |
|-------------------------------|--|----------------------|--|--|--|--|
| Energy Code: | 90.1 (2007) Standard | | | | | |
| Project Title: | A2 FM - V&J Clerestory - All Glass O.H. WD Doors | | | | | |
| Location: | Ann Arbor, Michigan | | | | | |
| Climate Zone: | 6a | | | | | |
| Project Type: | New Construction | | | | | |
| Vertical Glazing / Wall Area: | 56% | | | | | |
| Construction Site: | Owner/Agent: | Designer/Contractor: | | | | |

| Building Area | Floor Area |
|--------------------------------------|------------|
| 1-Convention Center - Nonresidential | 4000 |

Envelope Assemblies

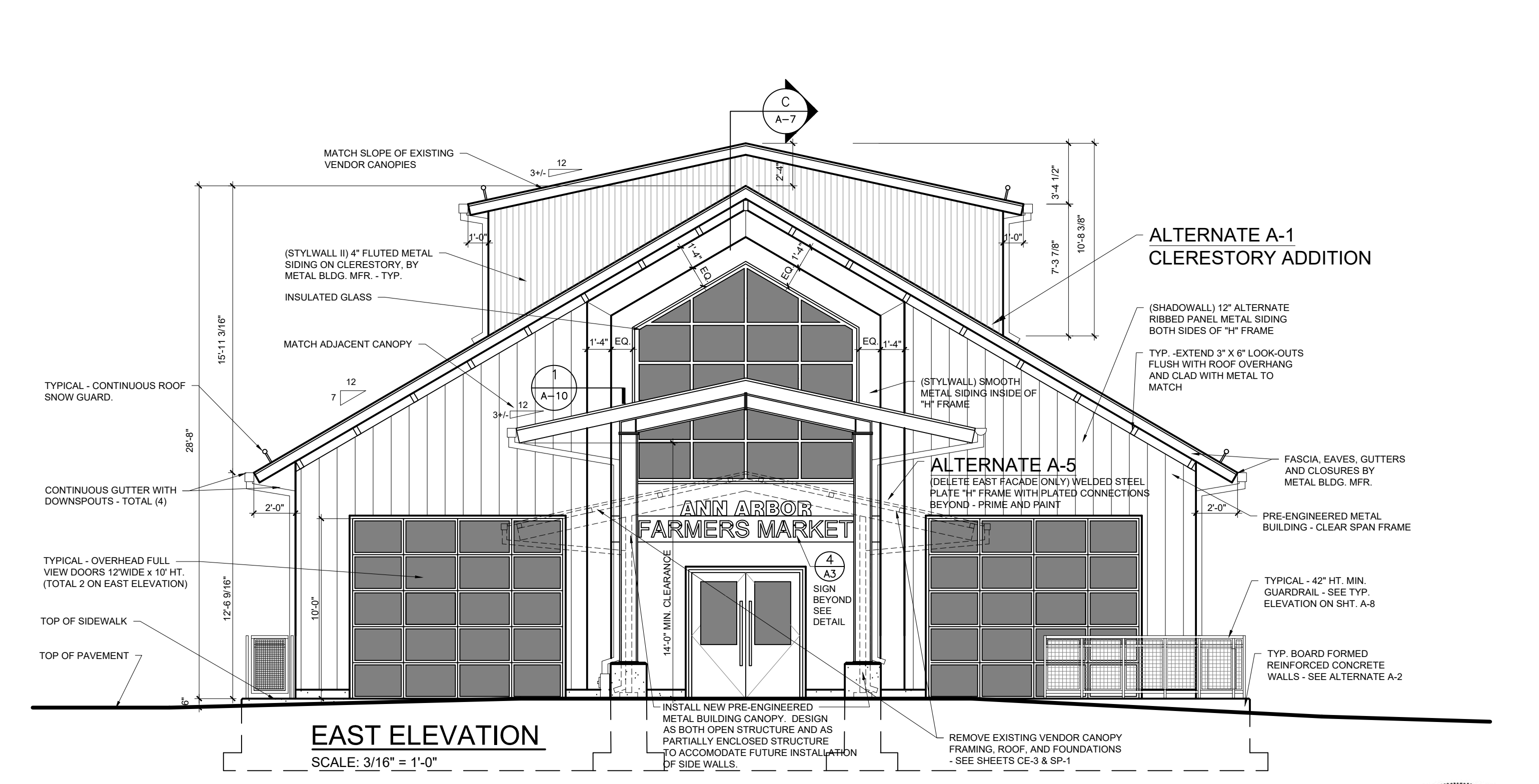
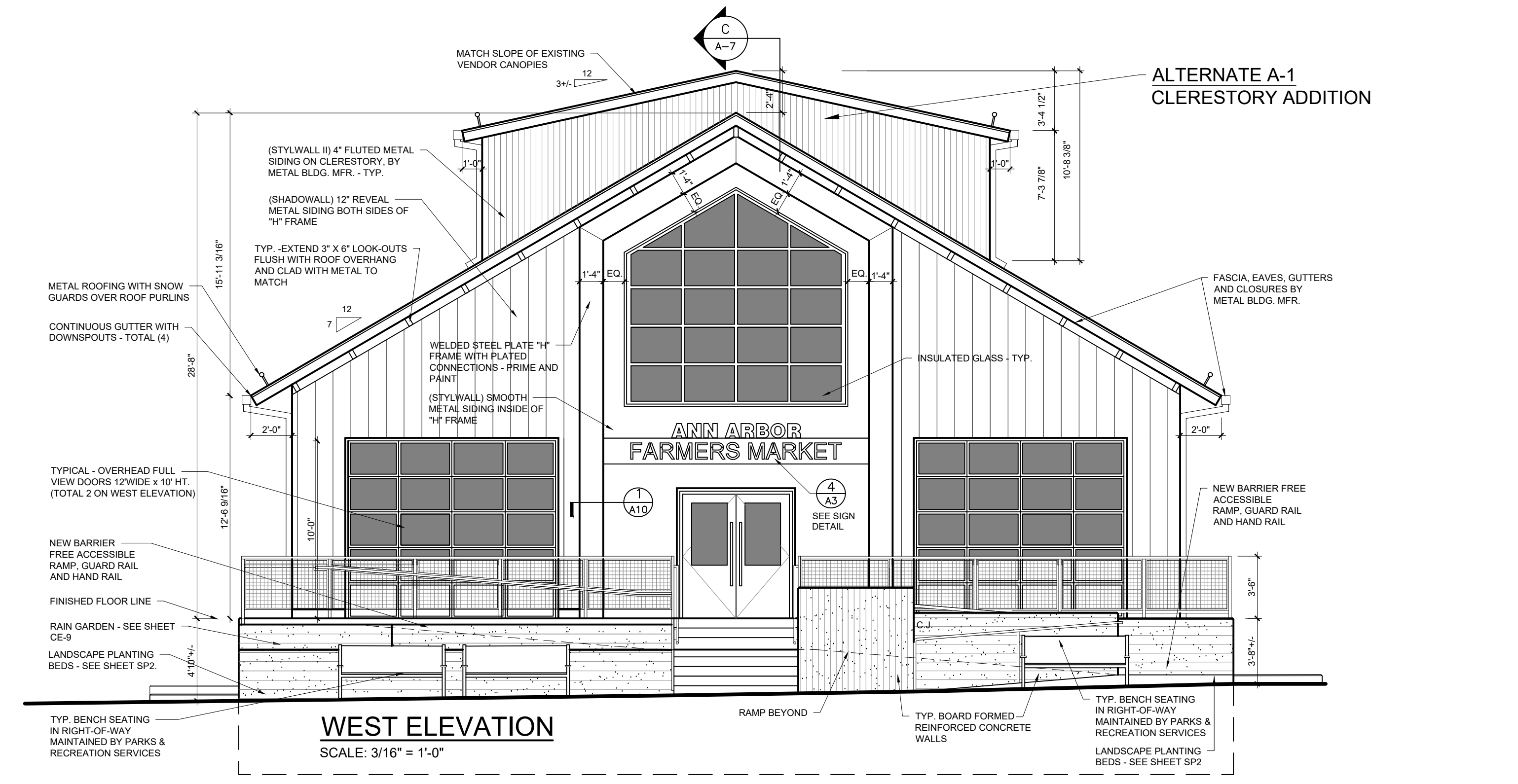
| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | Proposed U-Factor | Budget U-Factor |
|--|-------------------------|----------------|---------------|-------------------|-----------------|
| Roof: Metal Building, Standing Seam, (Bldg. Use 1 - Convention Center) | 2320 | 0.0 | 19.0 | 0.051 | 0.065 |
| Floor: Unheated Slab-On-Grade, Vertical 2 ft., (Bldg. Use 1 - Convention Center) (c) | 252 | | 10.0 | 0.540 | 0.540 |
| (NORTH) | | | | | |
| Ext. Wall: Metal Building Wall, Single Layer Mineral Fiber, (Bldg. Use 1 - Convention Center) (b) | 1181 | 13.0 | 0.0 | 0.113 | 0.113 |
| Door, Perf. Specs.: Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b) | 145 | | | 0.284 | 0.550 |
| Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b) | 62 | | | 0.480 | 0.800 |
| Door, Perf. Specs.: Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b) | 240 | | | 0.284 | 0.550 |
| Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b) | 142 | | | 0.480 | 0.450 |
| (EAST) | | | | | |
| Ext. Wall: Metal Building Wall, Single Layer Mineral Fiber, (Bldg. Use 1 - Convention Center) | 1020 | 13.0 | 0.0 | 0.113 | 0.113 |
| Door, Perf. Specs.: Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b) | 62 | | | 0.480 | 0.800 |
| Door, Perf. Specs.: Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b) | 240 | | | 0.284 | 0.550 |
| Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b) | 142 | | | 0.480 | 0.450 |
| (SOUTH) | | | | | |
| Ext. Wall: Metal Building Wall, Single Layer Mineral Fiber, (Bldg. Use 1 - Convention Center) | 1181 | 13.0 | 0.0 | 0.113 | 0.113 |
| Door, Perf. Specs.: Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b) | 145 | | | 0.284 | 0.550 |
| Door, Perf. Specs.: Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b) | 840 | | | 0.284 | 0.550 |
| (WEST) | | | | | |
| Ext. Wall: Metal Building Wall, Single Layer Mineral Fiber, (Bldg. Use 1 - Convention Center) | 1020 | 13.0 | 0.0 | 0.113 | 0.113 |
| Door, Perf. Specs.: Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b) | 62 | | | 0.480 | 0.800 |
| Door, Perf. Specs.: Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b) | 240 | | | 0.284 | 0.550 |
| Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b) | 142 | | | 0.480 | 0.450 |

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
 (b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
 (c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope Passes: Design 4% better than code

Envelope Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 4.3.4 and to comply with the mandatory requirements listed in the Inspection Checklist.

KEITH J. KOHLER ARCHITECT
 Name: Title: Signature: Date: 7.29.16

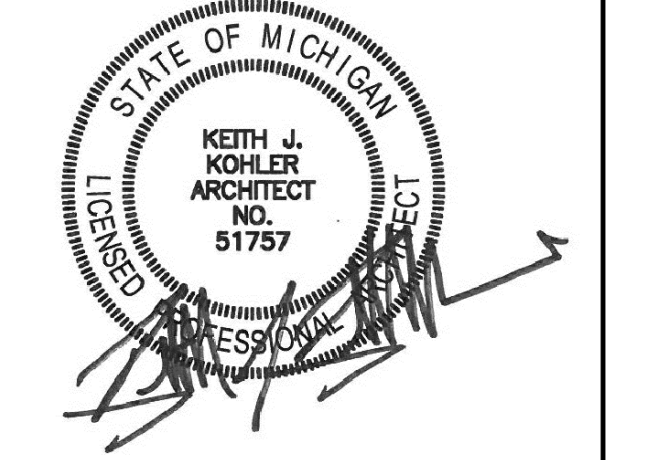


PLEASE NOTE: THE DRAWINGS ARE "DESCRIPTIVE" IN PRACTICE, PENDING SUBMITTAL AND ACCEPTANCE OF METAL BUILDING MANUFACTURER AS SELECTED BY SUCCESSFUL BIDDER, AND APPROVED BY THE ARCHITECT / OWNER. METAL BUILDING MANUFACTURER TO ENGINEER BUILDING SYSTEM AS REQUIRED TO ERECT BUILDING IN ACCORDANCE WITH THE GENERAL DESIGN AS INDICATED ON THE DRAWINGS. MODIFICATIONS TO THE STRUCTURAL FRAMING, WALL / ROOF PANELS AND OTHER BUILDING COMPONENTS, INCLUDING FINAL DETAILS, TO BE APPROVED BY THE ARCHITECT AND MANUFACTURERS BUILDING ENGINEER PRIOR TO SHOP DRAWING APPROVAL.

EXTERIOR ELEVATIONS
 NEW FARMERS MARKET ENCLOSURE
 AT ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
 301 EAST HURON STREET, ANN ARBOR, MI 48107

DR. KJK CK. MWK
 KOHLER ARCHITECTURE, INC.
 #1627
 1118 WEST FROTH STREET
 ANN ARBOR, MICHIGAN 48104
 PHONE: 734-242-6880, FAX: 734-242-6883

9/16/16 BIDDING
 7/6/16 ESP REVIEW
 6/20/16 REVISION
 5/31/16 CPC REVIEW
 DATE STATUS
 JOB ITB No. 4485
 SHEETA3 OF 12





PERSPECTIVE VIEW
NO SCALE LOOKING NORTHEAST



PERSPECTIVE VIEW
NO SCALE LOOKING SOUTHEAST



PERSPECTIVE VIEW
NO SCALE LOOKING WEST



PERSPECTIVE VIEW
NO SCALE LOOKING NORTHWEST

PLEASE NOTE: THE PERSPECTIVE VIEWS ON THIS SHEET ARE FOR GENERAL MASSING AND DESIGN CONCEPT ONLY. THESE VIEWS ARE NOT TO BE USED FOR CONSTRUCTION OR DETAIL PURPOSES.



| | | |
|--|--|--------------------------------|
| PERSPECTIVE VIEWS | | 4/11/17 BIDDING |
| NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107 | | DR. KJK CK MWK 9/16/16 BIDDING |
| KOHLER ARCHITECTURE, INC. 1118 WEST FRONT STREET MONROE, MICHIGAN 48151 PHONE: 734-242-6880, FAX: 734-242-6883 | | 7/6/16 FSP REVIEW |
| | | 6/20/16 REVISION |
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| | | JOB ITB No. 4485 |
| | | SHEET A4 OF 12 |



SITE SECTION

NO SCALE LOOKING SOUTH



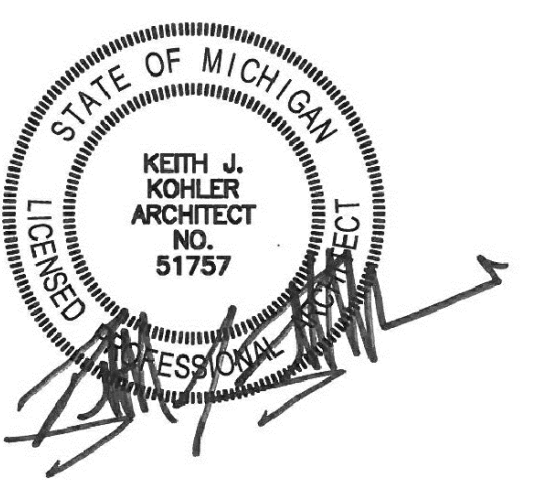
SITE SECTION

NO SCALE LOOKING NORTH



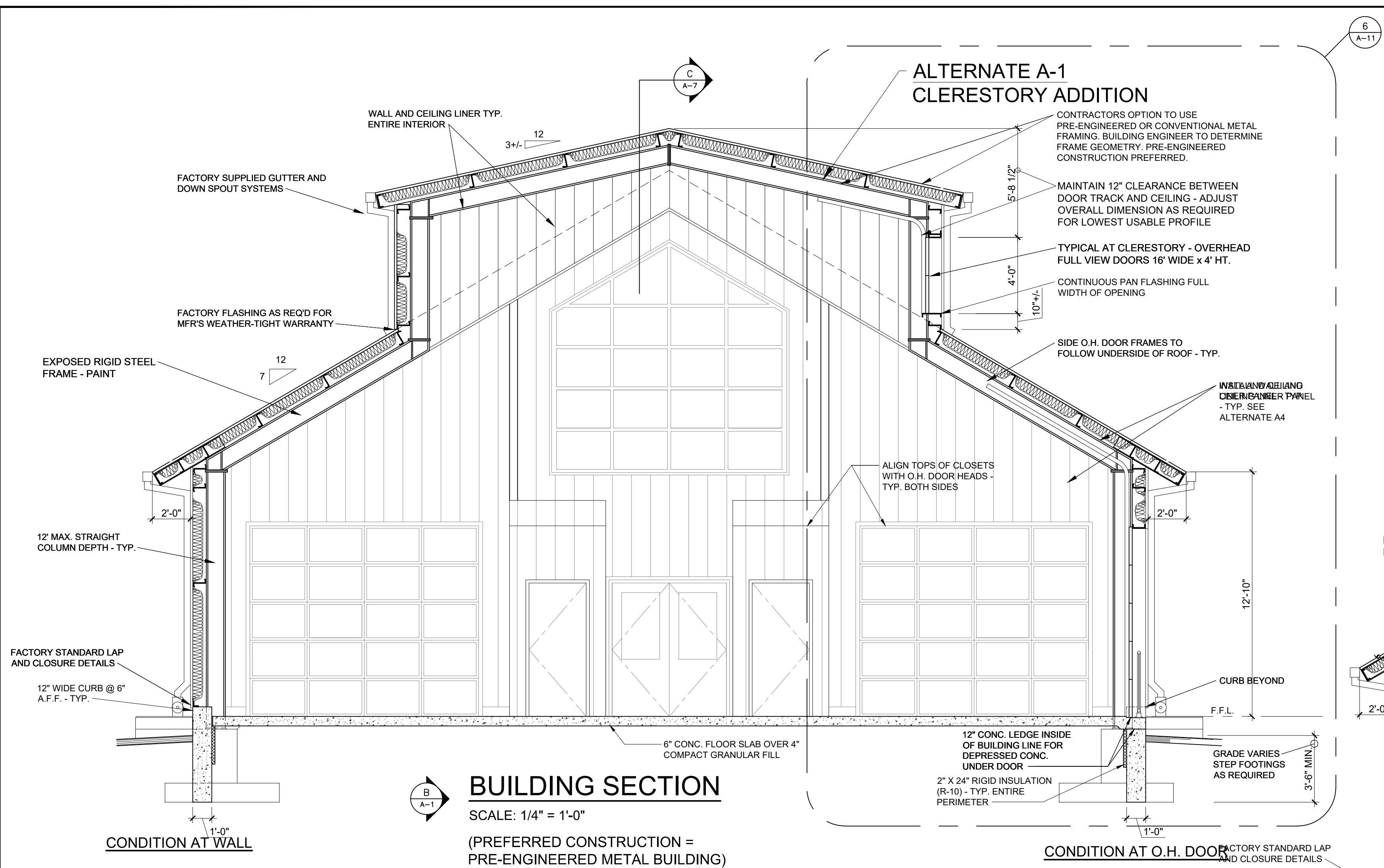
SITE SECTION

NO SCALE LOOKING EAST



PLEASE NOTE: THE SITE SECTIONS ON THIS SHEET ARE FOR GENERAL MASSING AND DESIGN CONCEPT ONLY. THESE VIEWS ARE NOT TO BE USED FOR CONSTRUCTION OR DETAIL PURPOSES.

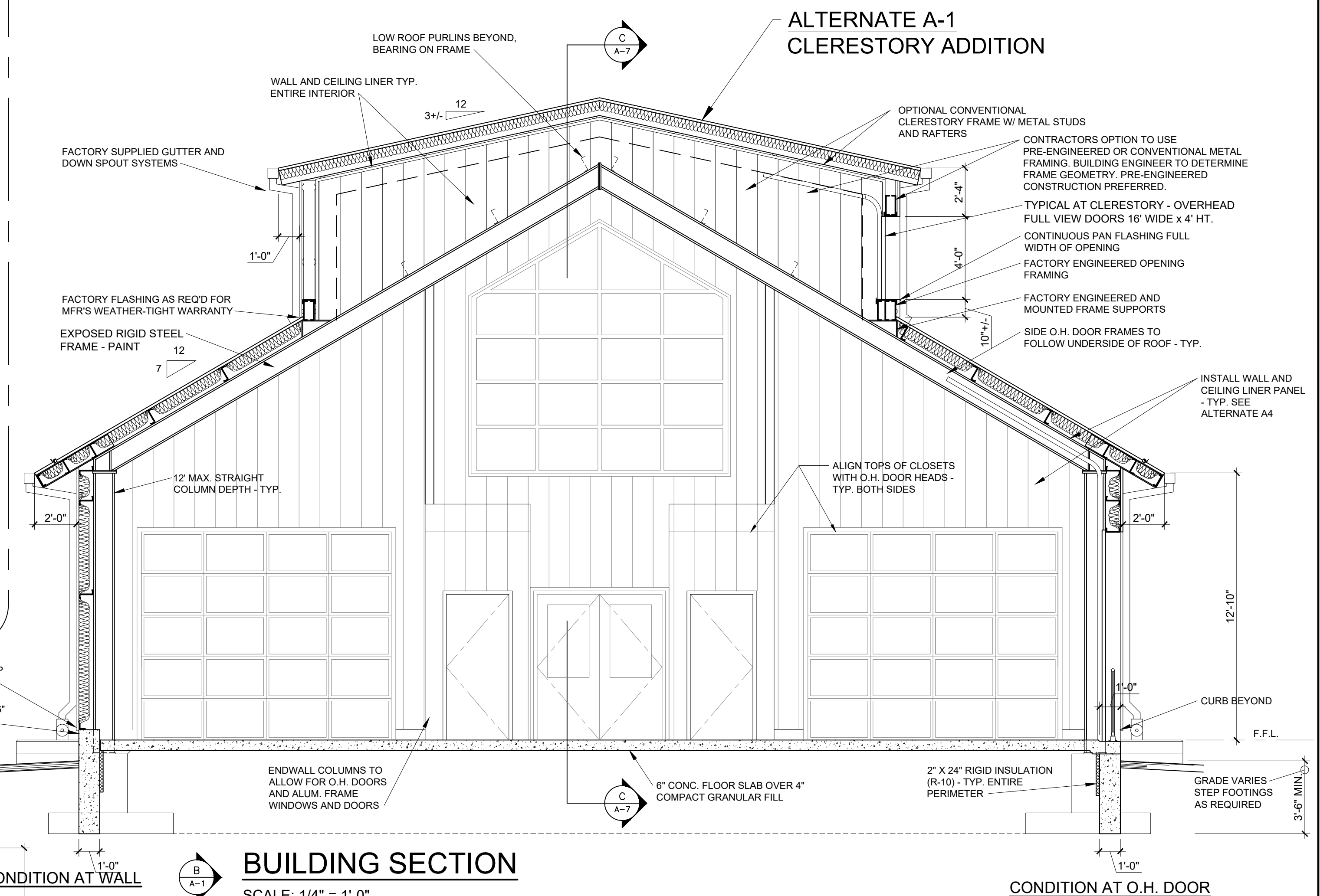
| SITE SECTIONS | | 4/11/17 BIDDING |
|---|--------------------|--------------------|
| NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET <small>315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI</small> FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES <small>301 EAST HURON STREET, ANN ARBOR, MI 48107</small> | DR. KJK | 9/16/16 BIDDING |
| | CK MWK | 7/6/16 FSP REVIEW |
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| | ARCHITECTURE, INC. | DATE STATUS |
| #1627 | JOB ITB No. 4485 | SHEET A5 OF 12 |
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BUILDING SECTION

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

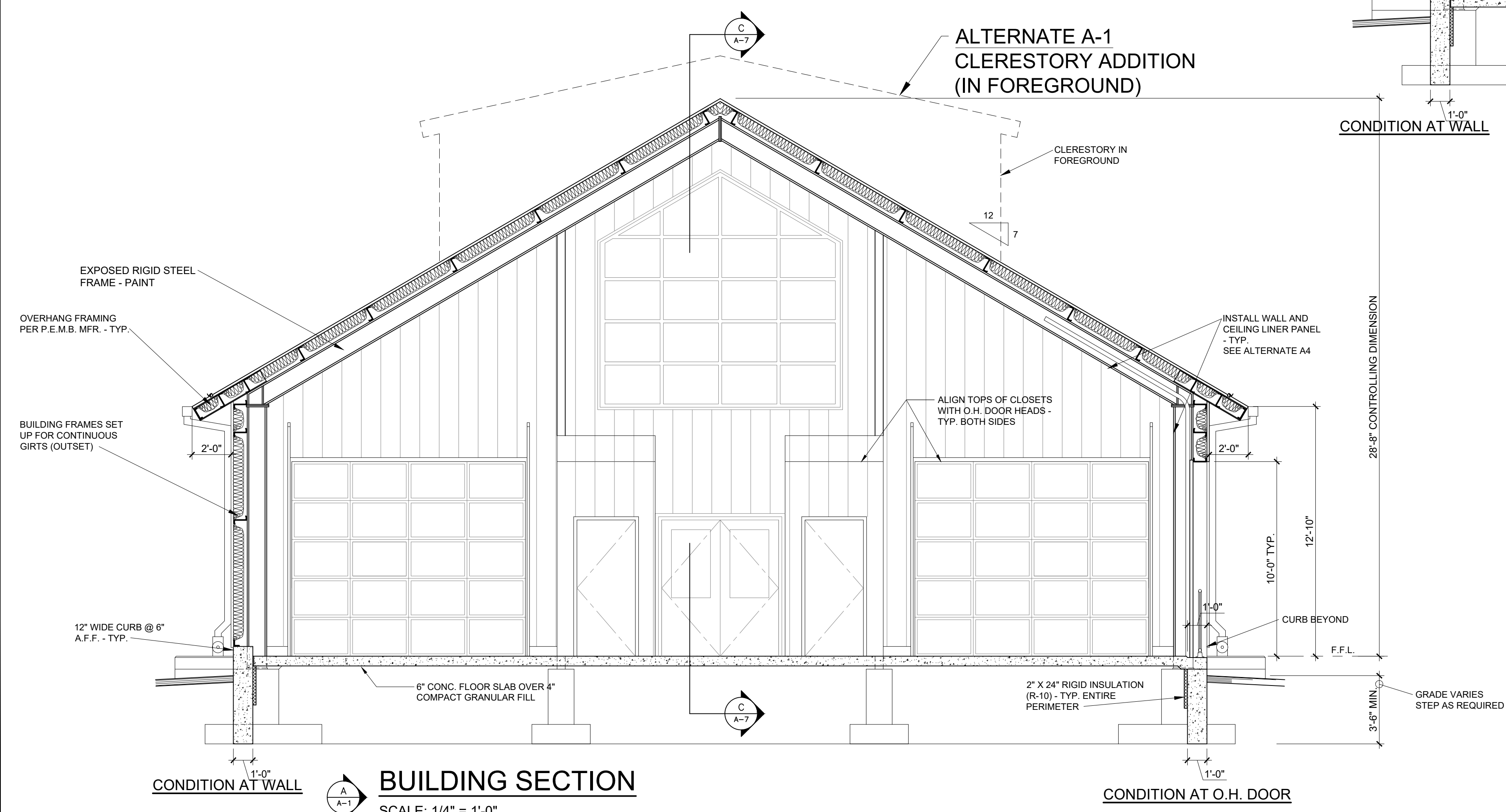
(PREFERRED CONSTRUCTION =
PRE-ENGINEERED METAL BUILDING)



BUILDING SECTION

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

(OPTIONAL CONSTRUCTION =
PRE-ENGINEERED METAL BUILDING W/
CONVENTIONAL CLERESTORY FRAMING)

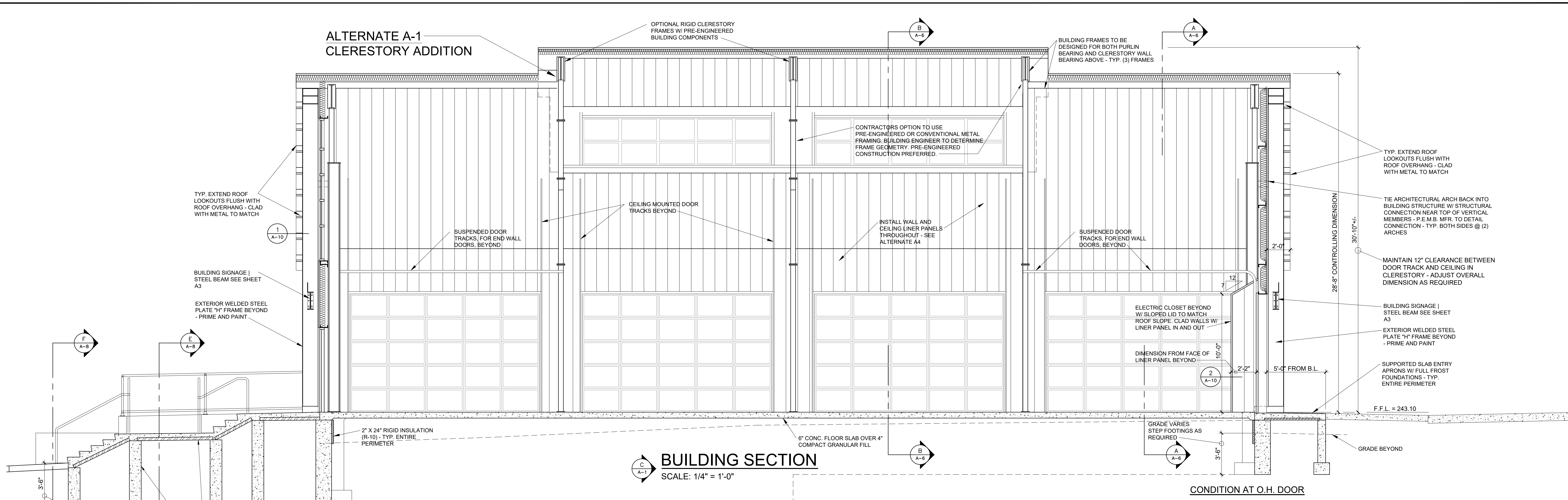


BUILDING SECTION

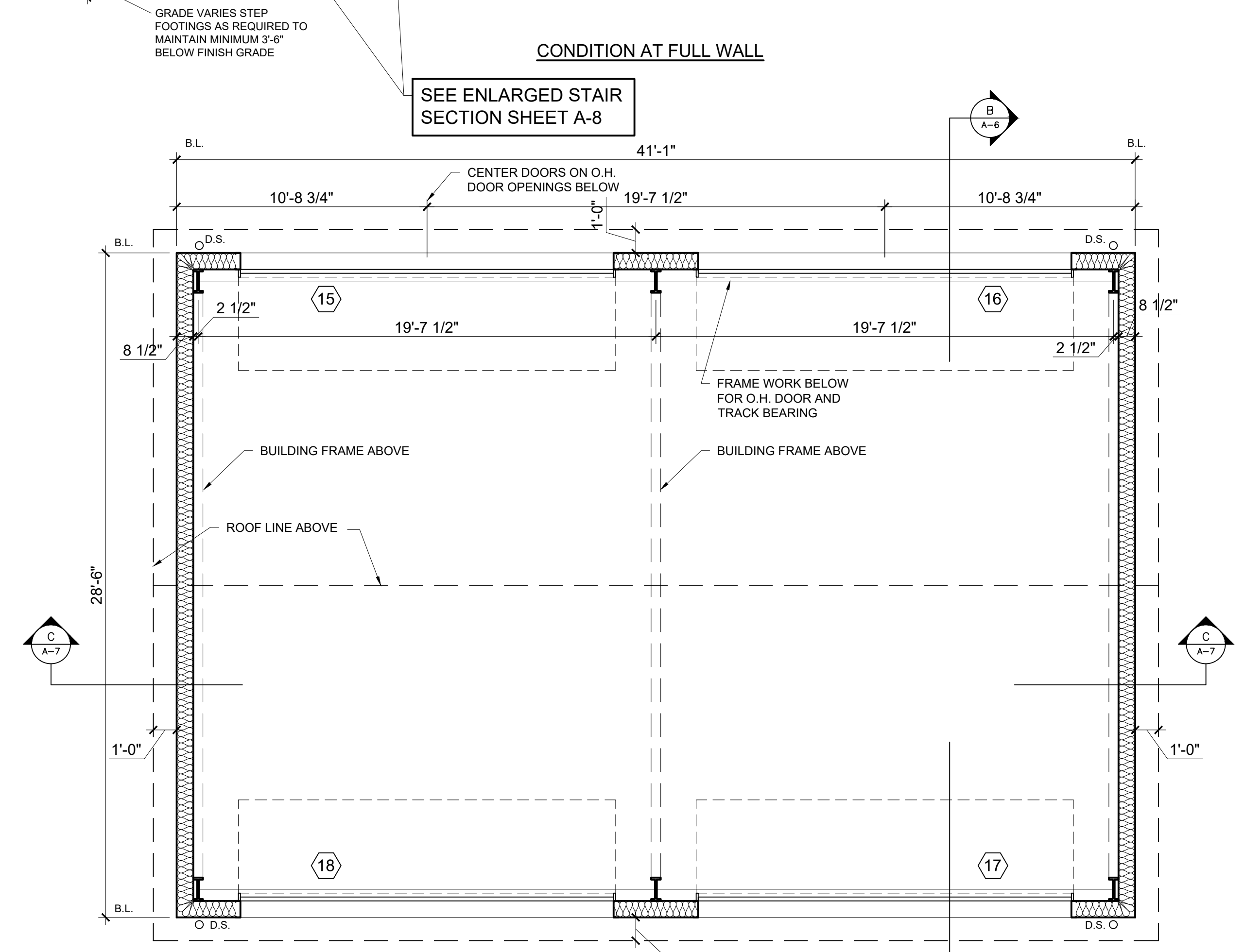
SCALE: 1/4" = 1'-0"



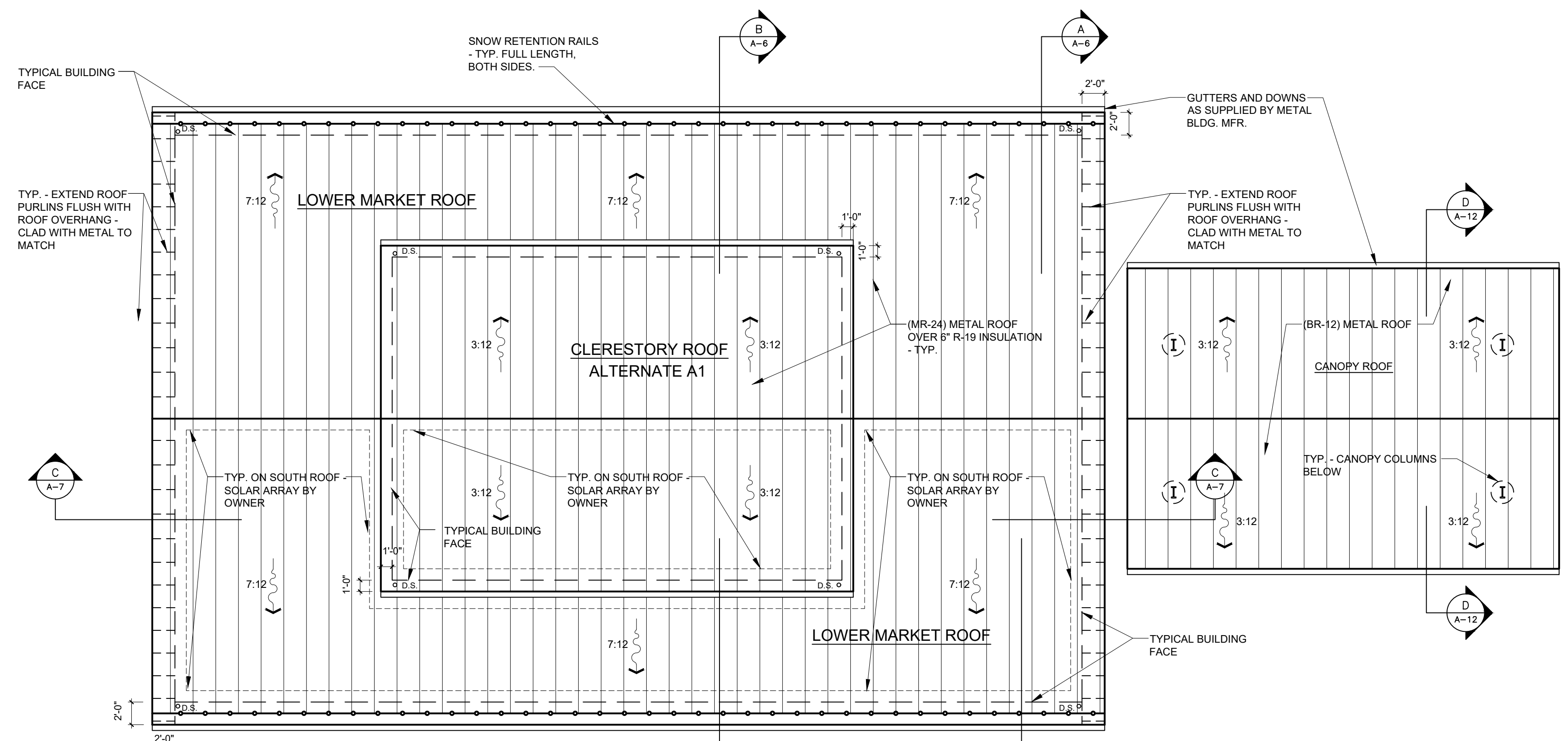
| | | |
|--|--|--|
| BUILDING SECTIONS | | 4/11/17 BIDDING |
| NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107 | | DR. KJK CK. MWK 9/16/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 CPC REVIEW |
| KOHLER ARCHITECTURE, INC. 1118 WEST FRONT STREET MONROE, MICHIGAN 48151 PHONE: 734-242-6880, FAX: 734-242-6883 | | © COPYRIGHT 2017 KOHLER ARCHITECTURE, INC. #1627 JOB #1627 ITB No. 4485 SHEETA6 OF 12 |
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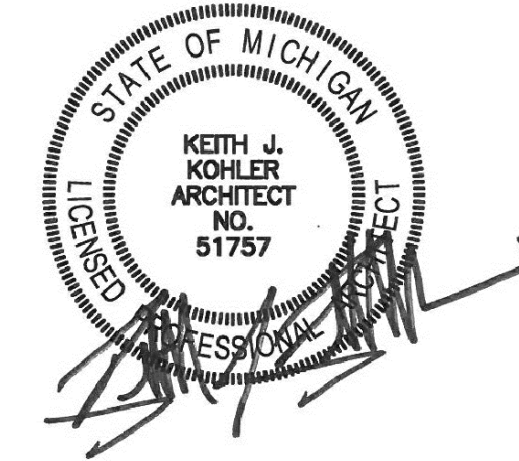
BUILDING SECTION
SCALE: 1/4" = 1'-0"



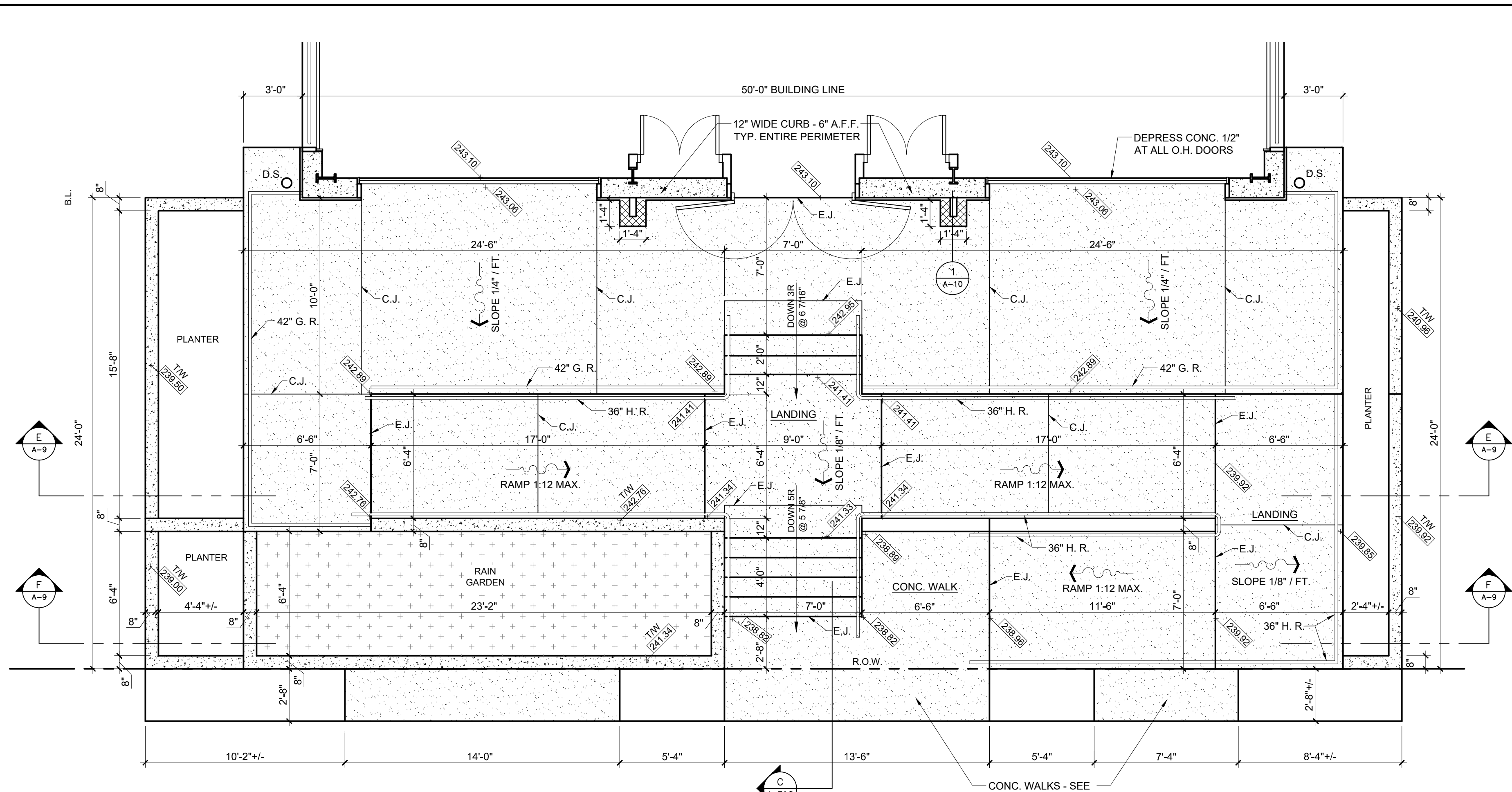
CLERESTORY PLAN
SCALE: 1/4" = 1'-0"
(ALTERNATE A-1)



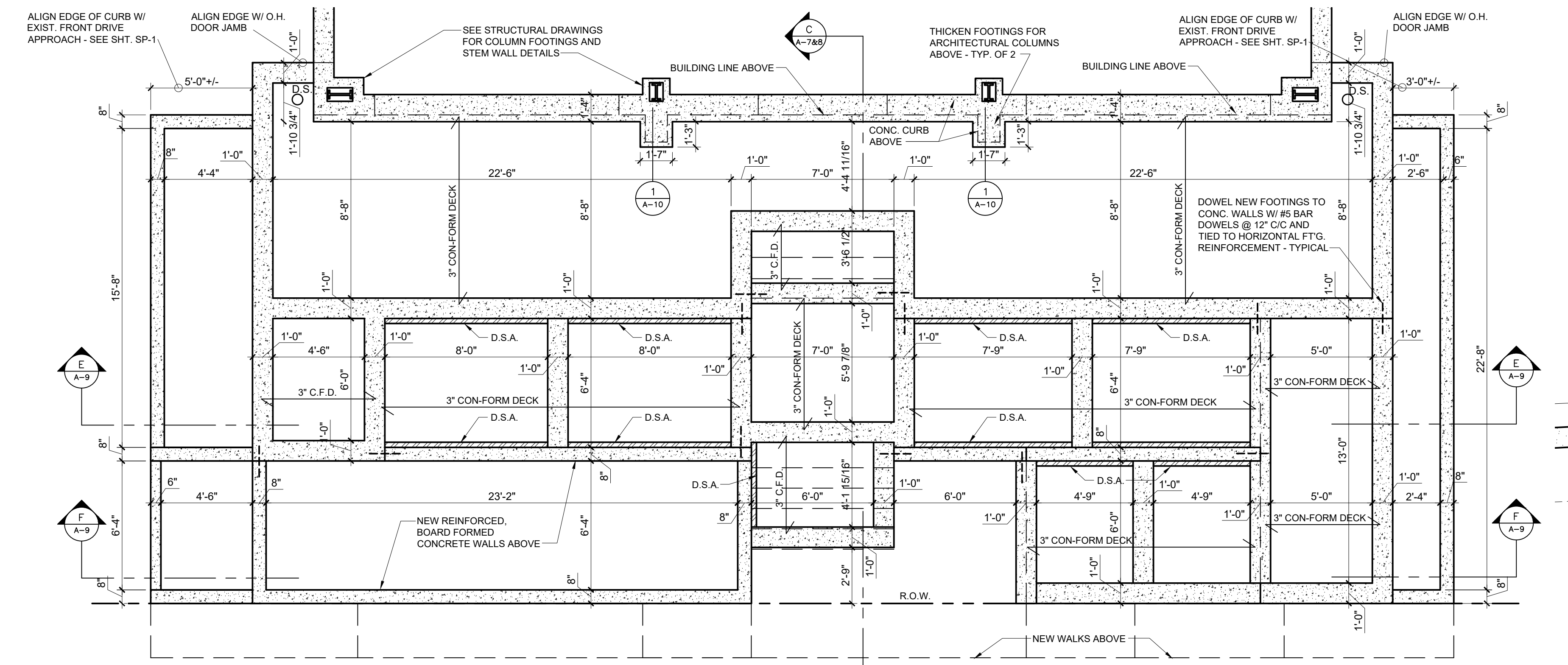
ROOF PLAN
SCALE: 1/8" = 1'-0"



| | | |
|--|--------|--------------------|
| BUILDING SECTIONS NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107 | | 4/11/17 BIDDING |
| | | 9/16/16 BIDDING |
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| SHEET 7 OF 12 | | DATE STATUS |



RAMP AND STAIR PLAN
SCALE: 1/4" = 1'-0"



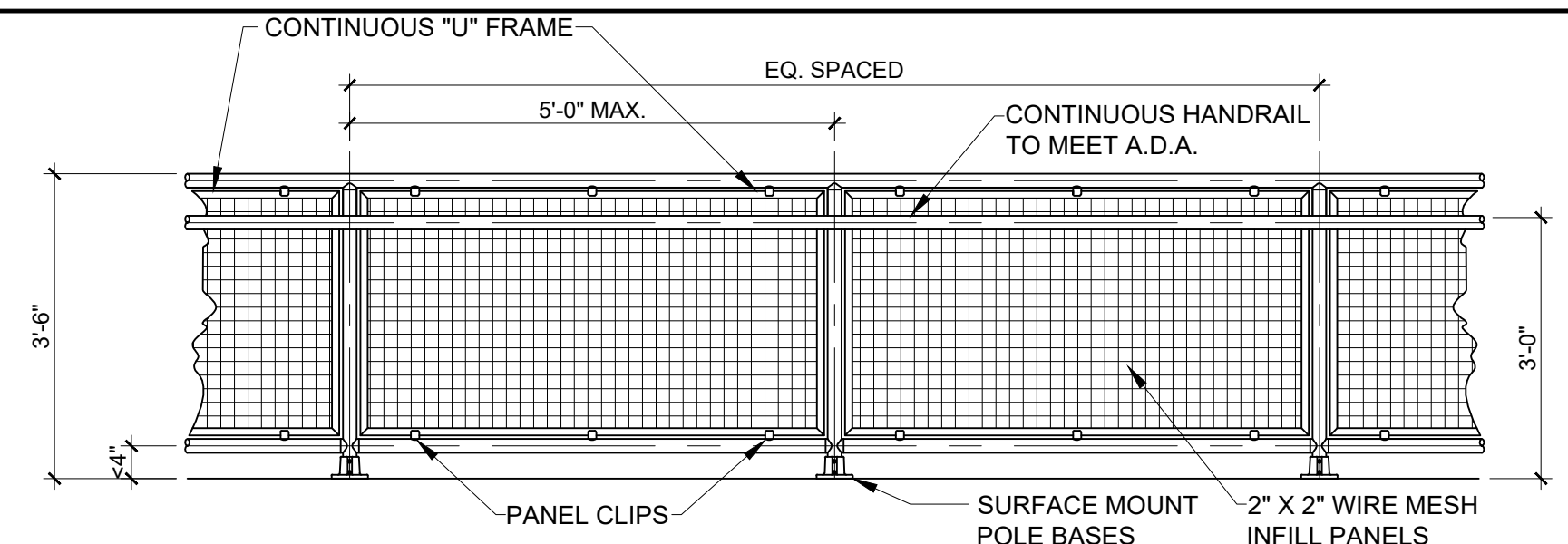
RAMP AND STAIR FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

NOTE:
ALL FOOTINGS ABUTTING ONE ANOTHER TO BE TIED TOGETHER W/ 24" X 24" #5 HOOKED BARS @ 12" C/C IN ALL DIRECTIONS, CREATING A CONTINUOUS AND INTEGRAL FOUNDATION

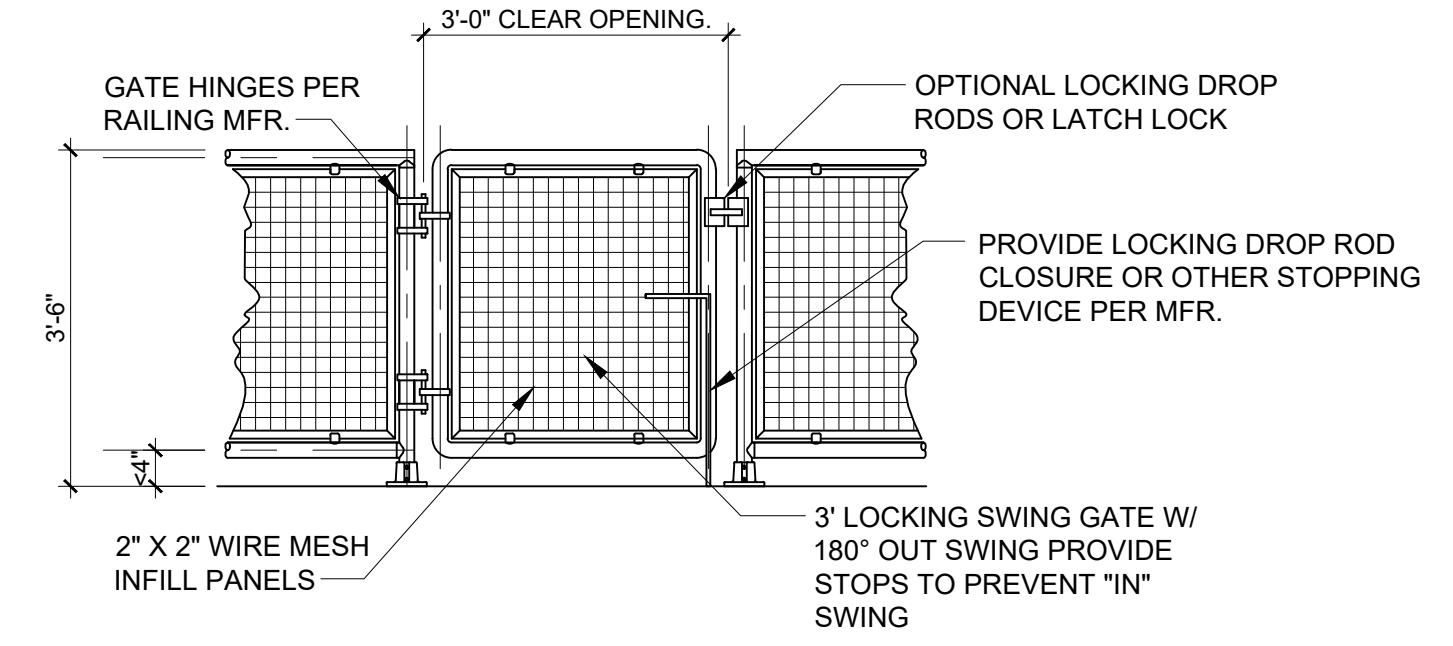
CONTRACTORS OPTION:
INSTALL UNFORMED TRENCH FOOTINGS BELOW GRADE W/ BOARD FORMED EXPOSED WALLS ABOVE.

NOTE:
ALL EXPOSED WALLS ABOVE GRADE TO BE BOARD FORMED - SEE SPECIFICATIONS

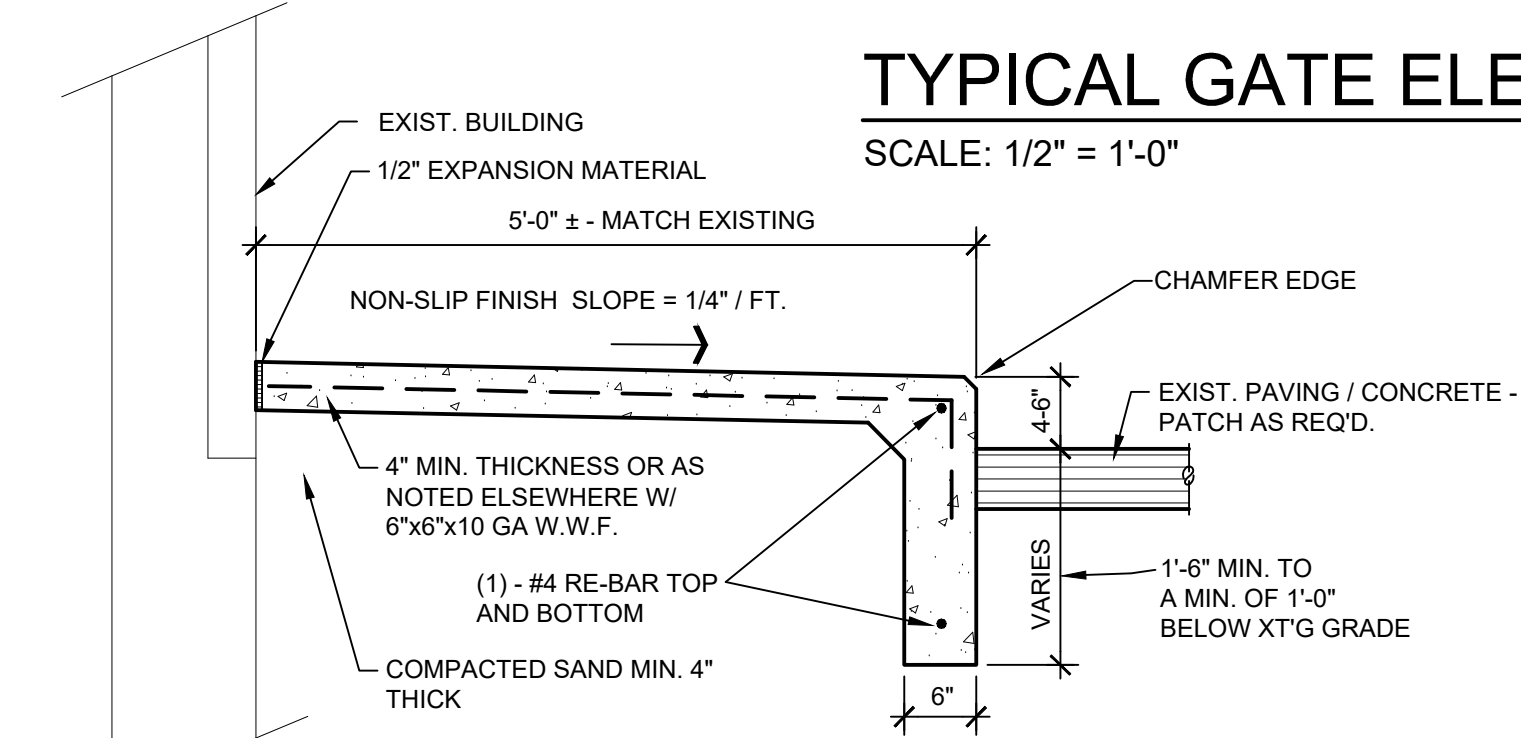
NOTE:
ALL HORIZONTAL COLD JOINTS WHERE SLABS OVERLAP EXPOSED WALLS SHALL HAVE CONTINUOUS "V" JOINTS



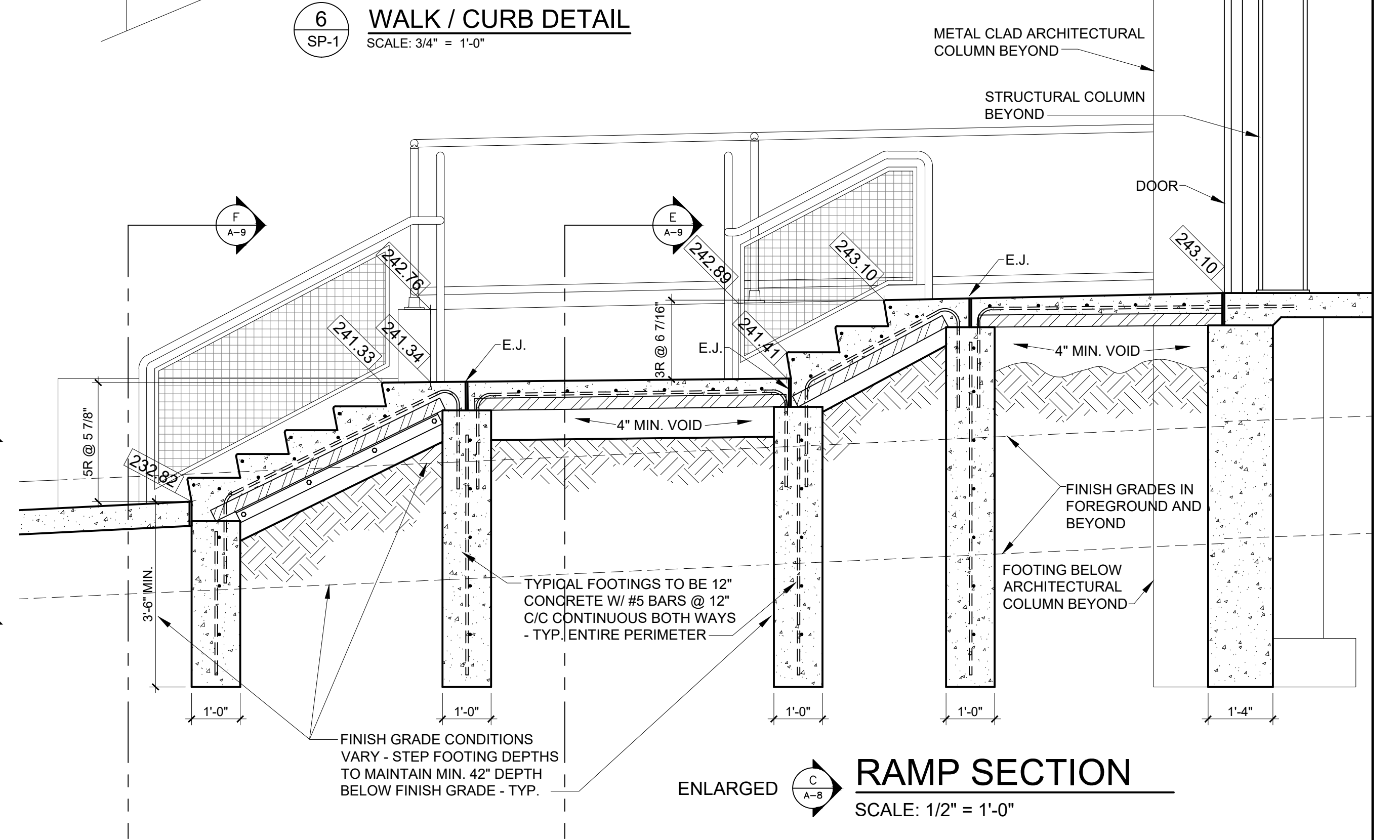
TYPICAL HANDRAIL & INFILL ELEVATION
SCALE: 1/2" = 1'-0"



TYPICAL GATE ELEVATION
SCALE: 1/2" = 1'-0" (TYPICAL OF 8)



6 WALK / CURB DETAIL
SCALE: 3/4" = 1'-0"



RAMP SECTION
SCALE: 1/2" = 1'-0"



RAMP & STAIR PLANS, SECTIONS

NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
301 EAST HURON STREET, ANN ARBOR, MI 48107

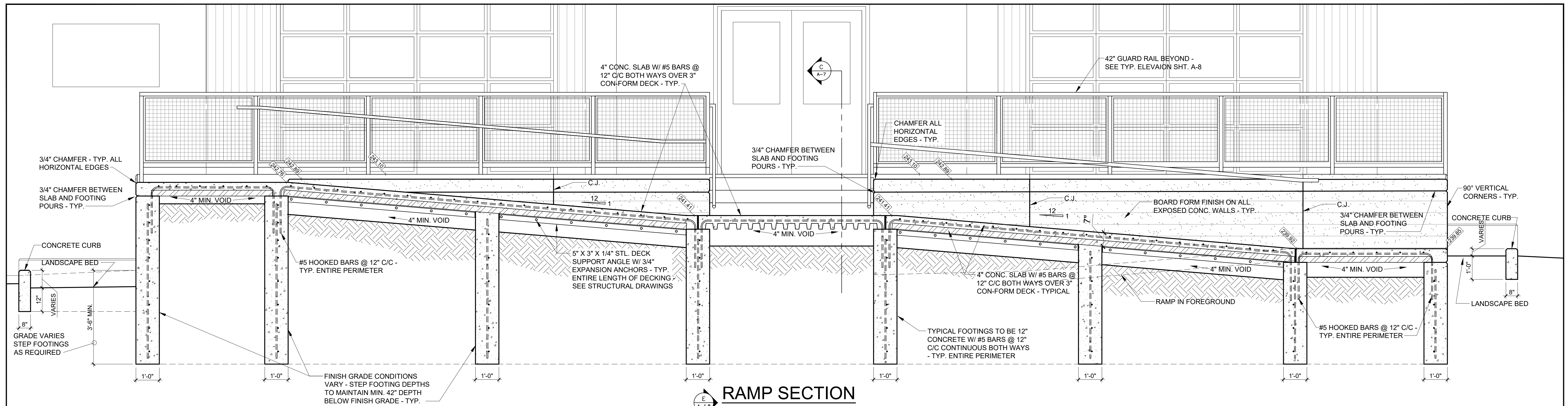
DR. KJK CK MWK
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SHEET 8 OF 12



RAMP SECTION
SCALE: 1/2" = 1'-0"

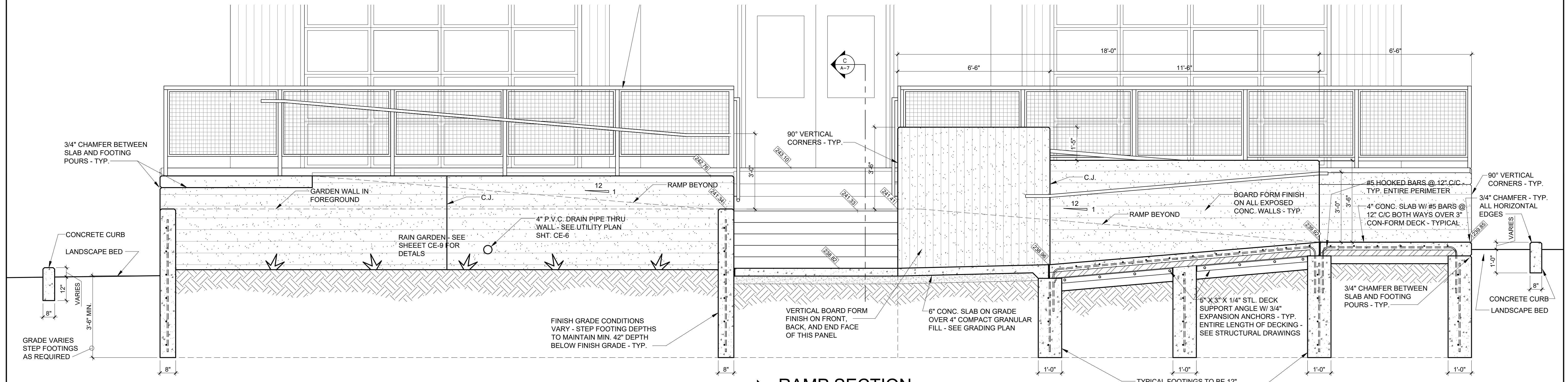
ALTERNATE A-2:
IN LIEU OF BOARD FORMED FINISH
ON EXPOSED CONCRETE WALLS,
PROVIDE SMOOTH RUBBED FINISH
ON ALL EXPOSED CONCRETE
WALLS. SEE DIVISION 17

NOTE:
ALL FOOTINGS ABUTTING ONE
ANOTHER TO BE TIED TOGETHER
W/ 24" X 24" #5 HOOKED BARS @
12" C/C IN ALL DIRECTIONS,
CREATING A CONTINUOUS AND
INTEGRAL FOUNDATION

CONTRACTORS OPTION:
INSTALL UNFORMED TRENCH
FOOTINGS BELOW GRADE W/
BOARD FORMED EXPOSED
WALLS ABOVE.

NOTE:
ALL EXPOSED WALLS ABOVE
GRADE TO BE BOARD FORMED -
SEE SPECIFICATIONS

NOTE:
ALL HORIZONTAL COLD JOINTS
WHERE SLABS OVERLAP
EXPOSED WALLS SHALL HAVE
CONTINUOUS "V" JOINTS



RAMP SECTION
SCALE: 1/2" = 1'-0"

ALTERNATE A-2:
IN LIEU OF BOARD FORMED FINISH
ON EXPOSED CONCRETE WALLS,
PROVIDE SMOOTH RUBBED FINISH
ON ALL EXPOSED CONCRETE
WALLS. SEE DIVISION 17



RAMP & STAIR SECTIONS

NEW FARMERS MARKET ENCLOSURE
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FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
301 EAST HURON STREET, ANN ARBOR, MI 48107

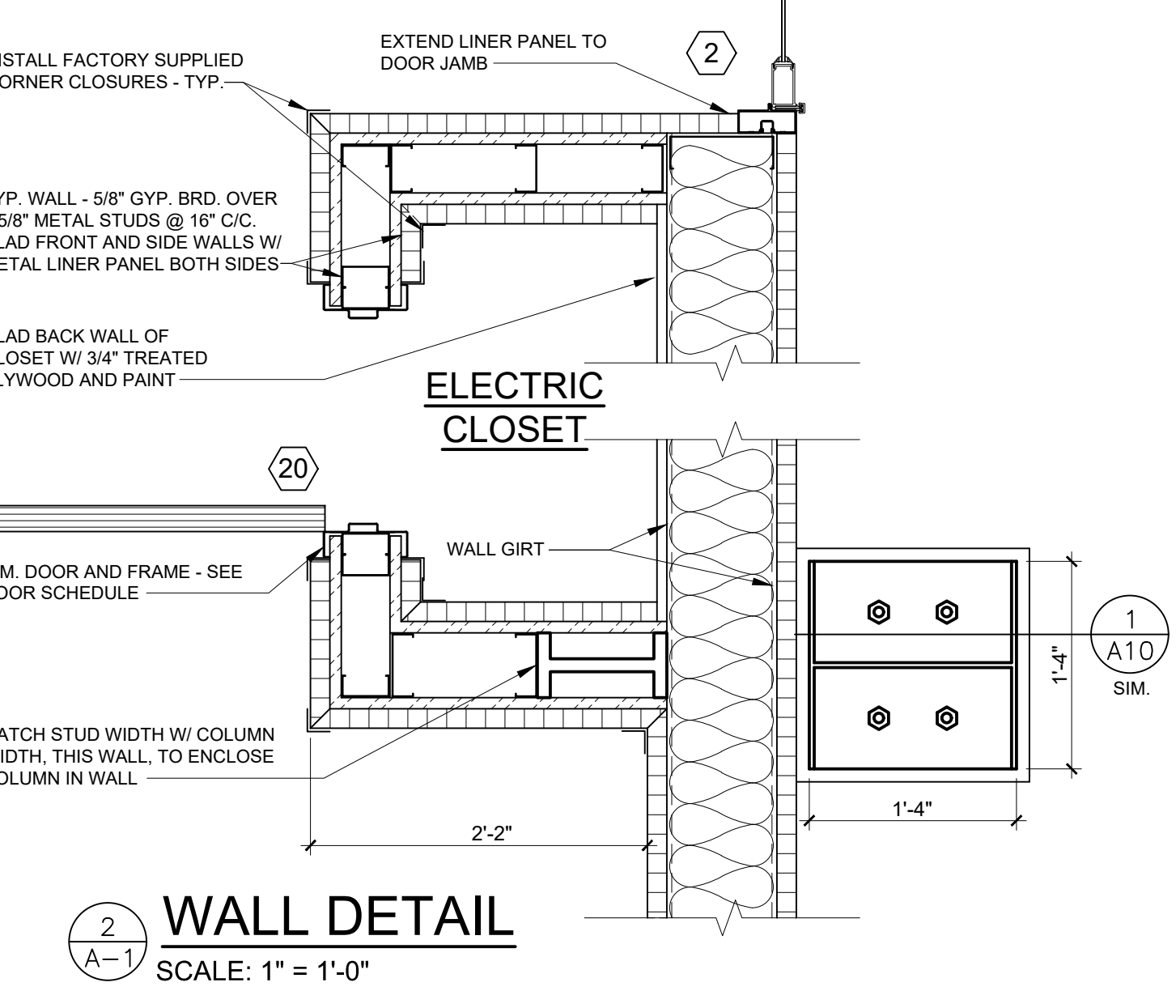
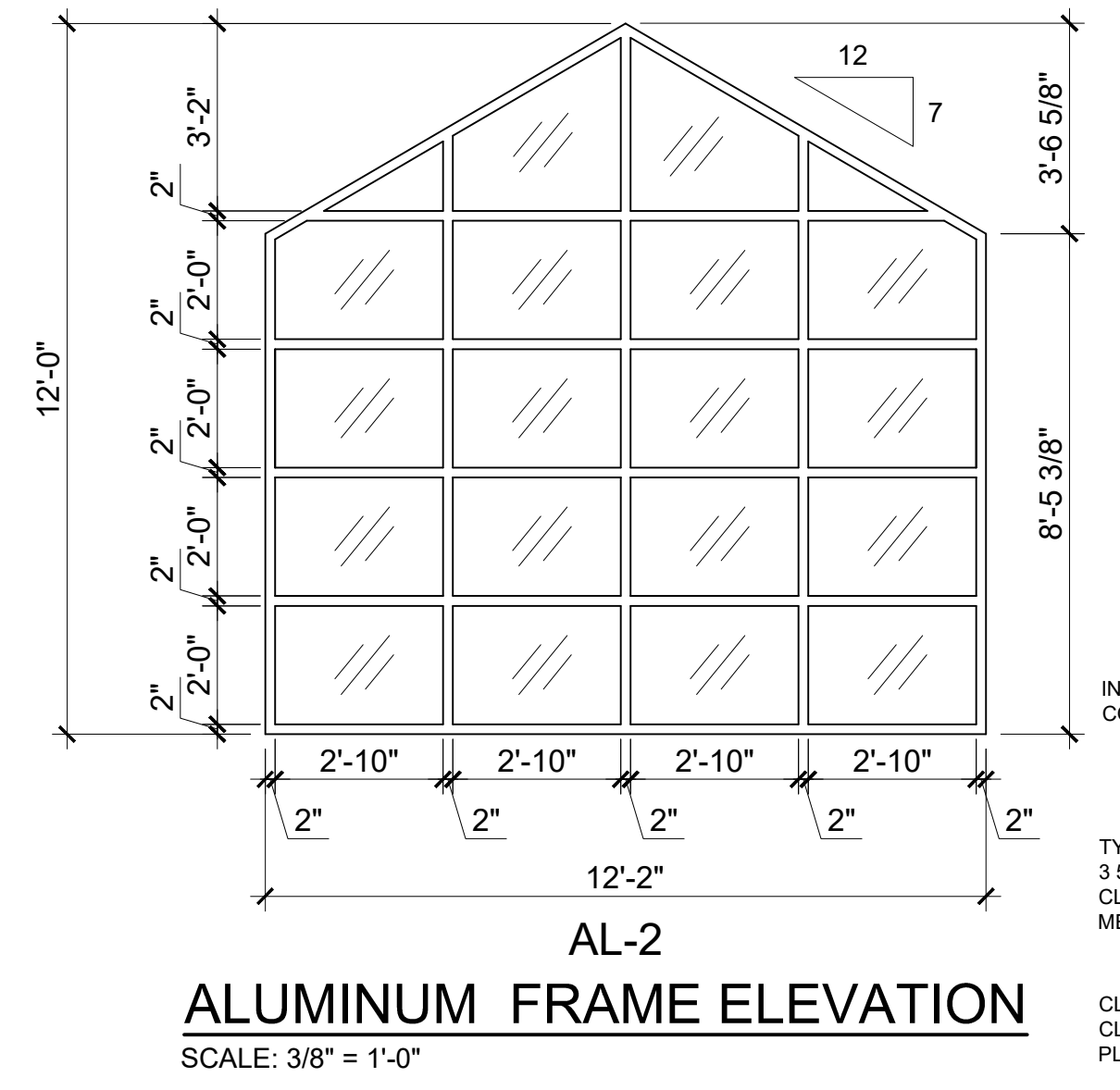
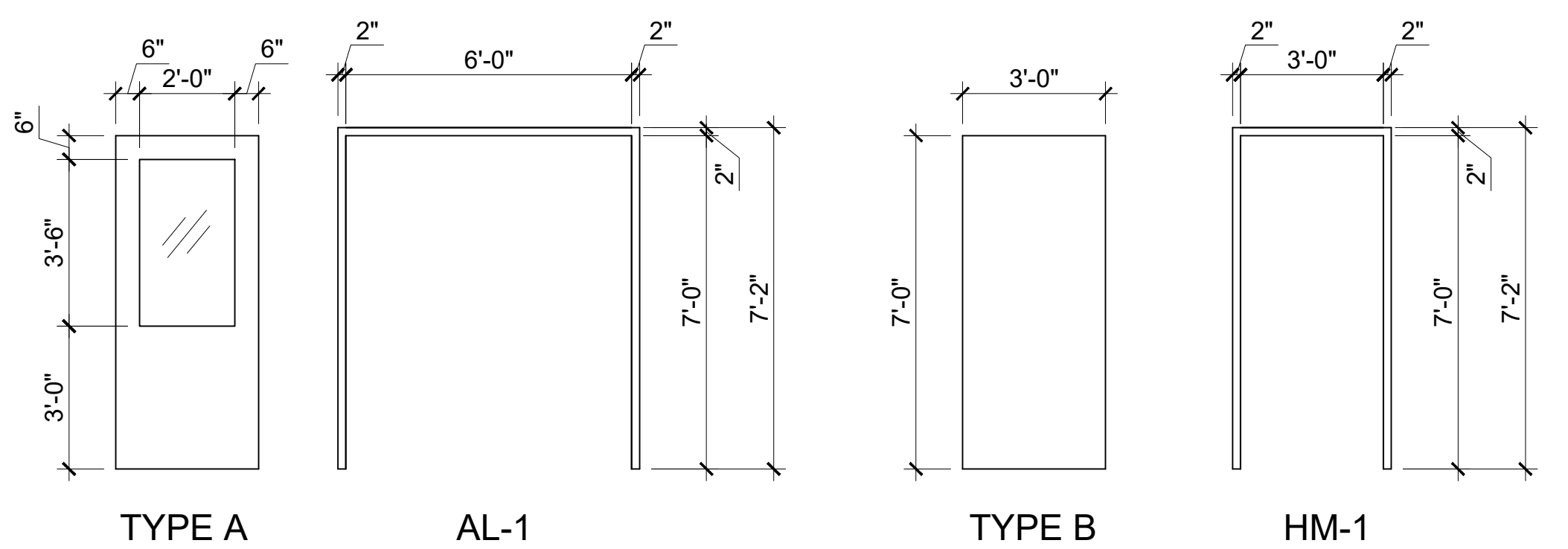
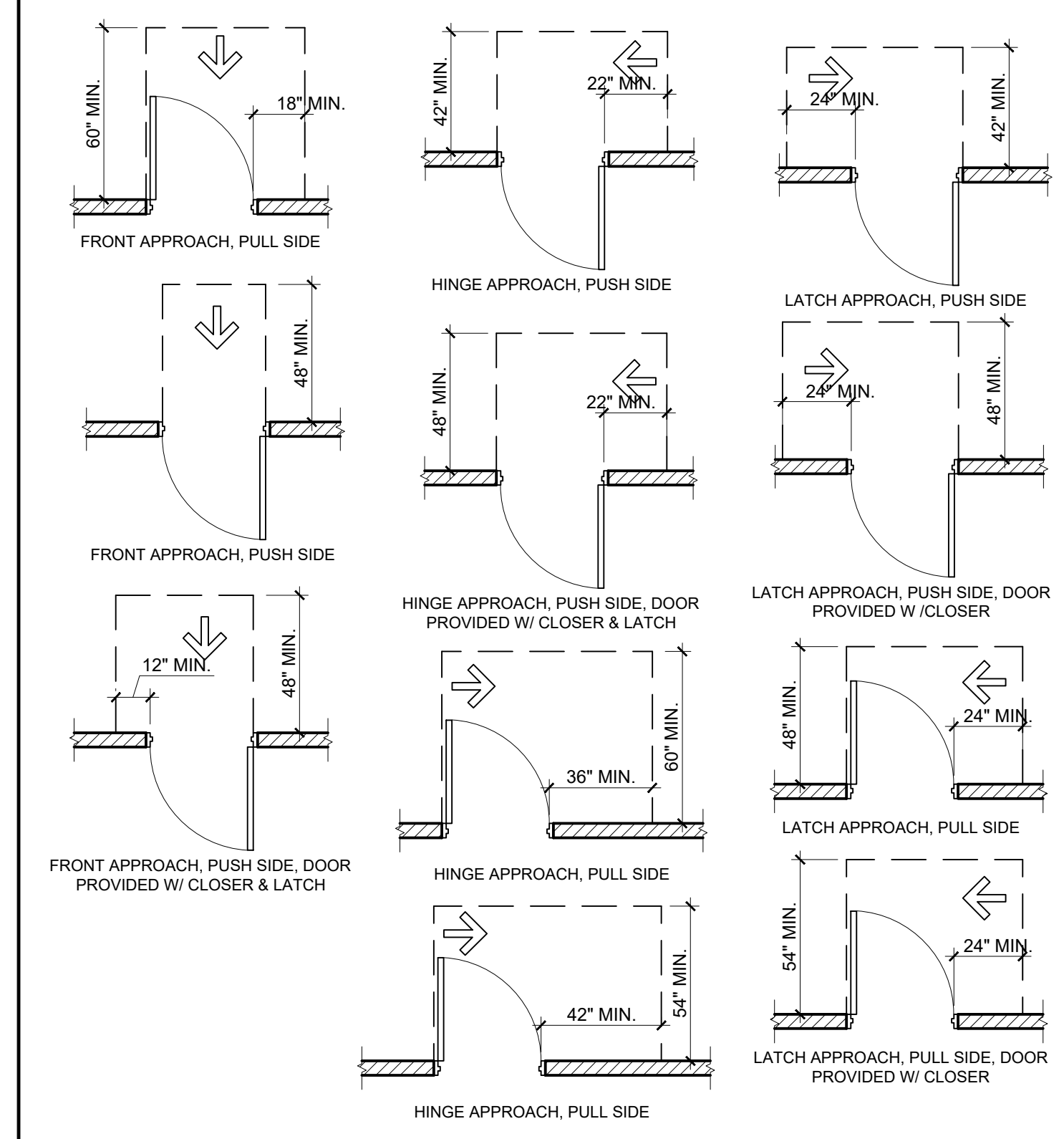
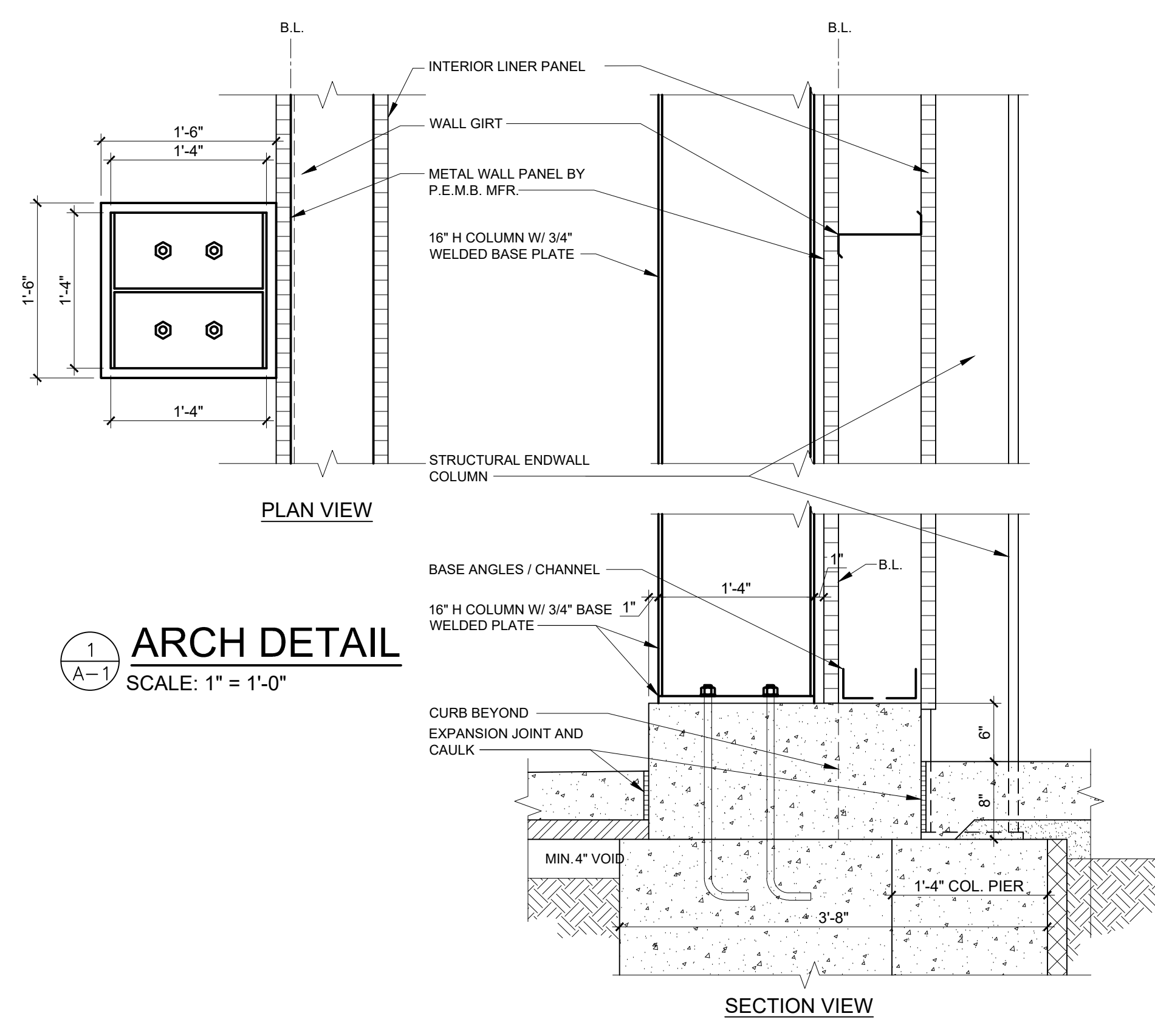
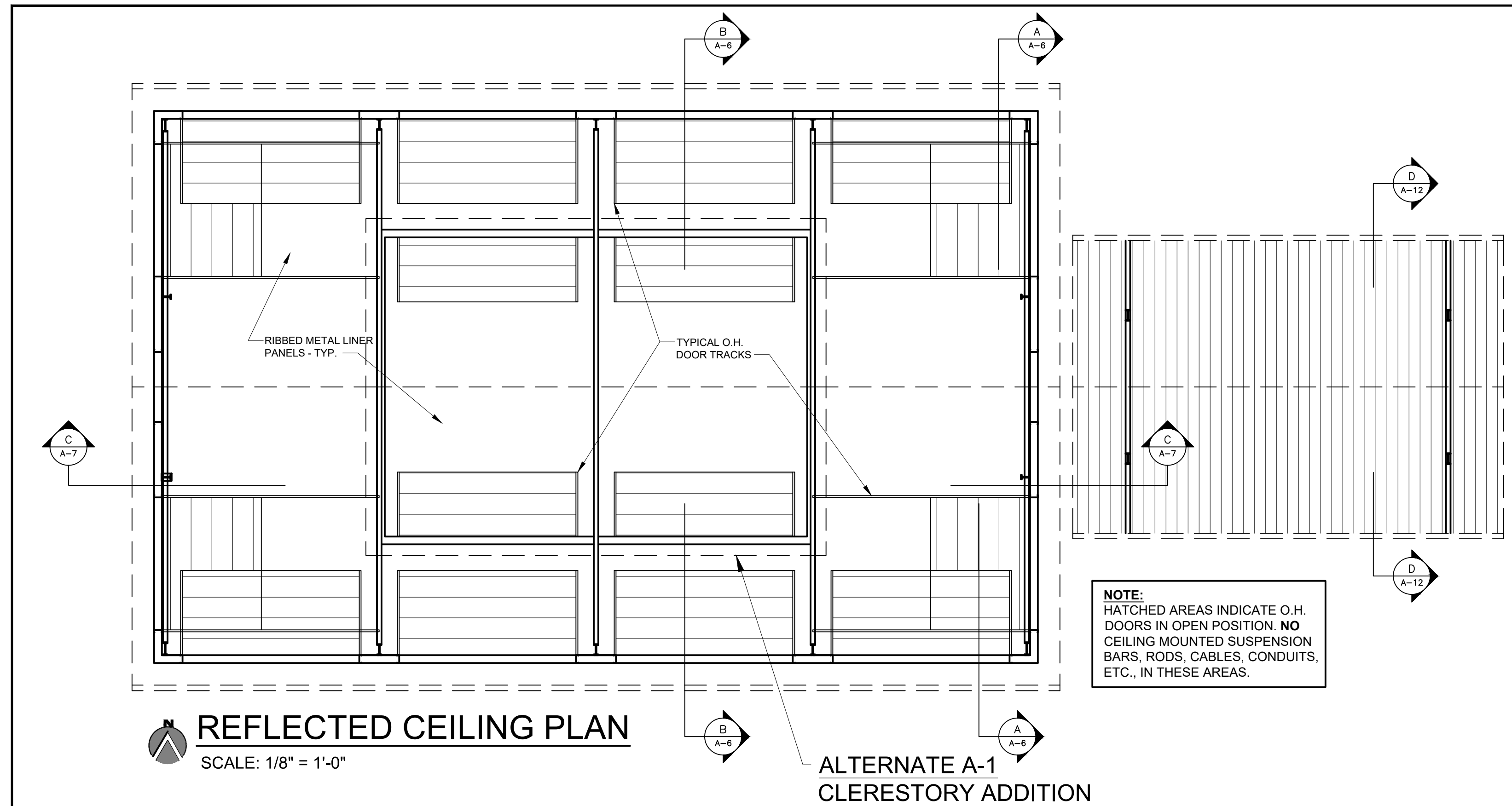
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#1627
JOB ITB No. 4485

KOHLER
ARCHITECTURE, INC.
1118 WEST FRONT STREET
ANN ARBOR, MICHIGAN 48106
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SHEET 9 OF 12



| MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS AND GATES | | | |
|---|-------------------|-------------------------------|--|
| TYPE OF USE | | MINIMUM MANEUVERING CLEARANCE | |
| APPROACH DIRECTION | DOOR OR GATE SIDE | PERPENDICULAR TO DOORWAY | PARALLEL TO DOORWAY (BEYOND LATCH SIDE UNLESS NOTED) |
| FROM FRONT | PULL | 60 INCHES | 18 INCHES |
| FROM FRONT | PUSH | 48 INCHES | 0 INCHES (1) |
| FROM HINGE SIDE | PULL | 60 INCHES | 36 INCHES |
| FROM HINGE SIDE | PULL | 54 INCHES | 42 INCHES |
| FROM HINGE SIDE | PUSH | 42 INCHES (2) | 22 INCHES (3) |
| FROM LATCH SIDE | PULL | 48 INCHES (4) | 24 INCHES |
| FROM LATCH SIDE | PUSH | 42 INCHES (4) | 24 INCHES |

(1) ADD 12 INCHES IF CLOSER AND LATCH ARE PROVIDED.
 (2) ADD 6 INCHES IF CLOSER AND LATCH ARE PROVIDED.
 (3) BEYOND HINGE SIDE.
 (4) ADD 6 INCHES IF CLOSER IS PROVIDED.

ALUMINUM DOOR AND FRAME ELEVATIONS
SCALE: 3/8" = 1'-0"

HOLLOW METAL DOOR AND FRAME ELEVATIONS
SCALE: 3/8" = 1'-0"

| DOOR AND FRAME SCHEDULE | | | | | | | |
|-------------------------|---------------------|-----------|-----------|-------|--------|----------------------|----------------------------|
| NO. | DOOR | | FRAME | | | LABEL (DOOR + FRAME) | REMARKS |
| | SIZE | TYPE MATL | TYPE MATL | DEPTH | | | |
| 01 | PR 3'x 7'x 1 - 3/4" | A AL | AL-1 | AL | 4-1/2" | • | HARDWARE SET #1 |
| 02 | PR 3'x 7'x 1 - 3/4" | A AL | AL-1 | AL | 4-1/2" | • | HARDWARE SET #1 |
| 03 | 12'x 10'x 2" | O.H. AL | • | • | • | • | HORIZONTAL TRACKS |
| 04 | 16'x 10'x 2" | O.H. AL | • | • | • | • | SLOPED TRACKS |
| 05 | 16'x 10'x 2" | O.H. AL | • | • | • | • | SLOPED TRACKS |
| 06 | 16'x 10'x 2" | O.H. AL | • | • | • | • | SLOPED TRACKS |
| 07 | 16'x 10'x 2" | O.H. AL | • | • | • | • | SLOPED TRACKS |
| 08 | 12'x 10'x 2" | O.H. AL | • | • | • | • | HORIZONTAL TRACKS |
| 09 | 12'x 10'x 2" | O.H. AL | • | • | • | • | HORIZONTAL TRACKS |
| 10 | 16'x 10'x 2" | O.H. AL | • | • | • | • | SLOPED TRACKS |
| 11 | 16'x 10'x 2" | O.H. AL | • | • | • | • | SLOPED TRACKS |
| 12 | 16'x 10'x 2" | O.H. AL | • | • | • | • | SLOPED TRACKS |
| 13 | 16'x 10'x 2" | O.H. AL | • | • | • | • | SLOPED TRACKS |
| 14 | 12'x 10'x 2" | O.H. AL | • | • | • | • | HORIZONTAL TRACKS |
| 15 | 16'x 4'x 2" | O.H. AL | • | • | • | • | CLERESTORY - ALTERNATE A-1 |
| 16 | 16'x 4'x 2" | O.H. AL | • | • | • | • | CLERESTORY - ALTERNATE A-1 |
| 17 | 16'x 4'x 2" | O.H. AL | • | • | • | • | CLERESTORY - ALTERNATE A-1 |
| 18 | 16'x 4'x 2" | O.H. AL | • | • | • | • | CLERESTORY - ALTERNATE A-1 |
| 19 | 3'x 7'x 1 - 3/4" | B HM | HM-1 | HM | 6-1/2" | • | HARDWARE SET #2 |
| 20 | 3'x 7'x 1 - 3/4" | B HM | HM-1 | HM | 6-1/2" | • | HARDWARE SET #2 |

| WINDOW SCHEDULE | | | | | | | |
|-----------------|----------|------|------|-------|----|---------|----------------------|
| NO. | SIZE | TYPE | MATL | DEPTH | | REMARKS | |
| 21 | 12'x 12' | • | • | AL-2 | AL | 4-1/2" | SLOPE TOPPED POLYGON |
| 22 | 12'x 12' | • | • | AL-2 | AL | 4-1/2" | SLOPE TOPPED POLYGON |



BUILDING DETAILS

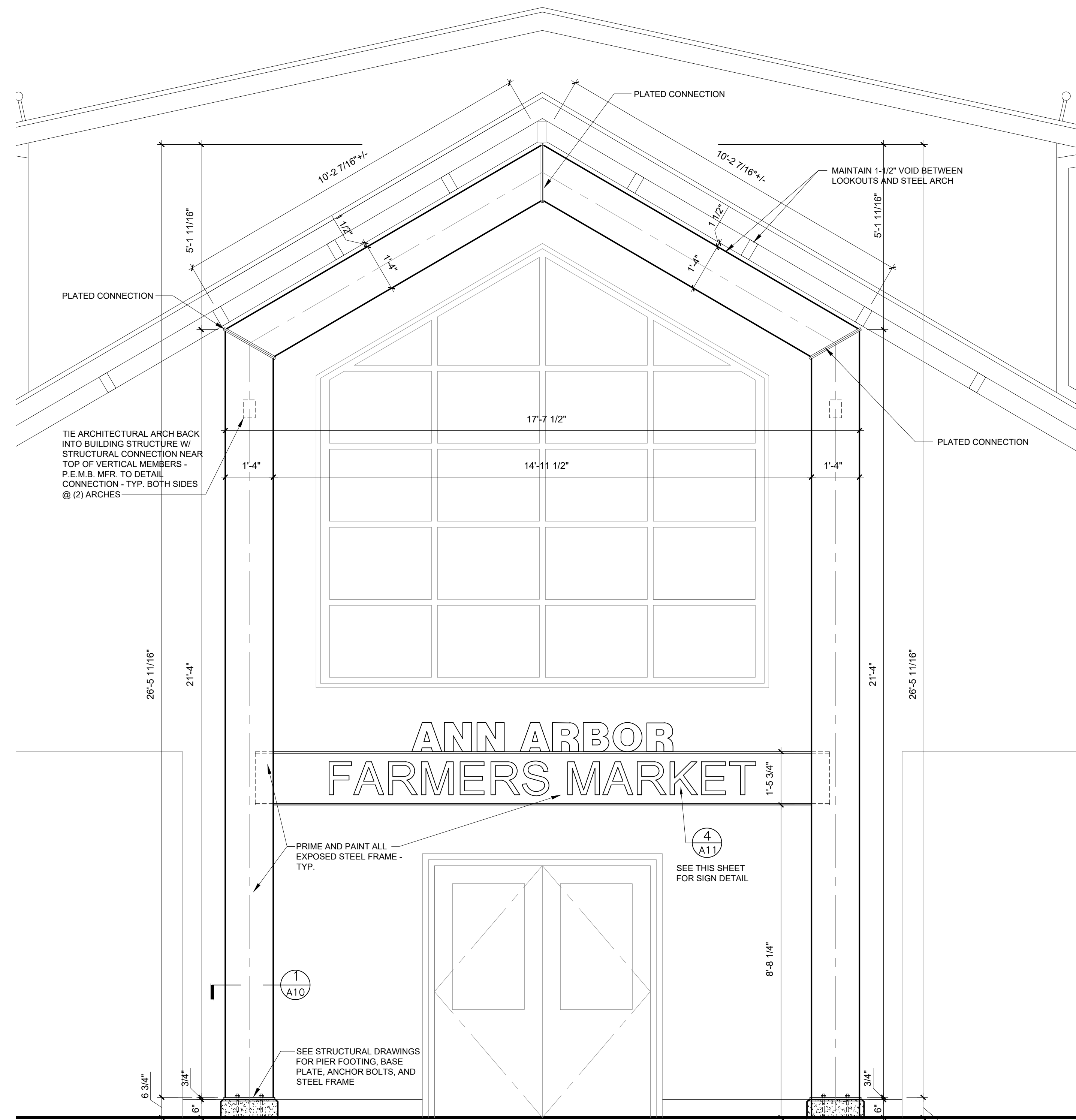
4/11/17 BIDDING

NEW FARMERS MARKET ENCLOSURE
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 FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
 301 EAST HURON STREET, ANN ARBOR, MI 48107

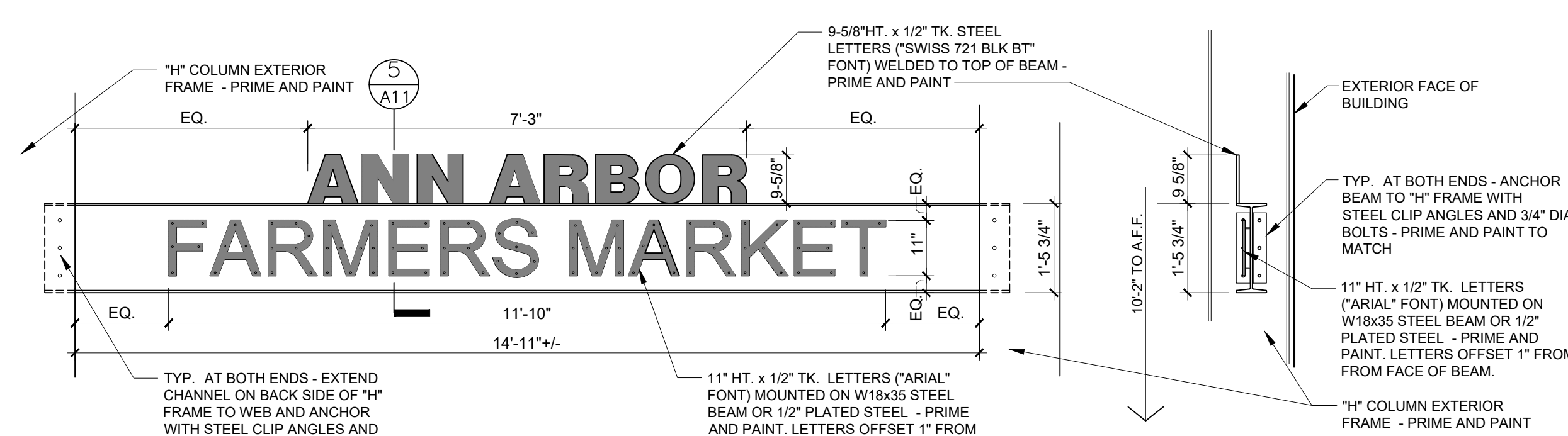
KOHLER ARCHITECTURE, INC.
 1118 WEST FRONT STREET
 MONROE, MICHIGAN 48151
 PHONE: 734-242-6880, FAX: 734-242-6883

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 SHEET 10 OF 12

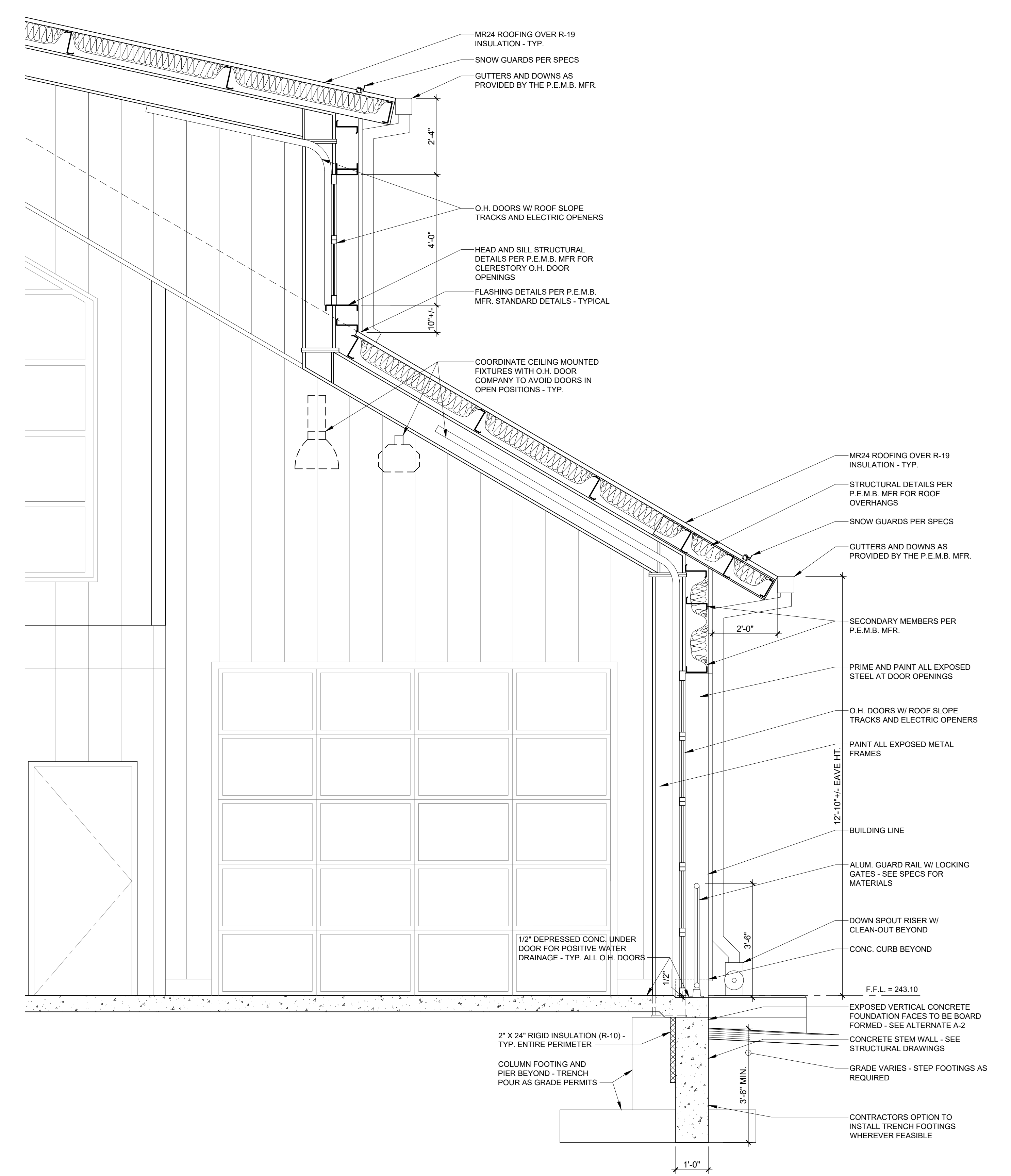


ENLARGED ENTRY FRAME ELEVATION
SCALE: 1/2" = 1'-0"

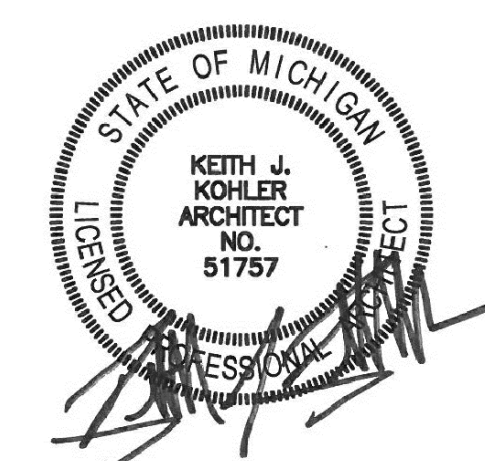


SIGN ELEVATION
SCALE: 1/2" = 1'-0"

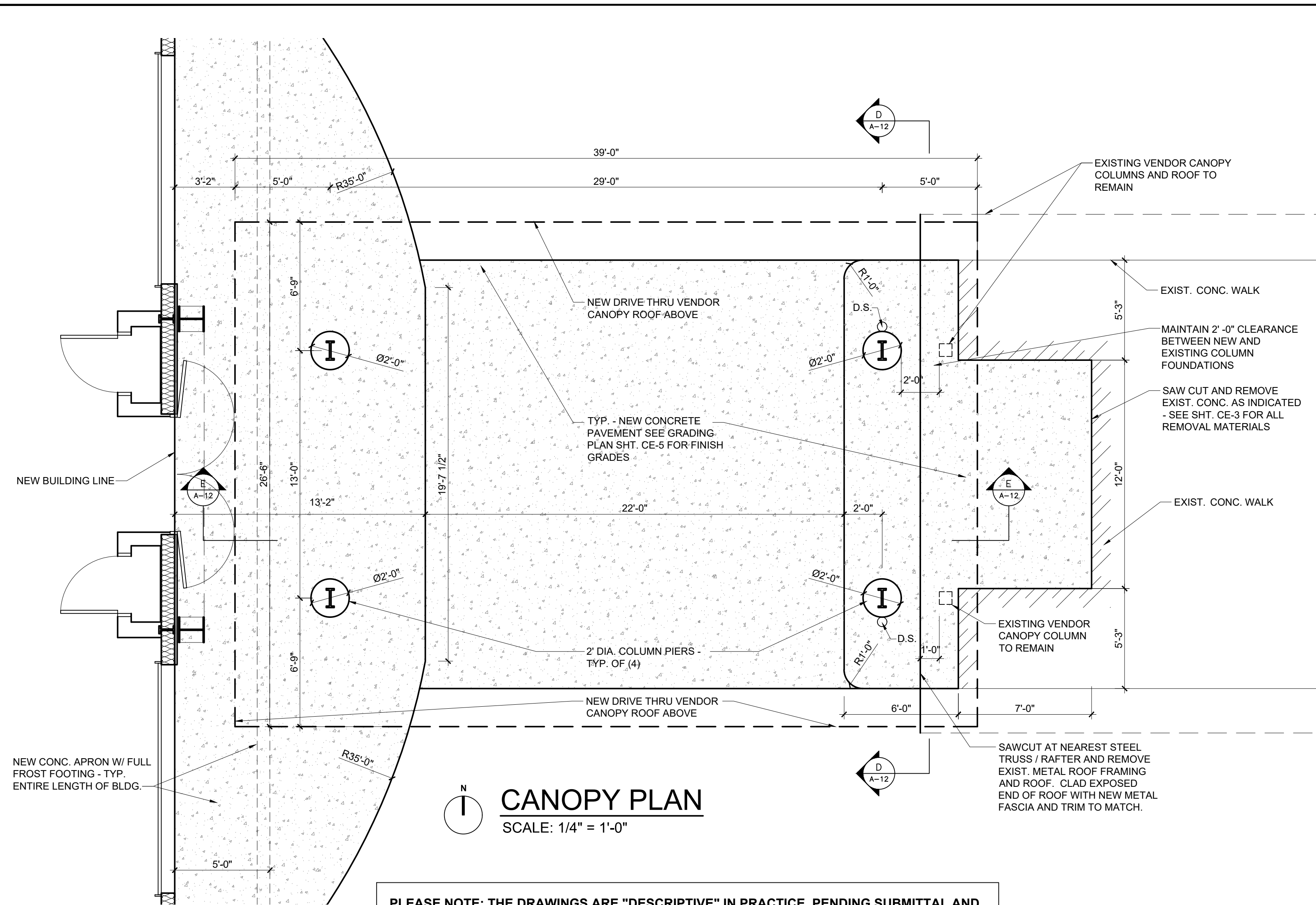
SIGN SECTION
SCALE: 1/2" = 1'-0"



ENLARGED WALL SECTION
SCALE: 1/2" = 1'-0"

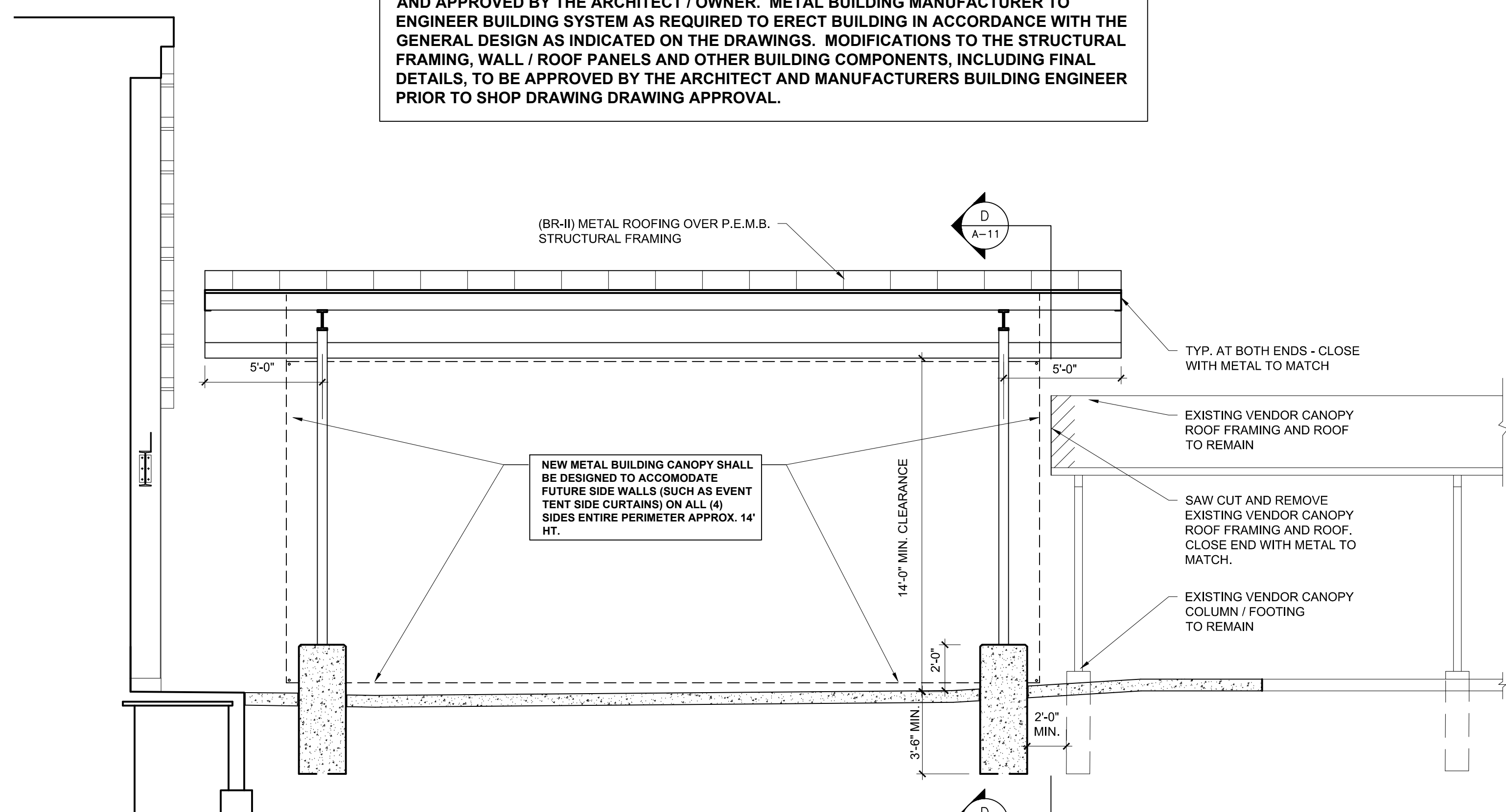


| | |
|--|--|
| ENLARGED SECTIONS / DETAILS | |
| NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107 | |
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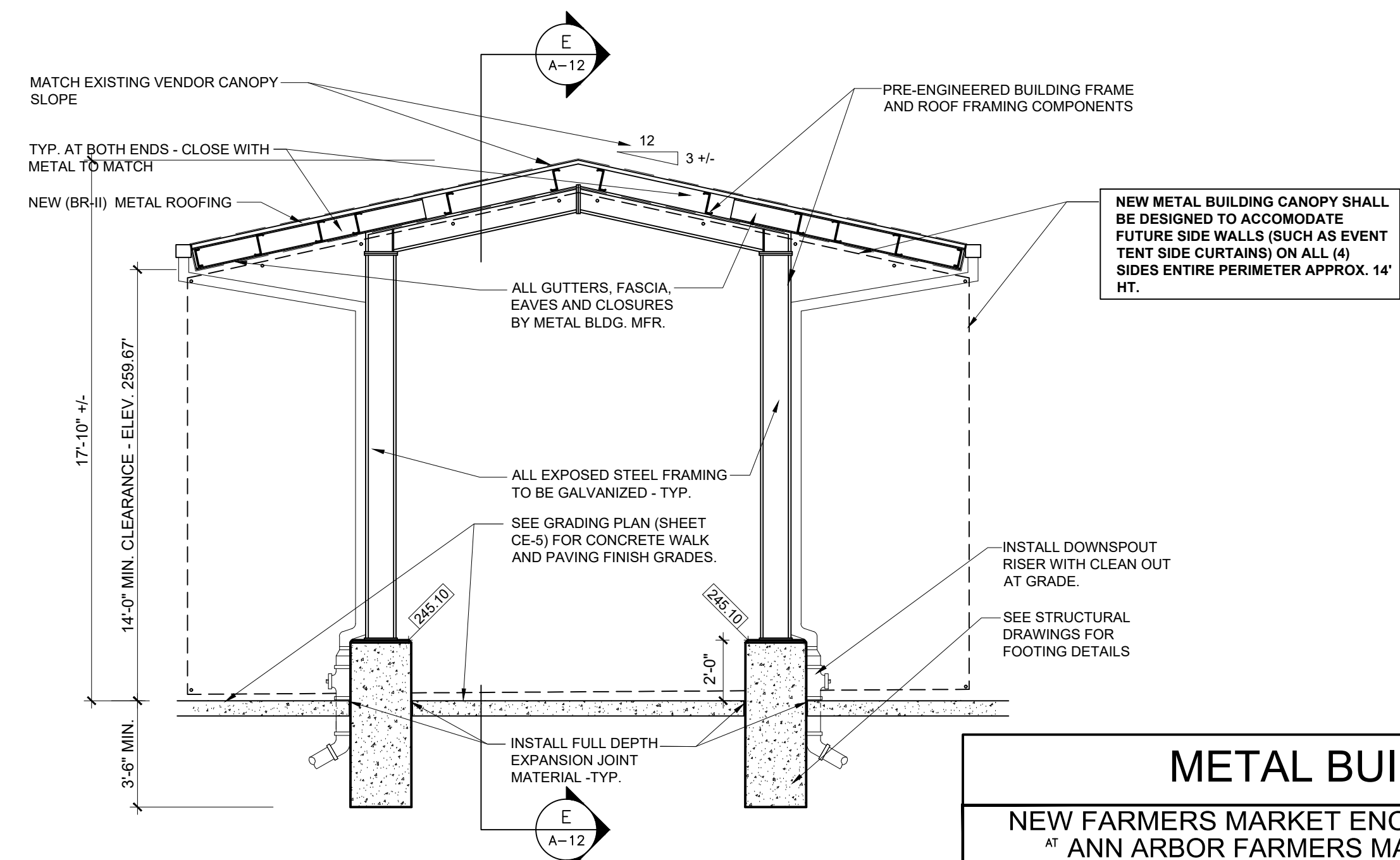


CANOPY PLAN
SCALE: 1/4" = 1'-0"

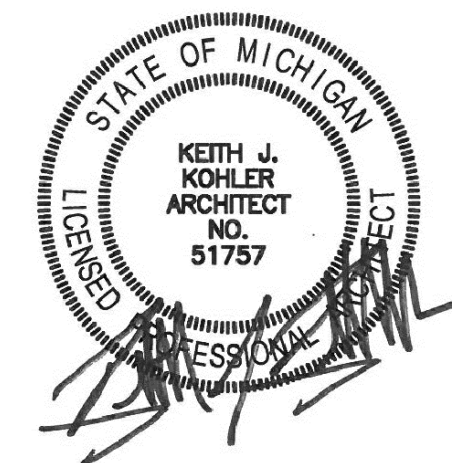
PLEASE NOTE: THE DRAWINGS ARE "DESCRIPTIVE" IN PRACTICE, PENDING SUBMITTAL AND ACCEPTANCE OF METAL BUILDING MANUFACTURER AS SELECTED BY SUCCESSFUL BIDDER, AND APPROVED BY THE ARCHITECT / OWNER. METAL BUILDING MANUFACTURER TO ENGINEER BUILDING SYSTEM AS REQUIRED TO ERECT BUILDING IN ACCORDANCE WITH THE GENERAL DESIGN AS INDICATED ON THE DRAWINGS. MODIFICATIONS TO THE STRUCTURAL FRAMING, WALL / ROOF PANELS AND OTHER BUILDING COMPONENTS, INCLUDING FINAL DETAILS, TO BE APPROVED BY THE ARCHITECT AND MANUFACTURERS BUILDING ENGINEER PRIOR TO SHOP DRAWING DRAWING APPROVAL.



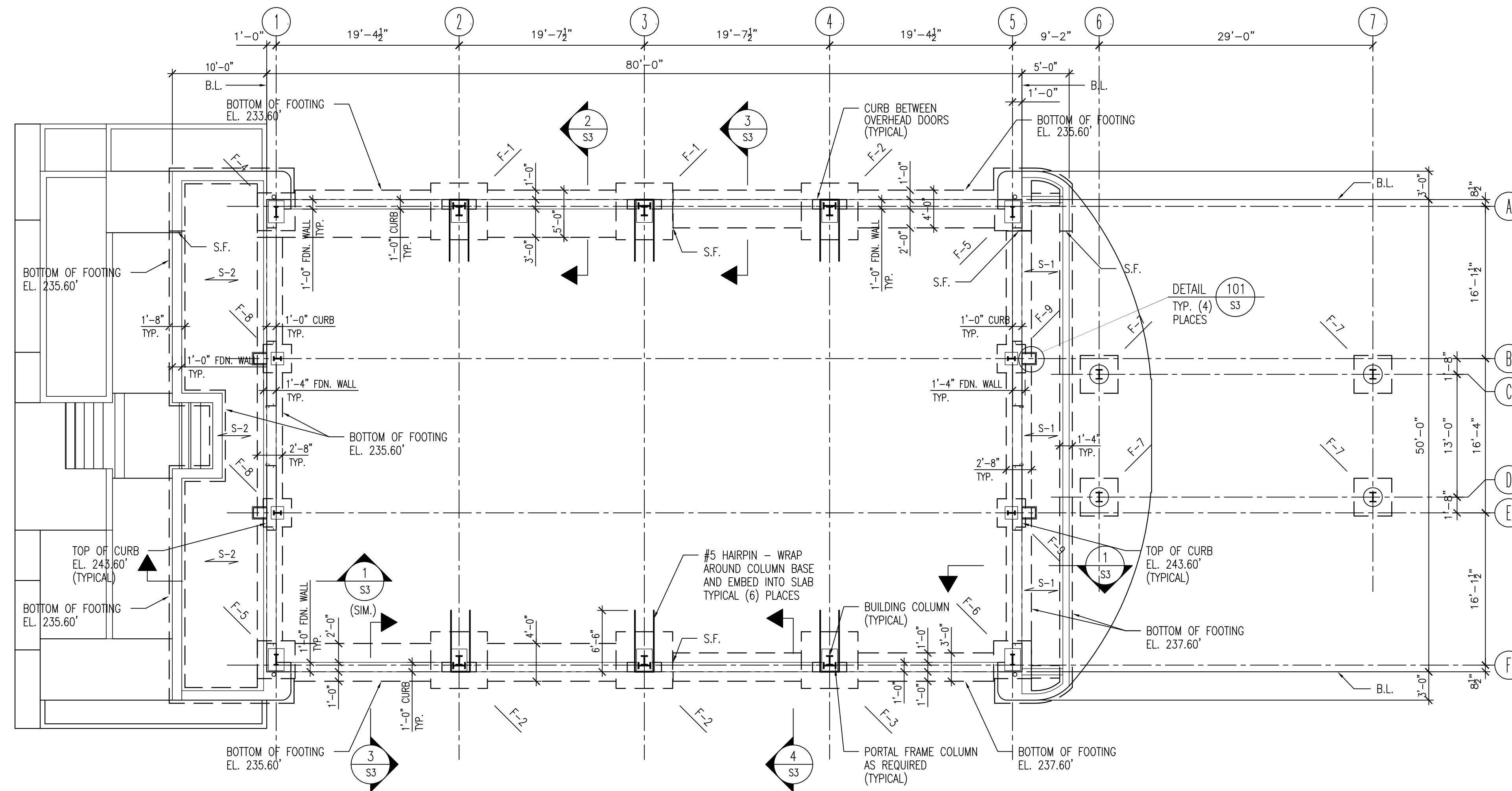
CANOPY SECTION
SCALE: 1/4" = 1'-0"



CANOPY SECTION
SCALE: 1/4" = 1'-0"



| | | |
|--|--|--|
| METAL BUILDING CANOPY | | 4/11/17 BIDDING |
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| KOHLER ARCHITECTURE, INC. #1627 <small>1118 WEST FRONT STREET MONROE, MICHIGAN 48151 PHONE: 734-242-6880, FAX: 734-242-6883</small> | | DATE STATUS JOB ITB No. 4485 SHEETA 12 OF 12 |



SEE ARCHITECTURAL DRAWINGS FOR SITE WALLS, RAMPS AND STAIRS.

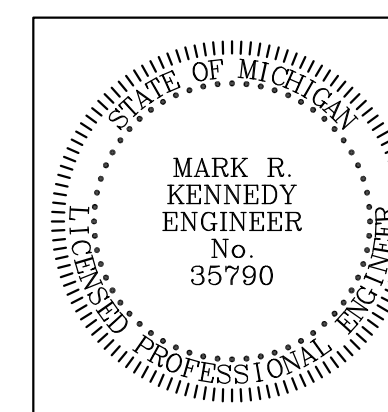
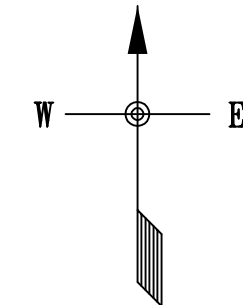
FOUNDATION AND FLOOR PLAN

SCALE: 1/8" = 1'-0"

NOTES:

1. FINISH FLOOR = EL. 243.10'
2. FLOOR CONSTRUCTION:
6" SLAB ON GRADE REINFORCED WITH ONE LAYER OF 6 x 6 - W4.0 x W4.0 W.W.F.
3. $\overline{s-2}$ INDICATES A SUPPORTED SLAB - SEE SECTIONS ON DRAWING S3.
 $\overline{s-1}$ INDICATES 4 1/2" CONCRETE OVER 1 1/2" x 20 GAGE FORM DECK - TOTAL THICKNESS = 6" REINFORCE WITH #3 REBAR AT 8" c/c AND #3 REBAR AT 12" c/c T & S.
 $\overline{s-2}$ INDICATES 5" CONCRETE OVER 3" x 18 GAGE FORM DECK - TOTAL THICKNESS = 8" REINFORCE WITH #4 REBAR AT 8" c/c AND #4 REBAR AT 12" c/c T & S.
4. S.F. INDICATES A STEPPED FOOTING - SEE TYPICAL DETAIL ON DRAWING S2
5. B.L. INDICATES BUILDING LINE (OUTSIDE FACE OF GIRTS)
6. SEE DRAWING S2 FOR STRUCTURAL TYPICAL DETAILS
SEE DRAWING S4 FOR STRUCTURAL GENERAL NOTES.

NORTH

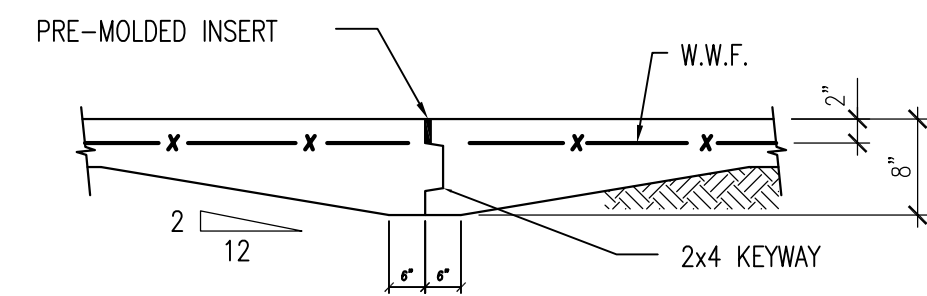


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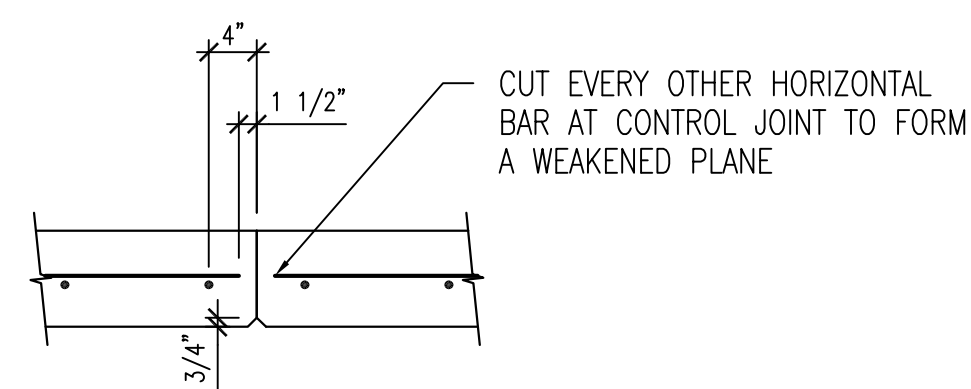
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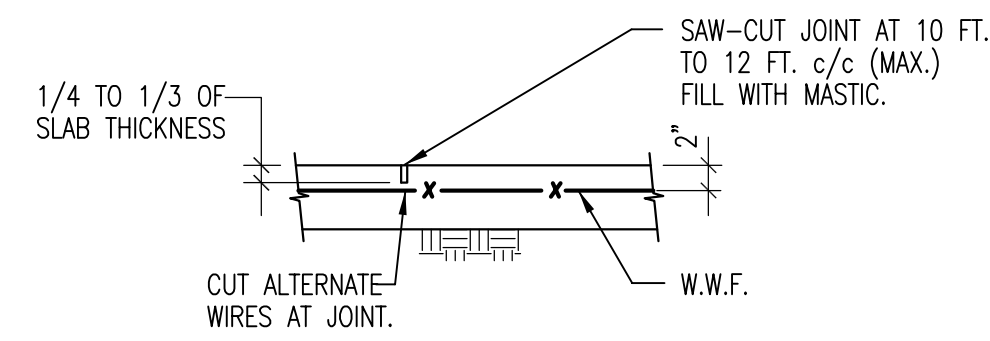
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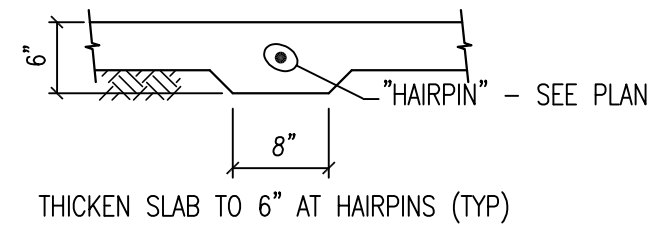
TYPICAL DETAIL - CONSTRUCTION JOINT



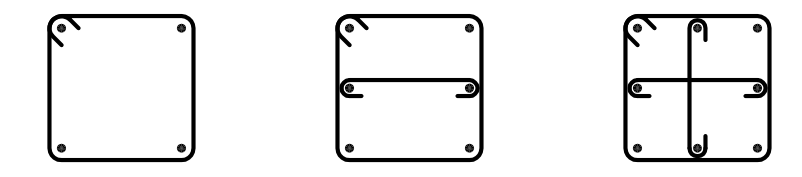
TYPICAL DETAIL - WALL CONTROL JOINT
(SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS)



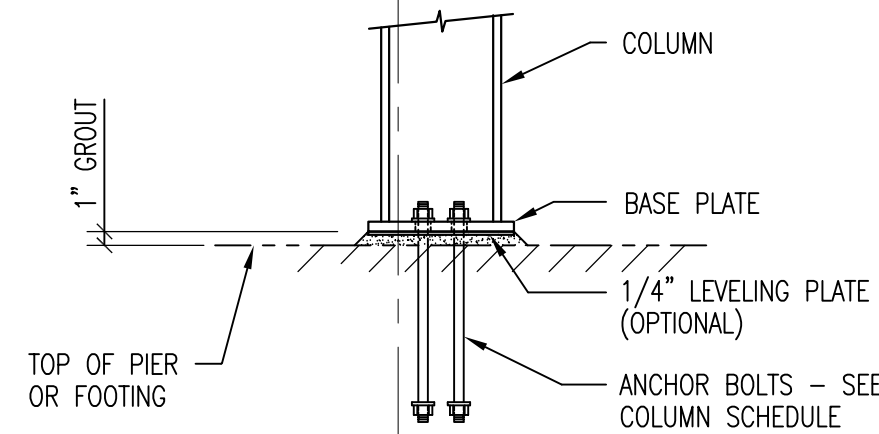
TYPICAL DETAIL - CONTROL JOINT



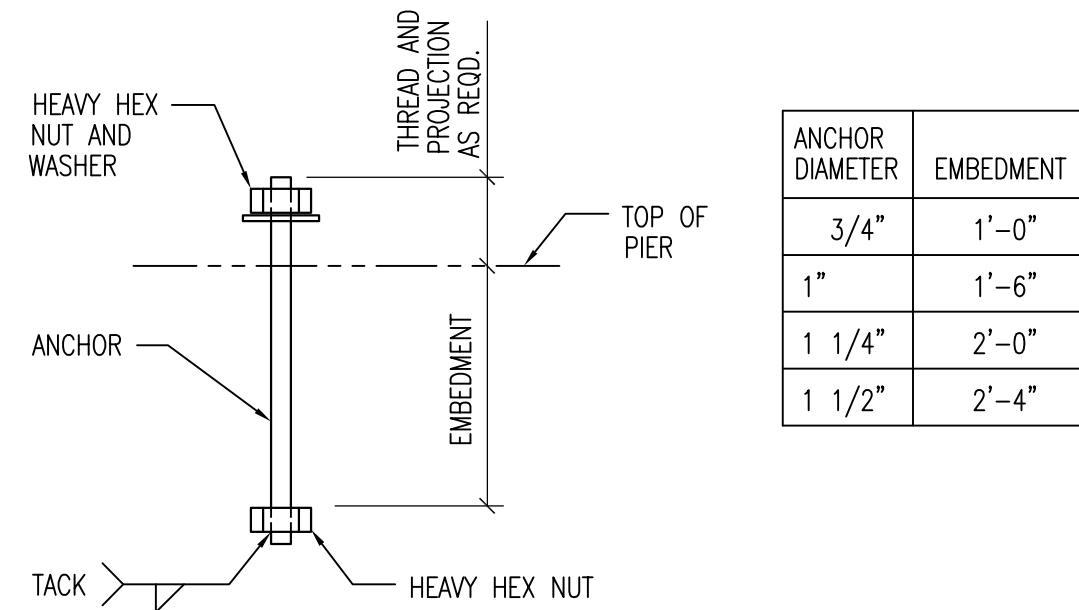
TYPICAL DETAIL - HAIRPIN



TYPICAL DETAILS - PIER TIES

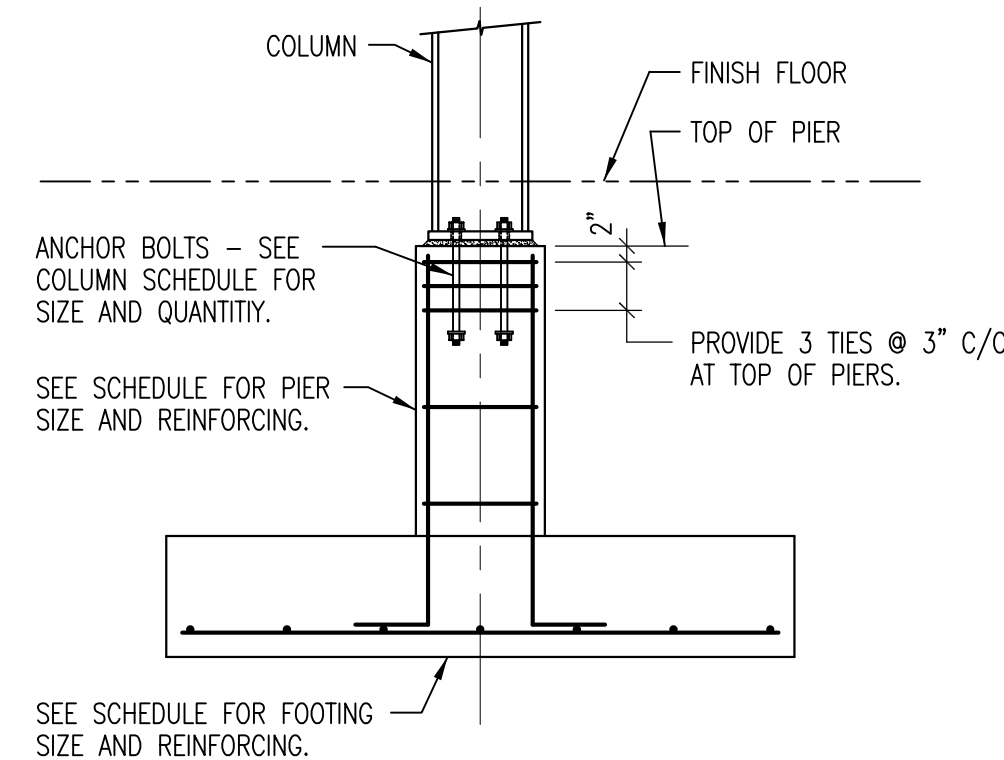


TYPICAL DETAIL - COLUMN BASE PLATE AND ANCHOR BOLT



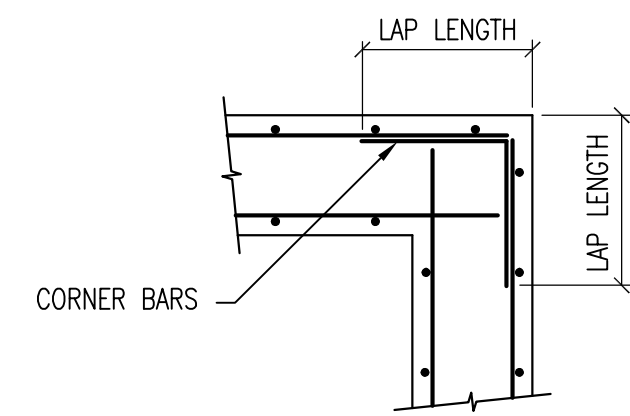
TYPE "A" ANCHOR BOLT DETAIL

| ANCHOR DIAMETER | EMBEDMENT |
|-----------------|-----------|
| 3/4" | 1'-0" |
| 1" | 1'-6" |
| 1 1/4" | 2'-0" |
| 1 1/2" | 2'-4" |

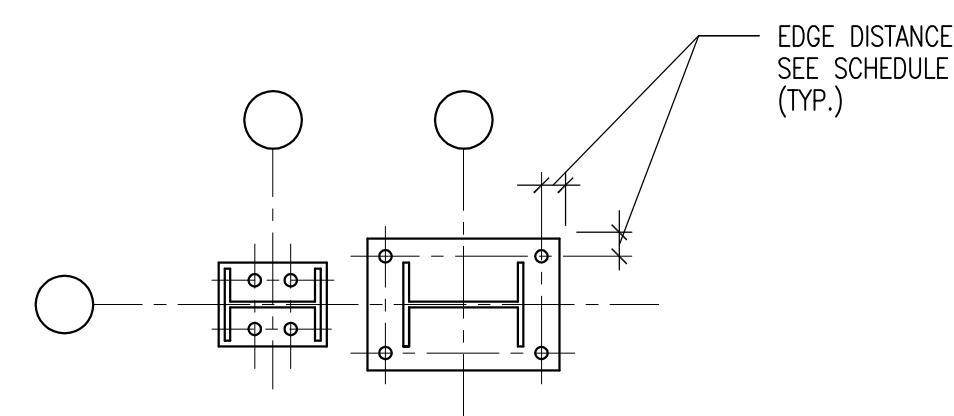


TYPICAL DETAIL - PIER/COLUMN FOOTING

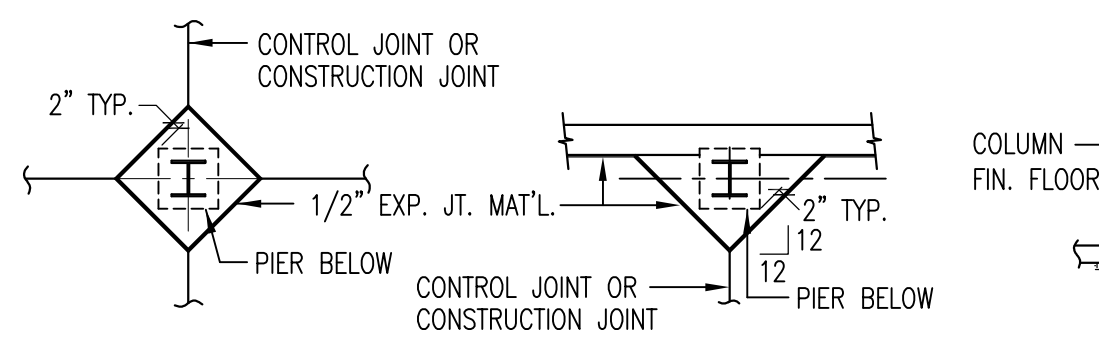
| ANCHOR DIAMETER | MAX. HOLE DIAMETER | MIN. WASHER DIAMETER | EDGE DISTANCE |
|-----------------|--------------------|----------------------|---------------|
| 3/4" | 1 5/16" | 1 7/8" | 1 1/2" |
| 1" | 1 13/16" | 2 5/8" | 1 3/4" |
| 1 1/4" | 2 1/16" | 2 7/8" | 2" |
| 1 1/2" | 2 5/16" | 3 1/8" | 2 1/4" |
| 1 3/4" | 2 3/4" | 3 3/4" | 2 1/2" |
| 2" | 3 1/4" | 4 1/2" | 3" |



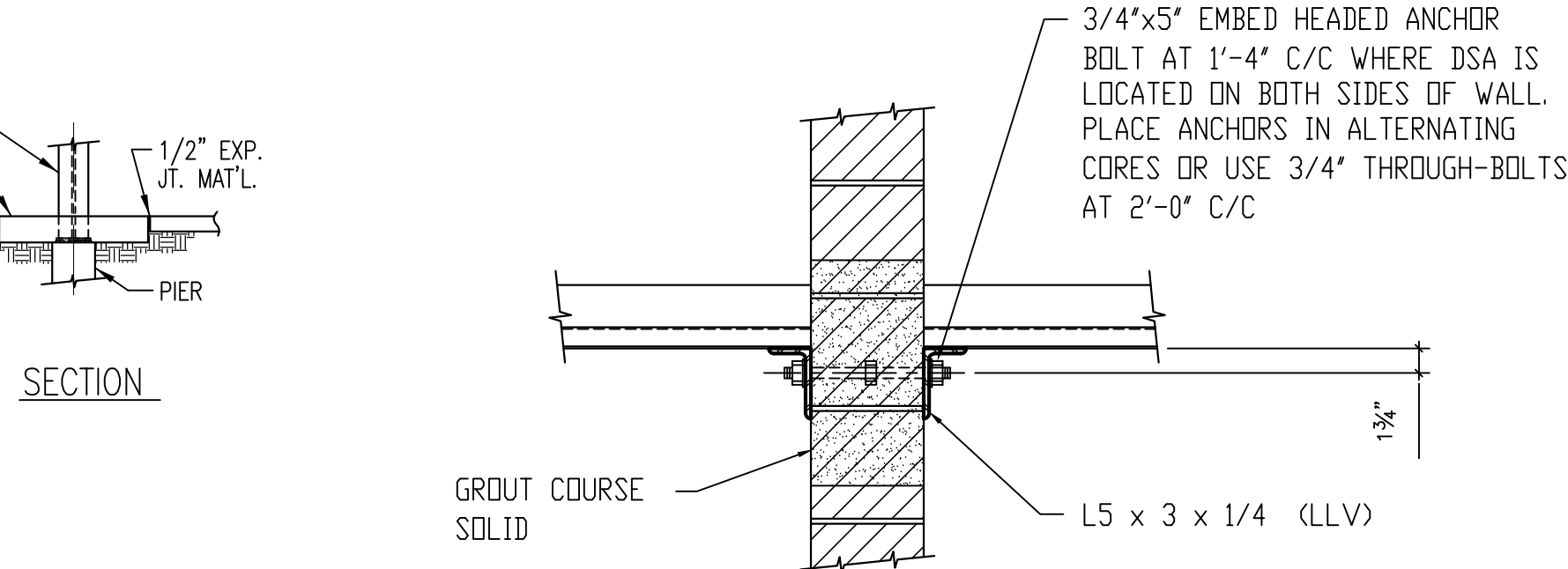
TYPICAL DETAIL - CORNER REINFORCING



TYPICAL DETAIL - COLUMN BASE PLATES



TYPICAL DETAILS - COLUMN ISOLATION JOINT



TYPICAL DETAIL - FLOOR DECK SUPPORT ANGLE (DSA)

FOOTING AND PIER SCHEDULE

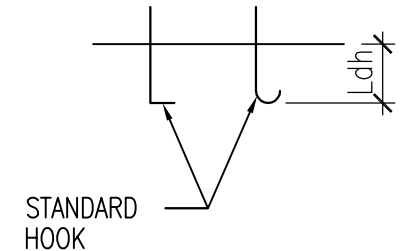
| MARK | F-1 | F-2 | F-3 | F-4 | F-5 | F-6 | F-7 | F-8 | F-9 | F- |
|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----|
| SIZE | 2'-4" x 1'-8" | 2'-4" x 1'-8" | 2'-4" x 1'-8" | 2'-4" x 1'-8" | 2'-4" x 1'-8" | 2'-4" x 1'-8" | 2'-0" DIA. | 1'-4" x 1'-4" | 1'-4" x 1'-4" | . |
| REINFORCING | (12) #6 | (12) #6 | (12) #6 | (12) #6 | (12) #6 | (12) #6 | (12) #6 | (8) #5 | (8) #5 | . |
| TIES | #3 at 12" c/c | #3 at 12" c/c | #3 at 12" c/c | #3 at 12" c/c | #3 at 12" c/c | #3 at 12" c/c | #3 at 12" c/c | #3 at 12" c/c | #3 at 12" c/c | . |
| TOP/PIER EL. | 242.43' | 242.43' | 242.43' | 242.43' | 242.43' | 242.43' | 245.10' | 242.43' | 242.43' | . |
| FOOTING SIZE (dxhxt) | 6'-0" x 6'-0" x 1'-0" | 6'-0" x 6'-0" x 1'-0" | 6'-0" x 6'-0" x 1'-0" | 4'-0" x 4'-0" x 1'-0" | 4'-0" x 4'-0" x 1'-0" | 4'-0" x 4'-0" x 1'-0" | 4'-0" x 4'-0" x 1'-0" | 3'-0" x 3'-0" x 1'-0" | 3'-0" x 3'-0" x 1'-0" | . |
| REINFORCING (BOT. EACH WAY) | (8) #4 | (8) #4 | (8) #4 | (5) #4 | (5) #4 | (5) #4 | (5) #4 | (4) #4 | (4) #4 | . |
| BDT. /FTG. EL. | 233.60' | 235.60' | 237.60' | 233.60' | 235.60' | 237.60' | 239.60' | 235.60' | 237.60' | . |
| REMARKS | . | . | . | . | . | . | . | . | . | . |

CONCRETE REINFORCEMENT CLASS B LAP SPLICES

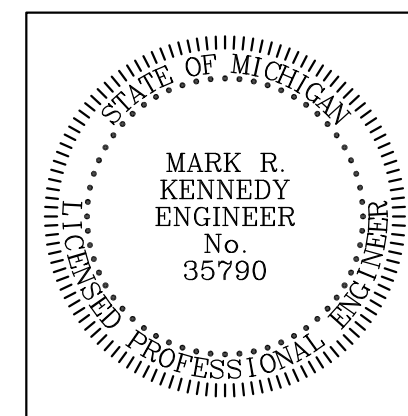
| BAR SIZE | WALLS, SLABS, JOISTS | | BEAMS, COLUMNS, PIERS | | FOOTINGS, TRENCH FOOTINGS | |
|----------|----------------------|----------------|-----------------------|----------------|---------------------------|----------------|
| | TOP REINF'G. | OTHER REINF'G. | TOP REINF'G. | OTHER REINF'G. | TOP REINF'G. | OTHER REINF'G. |
| #3 | 1'-0" | 1'-0" | 1'-7" | 1'-3" | 1'-1" | 1'-0" |
| #4 | 1'-7" | 1'-3" | 2'-1" | 1'-7" | 1'-6" | 1'-2" |
| #5 | 2'-4" | 1'-9" | 2'-7" | 2'-0" | 1'-10" | 1'-5" |
| #6 | 3'-1" | 2'-5" | 3'-1" | 2'-5" | 2'-2" | 1'-8" |
| #7 | 5'-0" | 3'-10" | 4'-6" | 3'-6" | 3'-2" | 2'-5" |
| #8 | 6'-2" | 4'-9" | 5'-2" | 4'-0" | 3'-7" | 2'-9" |
| #9 | 7'-6" | 5'-9" | 5'-10" | 4'-6" | 4'-5" | 3'-5" |
| #10 | 9'-0" | 6'-11" | 6'-7" | 5'-1" | 5'-6" | 4'-3" |
| #11 | 10'-7" | 8'-2" | 7'-3" | 5'-7" | 6'-7" | 5'-1" |

- NOTES:
- LAP SPLICES SHALL BE CLASS B UNLESS CLASS A IS INDICATED. CLASS A SPLICE = 0.77 X CLASS B SPLICE. MINIMUM SPLICE LENGTH = 1'-0"
 - TOP BARS ARE DEFINED AS HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.
 - MECHANICAL OR BUTT WELDED SPLICES DEVELOPING 125% OF YIELD STRENGTH OF REINFORCEMENT IS PERMITTED.

| BAR SIZE | Ldh | |
|----------|-----------------|-----------------|
| | fc' = 3,000 PSI | fc' = 4,000 PSI |
| 3 | 0'-9" | 0'-7" |
| 4 | 0'-11" | 0'-10" |
| 5 | 1'-2" | 1'-0" |
| 6 | 1'-5" | 1'-3" |
| 7 | 1'-8" | 1'-5" |
| 8 | 1'-10" | 1'-7" |
| 9 | 2'-1" | 1'-10" |
| 10 | 2'-4" | 2'-1" |
| 11 | 2'-7" | 2'-3" |



MINIMUM EMBEDMENT DEPTH OF CONCRETE REINFORCEMENT
STANDARD HOOK, Ldh



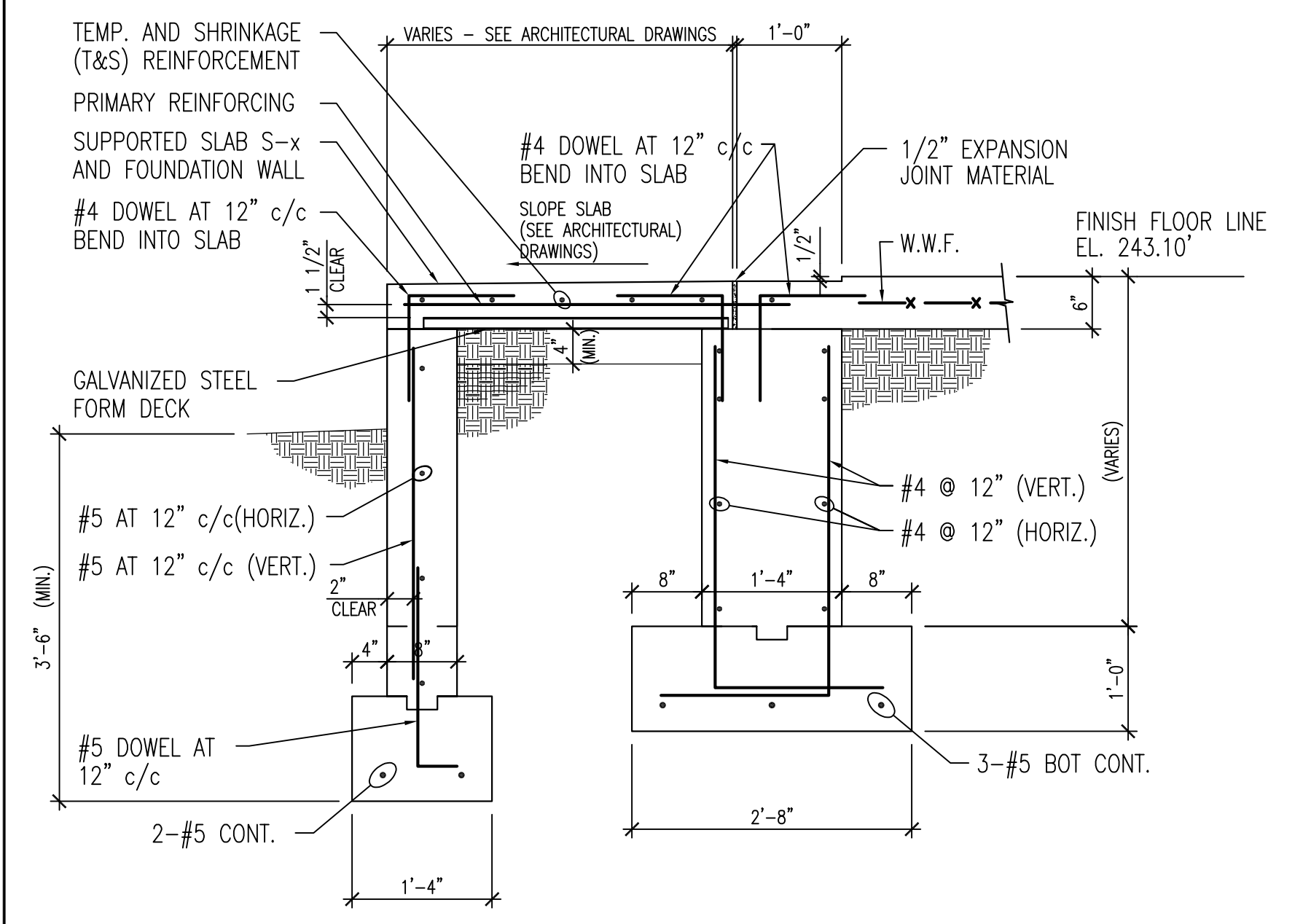
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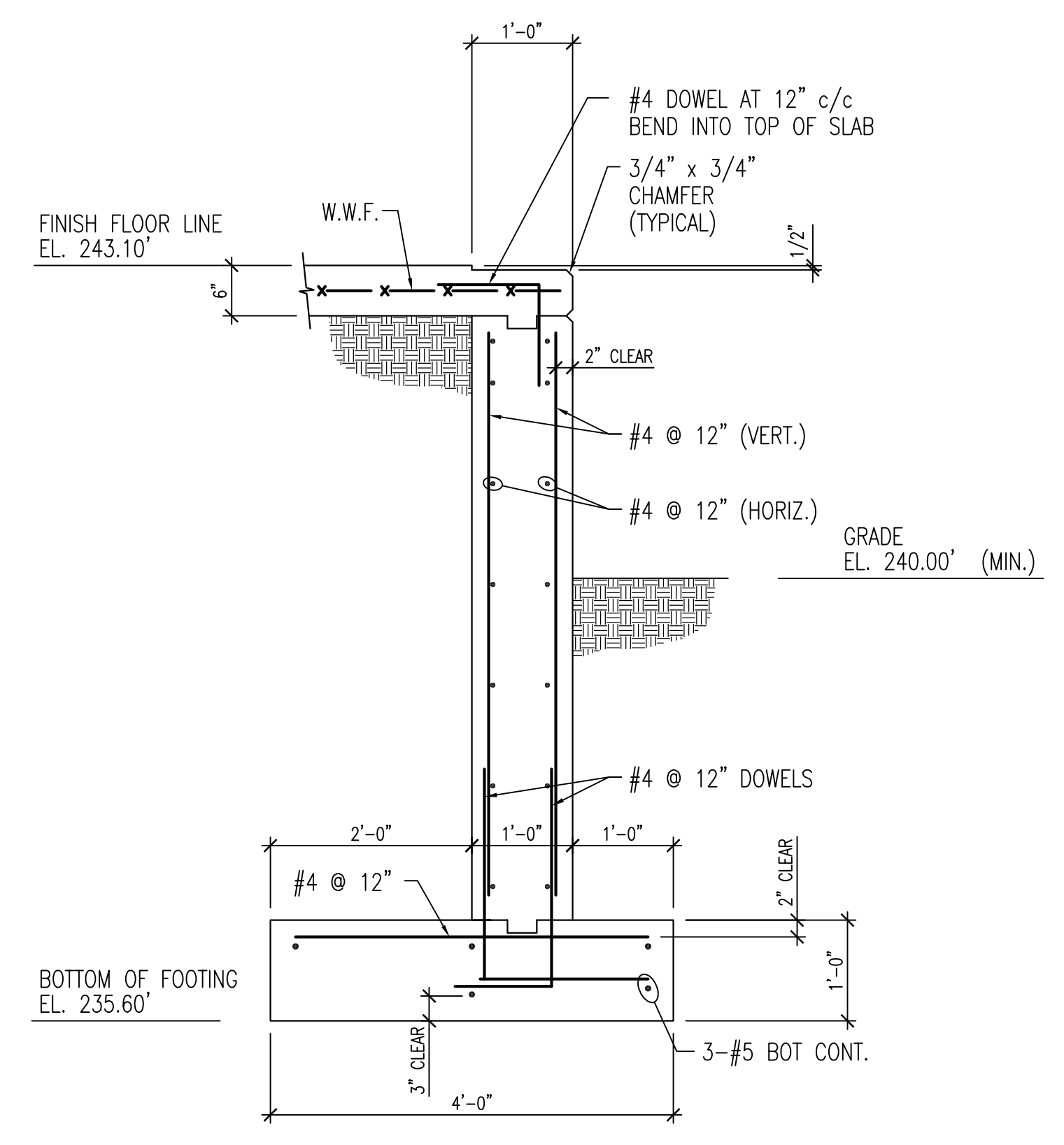
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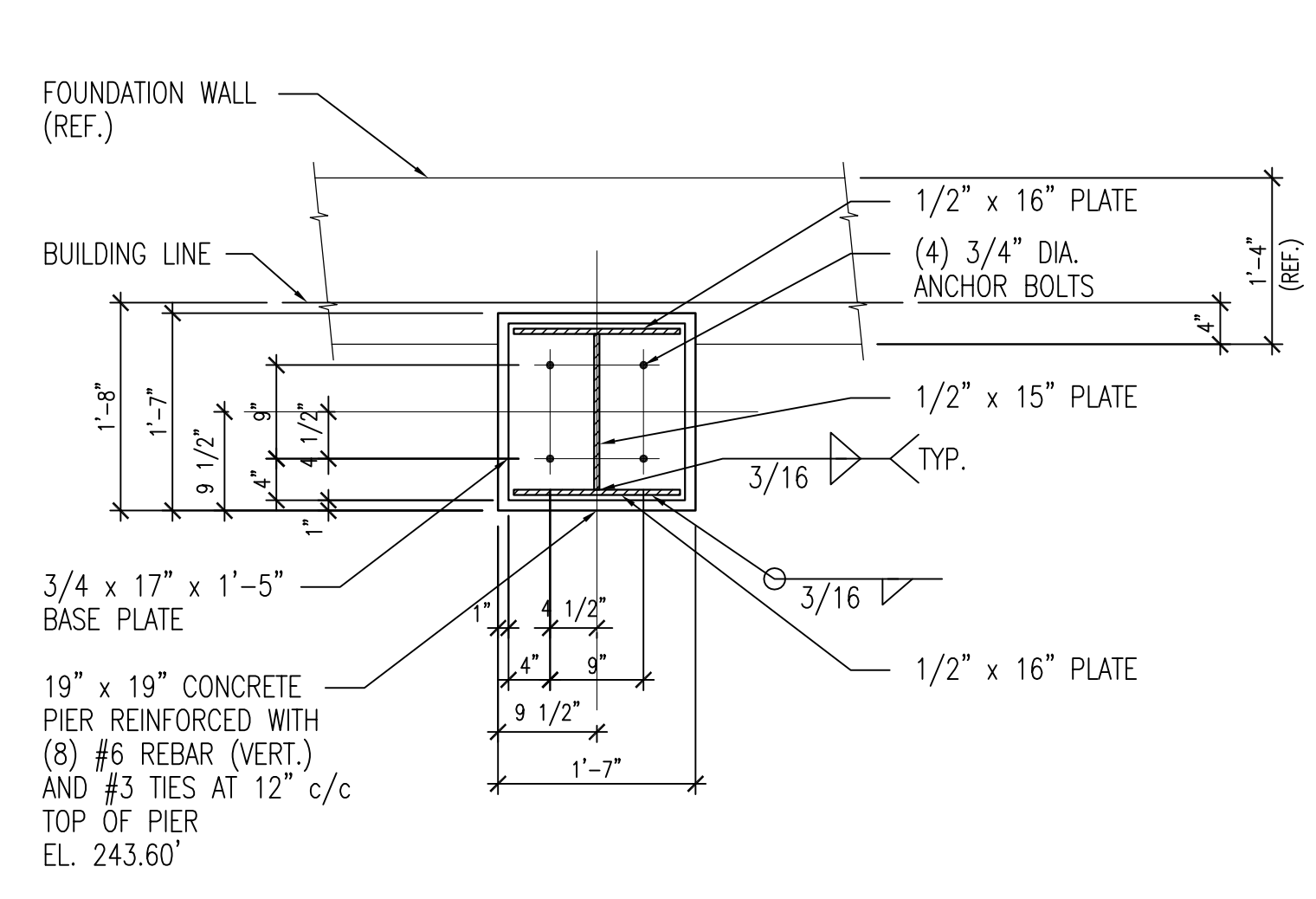
| DR. | CK. | DATE | STATUS |
|-------------|-----|---------|--------------|
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| | | 9-6-16 | BIDDING |
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| | | | SHEET S2 |
| | | | OF 4 |



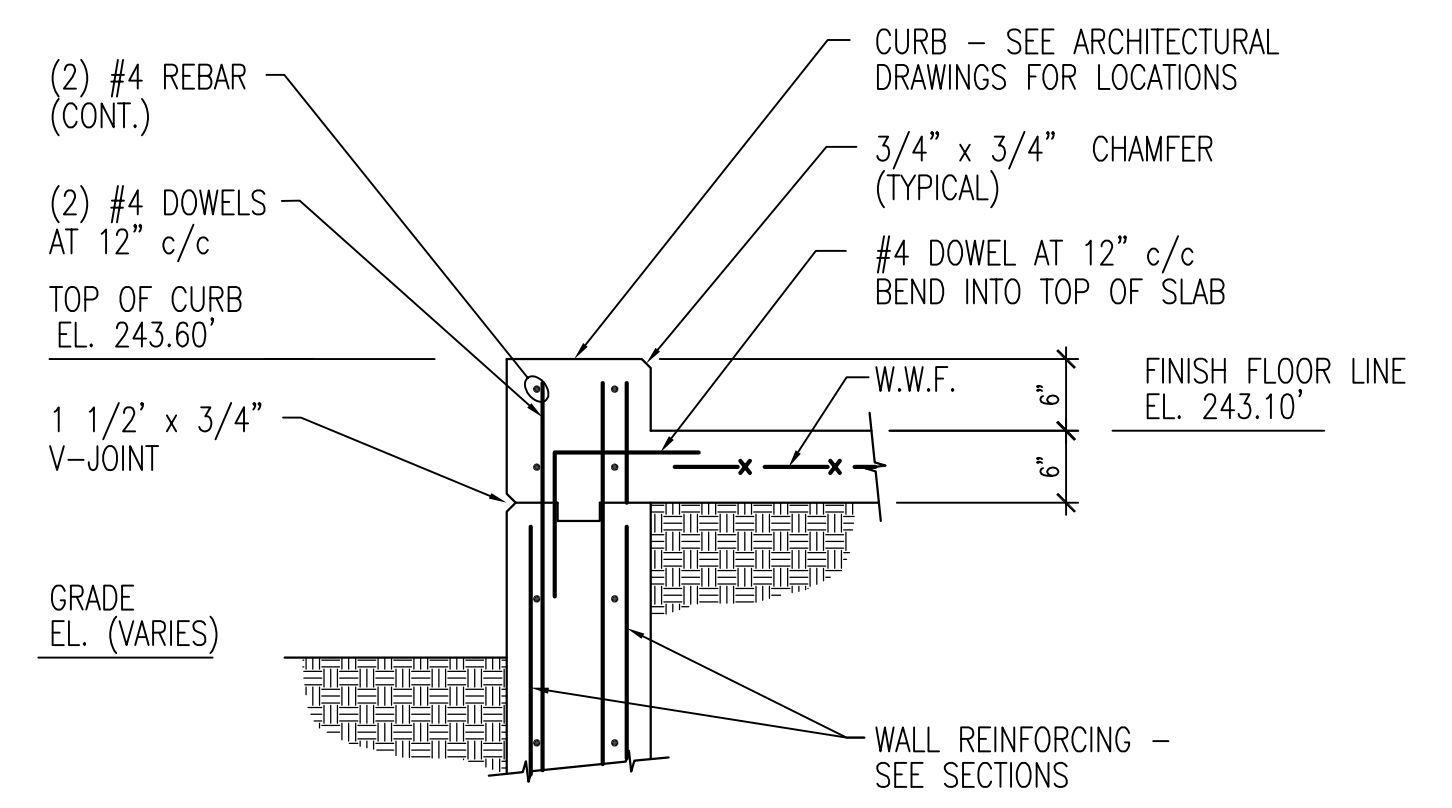
SECTION 1
SCALE: 3/4" = 1'-0"
S1



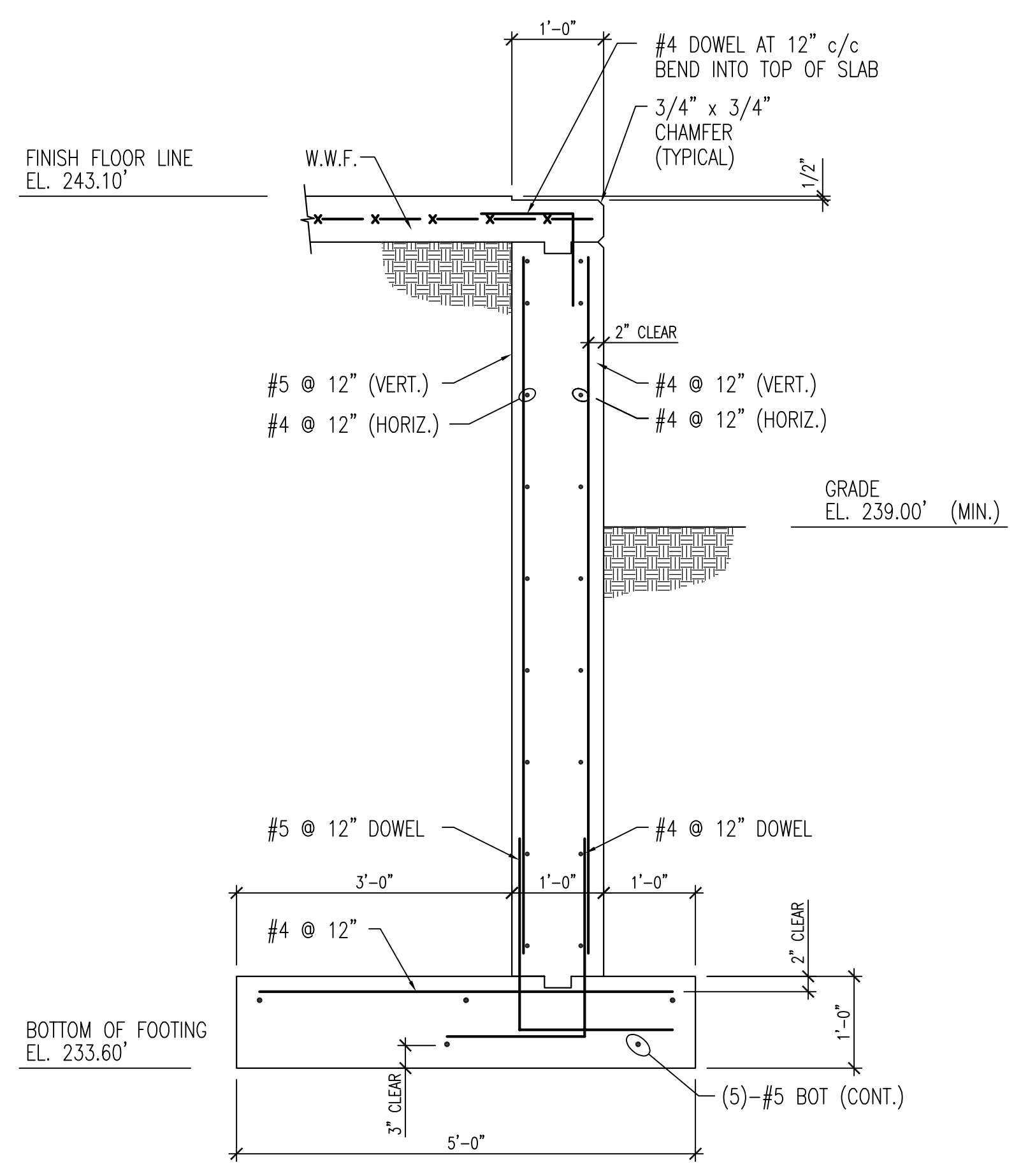
SECTION 3
SCALE: 3/4" = 1'-0"
S1



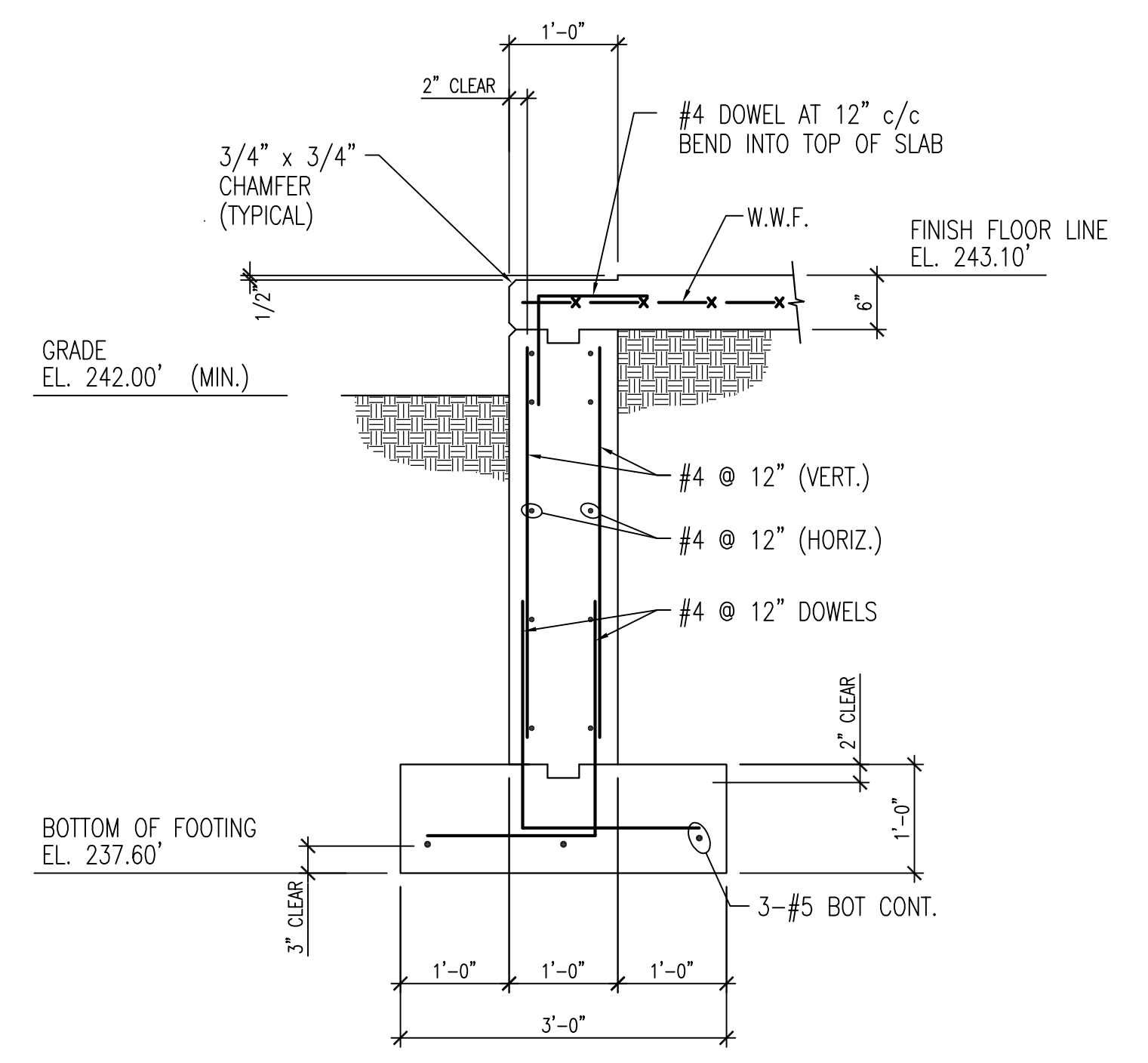
DETAIL 101
SCALE: 3/4" = 1'-0"
TYP. (4) PLACES



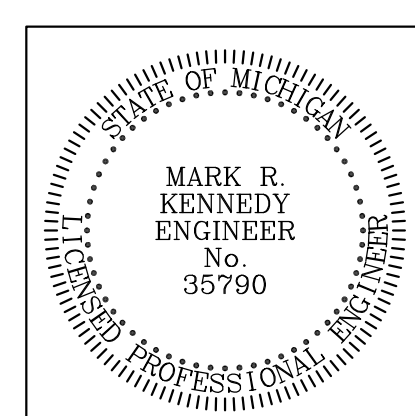
TYPICAL DETAIL - CURB BETWEEN OVERHEAD DOORS
SCALE: 3/4" = 1'-0"



SECTION 2
SCALE: 3/4" = 1'-0"
S1



SECTION 4
SCALE: 3/4" = 1'-0"
S1



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| | | SHEET | S3 OF 4 |

STRUCTURAL DESIGN CRITERIA

- A. General**
- Building Code: 2012 Michigan Building Code
 - Risk Category: II
- B. Floor Live Load**
- General Areas Unless Indicated: 150 psf
- C. Roof Live Load**
- Flat Roof: 20 psf
- D. Roof Snow Load**
- Snow Exposure Factor, Ce: 1.00
 - Thermal Factor, Ct: 1.00
 - Snow Load Importance Factor, Is: 1.00
 - Ground Snow Load, Pg: 25.0 psf
 - Flat Roof Snow Load, Pf: 17.5 psf
 - Low-Slope Minimum Snow Load, Pm: 20.0 psf
 - Snow Drifts and Unbalanced Loads: As required
- E. Wind Design Data**
- Basic Wind Speed, V: 115 mph
 - Exposure Classification: B
 - Enclosure Classification: Partially Enclosed
 - Mean Roof Height, H: 29-ft
 - Wind Directionality Factor, Kd: 0.85
 - Topographic Factor, Kzt: 1.00
 - Gust Response Factor, G: 0.85
 - Internal Pressure Coefficient, GCp: 0.55
- F. Earthquake Design Data**
- Site Class: D
 - Seismic Design Category, SDC: B
 - Mapped Short Period SRA, Ss: 0.094
 - Mapped One Second Period SRA, S1: 0.048
 - Short Period Design SRA, Sds: 0.100
 - One Second Period Design SRA, Sd1: 0.076
 - Seismic Load Importance Factor, Is: 1.00
 - Approximate Fundamental Period, Ta: 0.33 s
 - Seismic Response Coefficient, Cs: 0.033
 - Basic Seismic Force Resisting System: Steel System Not Specifically Detailed for Seismic Resistance
 - Response Modification Coefficient, R: 3
 - Analysis Procedure: Equivalent Lateral Force Procedure

FOUNDATIONS AND EARTHWORK

- A. Comply with Project Specifications and Drawings.**
- B. Design and install temporary systems for excavation dewatering and excavation bracing as required for proper execution of The Work. Remove temporary systems after construction is completed unless indicated or approved.**
- C. Spread footings are designed to bear on undisturbed soil, compacted fill material, or controlled low strength material (CLSM) with a net bearing capacity of 1,500 psf. Verify bearing capacity of soil at bottom of excavations before constructing footings. If actual bearing capacity is less than the design capacity immediately notify Architect. Increase depth of footings or overexcavate unsuitable soils and replace with compacted fill or CLSM as directed.**
- D. Prepare subgrade and construct building pad in accordance with project specifications. Proof roll subgrade to discover weak or unsuitable soils. Place fill in maximum 8-in lifts and compact to 95% of the maximum dry density determined in accordance with ASTM D1557-02 (Modified Proctor Test). Fill under foundations and backfill in excavations shall be coarse sand, gravel, or crushed stone. Subgrade under slabs-on-grade shall be minimum 4-in. deep, crushed stone placed to a tolerance of +0-in / -3/4-in.**
- E. Do not construct footings or slabs on frozen soils, on frost, or in excavations containing standing water. Keep excavations dry and protect subgrades, footings, and slabs from frost heave.**
- F. Center footings under columns and walls unless detailed otherwise. Top and bottom of footings shall be level. Step footings where it is necessary to change bearing elevations.**
- G. Bear exterior footings, footings adjacent to the building perimeter and footings in areas which will remain unheated during normal occupancy, at a minimum frost depth of 3'-6" below grade.**
- H. Form sides of footings and foundation walls unless conditions permit vertical excavations without sloughing and caving. Do not permit top of trench footings to mushroom. Form surfaces which will be exposed to view.**
- I. Reference architectural, mechanical, electrical, and plumbing drawings for sleeves, inserts, anchors, and other materials to be embedded in foundations.**
- J. Balance backfill on both sides of footings and foundation walls to prevent movement of foundations. Do not backfill against basement walls and earth-retaining walls until wall has attained its design strength and not before supporting floor or roof construction is in place.**
- K. Footings, piers, ties, hairpins, and other foundation details shown on drawings are based on estimated reactions from a generic manufactured building. Submit final reactions from selected building manufacture for evaluation by Engineer-of-Record prior to constructing foundations.**

ANCHORAGE TO CONCRETE AND MASONRY

- A. Comply with the following:**
- Specifications for Structural Concrete (ACI 301-05.)
 - Building Code Requirements for Structural Concrete (ACI 318-11.)
 - Project Specifications and Drawings.
- B. Furnish and install anchors of the type and materials indicated in the locations indicated. Substitution of anchor types is not permitted without prior authorization of structural engineer of record.**
- C. Cast-in Anchorage to Concrete and Masonry**
- Carbon-Steel Anchors
 - Headed Anchor Bolts: ASTM F1554, Grade 36
 - Washers: ASTM F436, hardened
 - Plate Washers: ASTM A36
 - Nuts: ASTM A563, heavy hex
 - Galvanizing: ASTM A153
 - Use templates to position anchors. Templates shall maintain alignment, depth, and projection of anchor bolts during concreting and masonry grouting.
- D. Post-Installed Anchorage to Concrete**
- Post-installed anchorage to concrete is designed by the Strength Design Method of ACI 318 Appendix D using the design-basis anchor. Substitution request for anchor of another manufacturer shall be accompanied by design calculations showing equivalent capacity to the design basis anchor.
 - Locate existing reinforcing bars and embedments by x-ray, electromagnetic, or ultrasonic testing or by chipping. Notify structural engineer of record of reinforcing bars which interfere with the installation of specific anchors and obtain approval to relocate anchors or cut existing reinforcement prior to proceeding with installation.
 - Install anchors in accordance with the Manufacturer's Printed Installation Instructions included in the anchor packaging.
 - Post-installed mechanical anchors shall be Category 1 and qualified for use in cracked and uncracked concrete in accordance with ACI 308.2.
 - Design Basis Anchors:

| | |
|-------------------|--------------------|
| Expansion Anchor: | Hilti Kwik Bolt TZ |
| Screw Anchor: | Hilti Kwik HUS EZ |
 - Embedment and anchor diameter shall be permanently embossed on exposed end of anchor.
 - Use manufacturer's longest standard embedment compatible with substrate depth unless indicated.
 - At time of installation, concrete shall have attained its specified compressive strength.

CAST-IN-PLACE CONCRETE

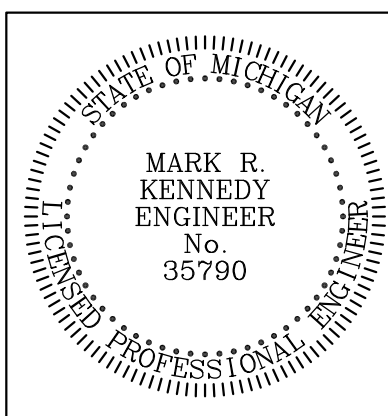
- A. Comply with the following:**
- Specifications for Structural Concrete (ACI 301-10).
 - Building Code Requirements for Structural Concrete (ACI 318-11).
 - Specification for Hot Weather Concreting (ACI 305.1-06).
 - Standard Specification for Cold Weather Concreting (ACI 306.1-90).
 - Guide for Concrete Floor and Slab Construction (ACI 302.1R-04).
 - Guide for Measuring, Mixing, Transporting, and Placing Concrete (ACI 304R-00).
 - Specification for Curing Concrete (ACI 308.1-11).
 - Guide to Formwork for Concrete (ACI 347-04).
 - Structural Welding Code - Reinforcing Steel (AWS D1.4-2011).
 - Placing Reinforcing Bars, Ninth Edition, CRSI
 - Project Specifications and Drawings.
- B. Qualify welders and welding procedures in accordance with AWS D1.4.**
- C. Concrete**
- Materials
 - Cement: ASTM C150, Type III
 - Fly Ash: ASTM C618, Class C
 - Ground Granulated Blast-Furnace Slag (GGBFS): ASTM C989
 - Normal Weight Aggregate: ASTM C33, Class 3S
 - Air-entraining Admixture: ASTM C260
 - Chemical Admixtures: ASTM C494
 - Mixing Water: ASTM C94, potable
 - General concrete mix requirements:
 - Establish mix proportions on the basis of trial mixes or field experience.
 - Cementitious materials may be combination of Portland cement, ground-granulated blast furnace slag and fly ash. Limit percentages, by weight, of fly ash and GGBFS to 25% of total cementitious material, and combination of fly ash and GGBFS to 40% of total cementitious material.
 - Limit water-soluble chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
 - Maximum coarse aggregate size: 1-in.
 - Concrete Classes:
 - Reinforced concrete exposed to freeze-thaw cycles in moist condition and exposed to deicing chemicals:
 - Exposure Class: F3
 - Compressive Strength, fc: 5,000 psi
 - Maximum water to cementitious material ratio: 0.40
 - Reinforced concrete exposed to freeze-thaw cycles but not exposed to deicing chemicals:
 - Exposure Class: F2
 - Compressive Strength, fc: 4,500 psi
 - PCompressive Strength, fc: 4,000 psi
 - Minimum cementitious material content: 520 pounds per cubic yard
 - Supported floor slabs, slabs-on-metal deck, concrete joists, concrete beams:
 - Exposure Class: F0
 - Compressive Strength, fc: 4,000 psi
 - Minimum cementitious material content: 520 pounds per cubic yard
 - Normal weight concrete.
- D. Steel Reinforcement**
- Materials
 - Reinforcing Bars: ASTM A615, Grade 60
 - Low Alloy Reinforcing Bars: ASTM A706, Grade 60
 - Welded Wire Fabric: ASTM A185, as-drawn.
 - Fabricate bent bars with minimum of standard hooks and embed in accordance with Concrete Reinforcement Standard Hook Embedment Schedule.
 - Lap reinforcing as shown in accordance with Concrete Reinforcement Lap Splice Schedule. Lap welded wire fabric one wire spacing plus 2-in.
 - Install dowels in column, pier, and wall footings of same size and number as vertical bars. Lap dowels with vertical reinforcement and extend into footing a distance equal to lap splice length. If footing depth is insufficient to develop dowel splice length, terminate end of bar in footing with standard hook.
 - P
 - P
 - Use low alloy reinforcing bars where welding of reinforcement is required or approved.
 - Embedding reinforcement dowels in existing structure:
 - Adhesive: Hilti HIT HY 200
 - Reinforcement Dowels: ASTM A615, Grade 60
 - Install dowels in accordance with the Manufacturer's Printed Installation Instructions included in the adhesive packaging. Installer shall be certified in accordance with ACI/CRSI Adhesive Anchor Installation Program
 - Unless shown, embed reinforcement dowels a minimum of twenty bar diameters.
 - Unless shown, maintain minimum edge distance of six bar diameters.
 - Install anchors in dry concrete with a minimum substrate temperature of 41 degrees. Drill holes with hammer drill using carbide-tipped bit.
 - Concrete cover on reinforcement unless noted:
 - Concrete deposited against earth: 3-in.
 - Formed surfaces exposed to weather or earth: 1-1/2-in. for #5 and smaller, 2-in. for #6 and larger.
 - Slabs, walls, and joists: 1-in.
 - Beams, girders, and columns: 1-1/2-in.
- E. Miscellaneous Materials**
- Bonding Adhesive: Sikaflex 110
 - Expansion/Isolation Joint filler: W.R. Meadows, Ceramair
 - Semi-rigid joint filler: Epoxy resin with Type A shore durometer hardness of 80
 - Vapor Retarder: ASTM E1745, Class C
 - Fine-Graded Granular Fill: ASTM D448, Size 10, crushed stone
 - Curing Compound: ASTM C309, Type 1, Class B, 18-25% solids, non-dissipating

- F. Reference architectural, mechanical, electrical, and plumbing drawings and specifications for openings, sleeves, conduits, inserts, anchors, and other materials to be embedded in concrete and for required slab depressions, slopes, equipment pads, curbs, chamfers, joints, and architectural detailing. Obtain written approval of engineer prior to placing openings or sleeves not shown on structural drawings through any structural element.**
- G. Place construction joints as shown on drawings and in locations which least impair strength of structure. Obtain written approval of engineer for construction joints not shown on drawings.**
- H. Saw out control joints in slabs-on-grade as soon as cutting action will not damage surface. Locate joints in approximately square pattern at a maximum spacing of 12-ft centers unless shown. Submit control joint location plan for approval.**
- I. Install vapor retarder under slabs cast on the ground. Seal joints with manufacturer's standard tape. Cover vapor retarder with 3-in layer of fine graded granular material unless indicated.**
- J. Chamfer exposed edges 3/4-in x 45 degrees.**
- K. Moist cure concrete for minimum of seven days using one of following methods:**
- Absorptive cover kept continuously wet with water.
 - Moisture-retaining cover.
 - Curing compound. Remove compound after curing period when required for application of architectural finishes.

CAST-IN-PLACE CONCRETE (CONTINUED)

- L. Finish Schedule:**
- Formed surfaces exposed to view and related unformed surfaces:

| |
|-----------------------------------|
| Architectural Finish - (Base Bid) |
| Rubbed Finish - (Alternate) |
 - Formed Surfaces not exposed to view: As-formed Finish
 - Slabs exposed to view: Trowel Finish
 - Slabs to receive resilient flooring, carpet, ceramic tile, paint, or thin coating: Trowel Finish
 - Slabs to receive bonded topping: Scratch Finish
 - Stairs, entry slabs, and exterior ramps: Broom Finish
- M. Floor Flatness and Levelness**
- Slabs-on-grade
 - Overall values: FF=35; FL=25,
 - Minimum local values: FF=24; FL=17.
 - Measure floor flatness and levelness in accordance with ASTM E1155 within 24 hours of finishing.
- N. Where bonding fresh concrete to previously hardened concrete, remove laitance and deleterious substances and intentionally roughen existing surface to 1/4" amplitude. Apply bonding adhesive in accordance with Manufacturer's Printed Installation Instructions included in the product packaging.**
- O. Sample fresh concrete and perform air content, slump tests, unit weight, and concrete temperature tests and cast concrete cylinders for strength tests in accordance with ACI 318. Obtain one composite sample for each day's placement of each concrete class exceeding 5 cubic yards plus one sample for each additional 50 cubic yards or fraction thereof.**



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 AT ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
 301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
 1118 WEST FRONT STREET
 MONROE, MICHIGAN 48161
 PHONE: 734-242-6880, FAX: 734-242-6883

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PLUMBING SPECIFICATIONS

PART 1 GENERAL

1.01 PURPOSE

THESE OUTLINE SPECIFICATIONS ARE NOT INTENDED TO COVER ALL NECESSARY ITEMS, BUT TO SERVE AS A GUIDE TO FURNISH AND INSTALL A COMPLETE PLUMBING SYSTEM AS DESCRIBED HEREIN.

1.02 SCOPE OF WORK

FURNISH AND INSTALL THE PLUMBING SYSTEMS AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- A. EXCAVATION AND BACKFILL REQUIRED FOR THE INSTALLATION OF THE PLUMBING SYSTEMS.
- B. CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE PLUMBING SYSTEMS.
- C. REMOVALS AS REQUIRED AND/OR AS INDICATED.
- D. DOMESTIC WATER SYSTEM INCLUDING PIPING TO ALL FIXTURES OR EQUIPMENT, VALVES, TAPS, ETC.
- E. ALL VALVES, FITTINGS, HANGERS, SLEEVES, ESCUTCHEON PLATES, ANCHORS, GUIDES, ETC., REQUIRED FOR THE PLUMBING SYSTEM INSTALLATION.
- F. CHLORINATION, TESTING, ADJUSTMENT AND CLEANING OF ALL SYSTEMS AND EQUIPMENT.
- G. INSTRUCTION OF OWNERS' PERSONNEL AND OPERATING MANUALS FOR ALL EQUIPMENT.
- H. PERMITS, APPLICATIONS, TESTS AND ANY OTHER FEES RELATED TO THIS WORK.

1.03 CONTRACT DRAWINGS

IN GENERAL, DRAWINGS ARE SCHEMATIC IN NATURE AND ARE INTENDED AS A GUIDE TO THE CONTRACTOR, BUT DO NOT NECESSARILY SHOW ALL DETAILS, OFFSETS, ETC. ALL DRAWINGS ARE TO BE THOROUGHLY INSPECTED. THE CONTRACTOR'S WORK SHALL CONFORM TO THE INFORMATION CONTAINED IN THIS SPECIFICATION AND/OR AS INDICATED IN THE LATEST REVISION OF THE DRAWINGS REFERRED TO THEREIN. THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER REGARDING ALL QUESTIONS ON WHICH HE MAY BE IN DOUBT BEFORE PROCEEDING WITH FABRICATION OF PARTS AFFECTED. THE CONTRACTOR SHALL PREPARE ALL ADDITIONAL DETAIL OR FIELD INSTALLATION DRAWINGS NECESSARY AT HIS OWN EXPENSE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS INDICATED ON THE ENGINEER'S LAYOUT DRAWINGS AND DETERMINE IF ANY CHANGES ARE REQUIRED IN PIPING RUNS, DRAINS, ETC., TO AVOID INTERFERENCE. MAJOR CHANGES SHALL NOT BE MADE WITHOUT THE APPROVAL OF THE ENGINEER. WHILE THE DRAWINGS ARE TO BE ADHERED TO AS CLOSELY AS POSSIBLE, THE CONTRACTOR HAS THE RIGHT TO VARY THE RUN OR CONDUITS, PIPING AND/OR DUCTS DURING PROGRESS OF THE WORK AS MAY BE FOUND NECESSARY OR DESIRABLE TO AVOID INTERFERENCES. MAJOR REVISIONS SHALL BE VERIFIED WITH THE ENGINEER.

1.04 VERIFICATION

BEFORE RUNNING ANY PIPING, ETC., WITHIN THE BUILDING, THIS CONTRACTOR SHALL ASSURE HIMSELF THAT THEY CAN BE INSTALLED AS CONTEMPLATED WITHOUT TRAPPING OR INTERFERING WITH COLUMNS, BEAMS, PIPING, FIXTURES, ETC. ANY NECESSARY MAJOR DEVIATION SHALL BE REFERRED TO THE ENGINEER FOR ADJUSTMENT BEFORE LINES ARE RUN, AT NO INCREASE IN CONTRACT PRICE. OF NECESSITY, OPENINGS, SUPPORTING STEEL, FIELD-BUILT CURBS, SPACE REQUIREMENTS, ETC., WERE DESIGNED AROUND SPECIFIC PARAMETERS. WHEN THE CONTRACTOR DETERMINES THE MAKE OF EQUIPMENT TO BE PROVIDED FOR THE JOB, IT SHALL BE HIS RESPONSIBILITY TO VERIFY AND COORDINATE UNIT DIMENSIONS WITH THE GENERAL CONTRACTOR AND ALL OTHER INTERESTED CONTRACTORS ON THE JOB. IT SHALL ALSO BECOME THE CONTRACTOR'S RESPONSIBILITY TO CHANGE AS NECESSARY, THROUGH THE ENGINEER, ALL REQUIRED DIMENSIONS SO THAT OPENINGS, SUPPORTING STEEL, CURBS, ELECTRICAL DATA, ETC., WILL FIT THE EQUIPMENT SUPPLIED. ANY ADDITIONAL COST WILL BE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. IN ADDITION, ELECTRICAL POWER, INTERLOCK AND CONTROL DIAGRAMS AND PIPING ARRANGEMENTS WERE DESIGNED AROUND ONE SPECIFIC MANUFACTURER. IF ADDITIONAL WIRING, PIPING CONTROLS, ETC., IS REQUIRED FOR OTHER EQUIPMENT, THIS CONTRACTOR SHALL INCLUDE THE COST OF THE SAME IN HIS PRICE. DIMENSIONS, ELEVATIONS AND RELATIVE LOCATIONS OF EXISTING EQUIPMENT, SEWERS, PIPES, DUCTS, CONDUITS, ETC., IN PLACE AS SHOWN ON THE DRAWINGS, ARE TAKEN FROM AS-BUILT AND RECORD DRAWINGS AND ARE DEEMED RELIABLE ONLY INsofar AS GENERAL LAYOUT IS CONCERNED. SUCH DIMENSIONS SHALL NOT BE USED FOR LAYOUT DRAWINGS OR DETAILING OF COMPONENTS. THE RESPONSIBILITY FOR CHECKING IN PLACE ITEMS WILL BE THE CONTRACTOR'S. ALL MEASUREMENTS, THE EXACT DETERMINATION OF RELATIVE ELEVATIONS OR LOCATIONS, THE ASCERTAINING OF ACCURACY OF ALL GIVEN ELEVATIONS AND DIMENSIONS AND THE OBTAINING OF ALL NECESSARY ADDITIONAL INFORMATION TO INSURE THE PROPER FIT AND COORDINATION OF ALL CONDUIT EQUIPMENT, DUCTS, AND PIPING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.05 SITE VISIT

ALL CONTRACTORS BIDDING THE WORK INDICATED THROUGHOUT THESE CONTRACT DOCUMENTS ARE REQUIRED TO VISIT, AND THOROUGHLY EXAMINE THE PROJECT SITE AND ITS ASSOCIATED CONDITIONS. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS UNDER WHICH THIS WORK MUST BE PERFORMED. ALL CONTRACTORS SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO SUBMITTING A BID PROPOSAL. FAILURE TO DO SO SHALL BE DEEMED AS ACCEPTANCE OF EXISTING CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR ANY DEVIATIONS OR DISCREPANCIES TO THESE PLANS AFTER A CONTRACTOR HAS BEEN SELECTED.

1.06 GUARANTEE

THE CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK WILL BE FREE FROM DEFECTS IN WORKMANSHIP AND/OR MATERIALS AND THAT ALL APPARATUS WILL DEVELOP CAPACITIES AND CHARACTERISTICS SPECIFIED. SHOULD ANY DEFECTS IN WORKMANSHIP, AND/OR MATERIALS REQUIRE REDESIGN OF ANY PART OF THE ELECTRICAL, MECHANICAL, PLUMBING, OR ARCHITECTURAL LAYOUT, ALL SUCH REDESIGN AND ALL NEW DRAWINGS AND DETAILING REQUIRED HEREOF SHALL, WITH THE APPROVAL OF THE ARCHITECT, BE PREPARED BY THE CONTRACTOR AT HIS OWN EXPENSE. WHERE SUCH APPROVED DEVIATION REQUIRES A DIFFERENT QUALITY AND ARRANGEMENT OF DUCTWORK, PIPING, WIRING, CONDUIT AND/OR EQUIPMENT FROM THAT SPECIFIED OF DETAILED ON THE DRAWINGS WITH THAT APPROVAL OF THE ARCHITECT, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUCH MATERIAL AND/OR EQUIPMENT REQUIRED BY THE SYSTEM AT NO ADDITIONAL COST TO THE OWNER.

1.07 SUBMITTALS

AFTER RECEIVING APPROVAL OF EQUIPMENT MANUFACTURERS AND PRIOR TO DELIVERY OF ANY MATERIAL TO JOB SITE AND SUFFICIENTLY IN ADVANCE OF THE REQUIREMENTS TO ALLOW ARCHITECT AMPLE TIME FOR CHECKING, SUBMIT FOR REVIEW DETAILED DIMENSIONED DRAWINGS AND/OR EQUIPMENT CUT SHEETS SHOWING CONSTRUCTION SIZE, ARRANGEMENT, OPERATING CLEARANCES, PERFORMANCE CHARACTERISTICS AND CAPACITY OF MATERIAL AND EQUIPMENT. SHOP DRAWINGS SHALL SHOW THE RATINGS OF ITEMS AND SYSTEMS AND HOW THE COMPONENTS OF AN ITEM AND SYSTEM ARE ASSEMBLED, FUNCTION TOGETHER AND HOW THEY WILL BE INSTALLED ON THE PROJECT. DATA AND SHOP DRAWINGS FOR COMPONENT PARTS OF AN ITEM OR SYSTEM SHALL BE COORDINATED AND SUBMITTED AS A UNIT. IT IS THE INTENT OF THESE CONTRACT DRAWINGS TO HAVE THE MECHANICAL CONTRACTOR PREPARE "AS-BUILT" RECORD DRAWINGS IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS.

1.08 CUTTING, PATCHING & FINISHING

PROVIDE CUTTING AND PATCHING OF ALL MATERIALS NECESSARY FOR THE INSTALLATION AS INDICATED OR SPECIFIED. NEATLY REMOVE AND LEGALLY DISPOSE OF PLUMBING COMPONENTS AND ITEMS NO LONGER IN USE. PROTECT THE STRUCTURE, FURNISHINGS, FINISHES AND MATERIALS ADJACENT TO THE AREA OF CUTTING AND PATCHING. PATCH EXISTING FINISHED SURFACES AND EQUIPMENT USING NEW MATERIALS AND METHODS, TO MATCH ADJACENT WORK, UTILIZING EXPERIENCED INSTALLERS. PATCHING OF FIRE RATED PARTITIONS, CEILINGS AND OTHER ASSEMBLIES, SHALL MATCH THE RATING OF THE RATED BARRIER WITH MATERIALS LISTED AND IDENTIFIED FOR SUCH USE, AND SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE GENERAL TRADES SPECIFICATIONS. IN AREAS WHERE NEW FINISH WORK BY THE GENERAL CONTRACTOR IS NOT INCLUDED IN THE PROJECT, THE CONTRACTOR SHALL REPAIR AND/OR RESTORE FINISHES TO MATCH ADJACENT FINISHES. OPENINGS AROUND PIPING OR IN SLEEVES FOR PIPING PENETRATING FIRE-RATED FLOOR SLABS, WALLS, PARTITIONS, CEILINGS, OR SMOKE PARTITIONS, SHALL BE SEALED AT BOTH SIDES OF THE PENETRATION. INSULATION SHALL NOT EXTEND THROUGH SLEEVES. PACK OPENINGS WITH CALCIUM SILICATE BLOCK, DOW CORNING 3-6548 RTV SILICON FOAM, 3M CP25 CAULK, OR 303 PUTTY FIRE BARRIER SYSTEM OR MATERIAL HAVING THE SAME FIRE RATING AS THE FLOOR OR WALL PENETRATED. FIBERGLASS IS NOT ACCEPTABLE.

1.09 CONNECTIONS TO EXISTING WORK

PLAN THE INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH THE REGULAR OPERATION OF THE EXISTING FACILITIES. SUBMIT TO THE ARCHITECT, FOR HIS APPROVAL, A PROGRESS SCHEDULE INDICATING ALL NECESSARY TEMPORARY SHUTDOWNS OF EXISTING SERVICES. ALL SHUTDOWNS SHALL BE MADE AT SUCH TIMES AS WILL NOT INTERFERE WITH REGULAR OPERATION OF THE EXISTING FACILITIES AND ONLY AFTER WRITTEN APPROVAL FROM THE ARCHITECT.

1.10 NEW WORK

UNLESS OTHERWISE NOTED, ALL WORK INDICATED THROUGHOUT THESE DRAWINGS SHALL BE CONSIDERED TO BE NEW WORK AND SHALL BE INCLUDED AS AN INTEGRAL PART OF THIS CONTRACT.

1.11 CLOSE-OUT

CONTRACTOR SHALL PROVIDE FIELD-TESTING, CHECKOUT AND SYSTEM DEMONSTRATIONS TO OWNER TO ASSURE PROPER PERFORMANCE AND ADJUSTMENT OF ITEMS PROVIDED UNDER THE CONTRACT. REMOVE ALL DEBRIS CREATED BY THE CONSTRUCTION WORK AND CLEAN ALL EQUIPMENT, AIR DEVICES, ETC., INSIDE AND OUTSIDE. PROVIDE HARDBOUND BINDER WHICH INCLUDES: COPIES OF EACH SHOP DRAWING, PREVENTATIVE MAINTENANCE PROCEDURES, OPERATION AND INSTRUCTION MANUALS, LITERATURE SUPPLIED WITH PLUMBING EQUIPMENT, AND A LIST OF ALL CONTRACTOR'S PURCHASE ORDERS WITH SUPPLIERS, NAMES, ADDRESSES AND PHONE NUMBERS, FOR ALL MATERIALS. PROVIDE AT LEAST 2 HOURS OF INSTRUCTION TO PERSONNEL SELECTED BY THE OWNER, TO FAMILIARIZE THEM WITH THE LOCATION OF SIGNIFICANT EQUIPMENT, TRAIN THEM ON EQUIPMENT FUNCTIONS, REVIEW MAINTENANCE PROCEDURES AND COORDINATE INFORMATION AVAILABLE IN THE CLOSE-OUT BINDER.

1.12 REFERENCED STANDARDS

2012 MICHIGAN PLUMBING CODE
NFPA-NATIONAL FIRE PROTECTION ASSOCIATION

PART 2 PRODUCTS

2.01 GENERAL

THE MANUFACTURERS REFERENCED THROUGHOUT THIS OUTLINE SPECIFICATION ARE INCLUDED AS A BASIS OF DESIGN. SUBMISSION OF ALTERNATE MANUFACTURERS OF SIMILAR EQUIPMENT IS SUBJECT TO ENGINEER APPROVAL. UNITS OF EQUIPMENT, OTHER THAN THOSE LISTED AS THE BASIS OF DESIGN, MUST BE PROVEN TO BE PHYSICALLY ACCEPTABLE, IN ADDITION TO MEETING ALL PERFORMANCE AND EQUIPMENT SPECIFICATIONS. LIABILITY OF NON-COMFORMANCE SHALL LIE WITH THE CONTRACTOR/SUBMITTER.

2.02 PIPING

- A. DOMESTIC WATER - ABOVEGROUND
 - 1. 2" AND SMALLER: CROSS-LINKED POLYETHYLENE (PEX-A) TUBING AND ASTM F1960 COLD EXPANSION FITTINGS. THE USE OF PEX-B OR PEX-C IS NOT PERMISSIBLE.
 - 2. 3" AND SMALLER: TYPE "L" HARD TEMPER COPPER:
 - a. WITH LEAD-FREE SOLDERED JOINTS AND WROUGHT STANDARD WEIGHT PRESSURE RATED FITTINGS.
 - b. WITH COPPER PRESS FITTINGS, WHICH SHALL CONFORM TO THE MATERIAL AND SIZING REQUIREMENTS OF ASME B16.18 OR ASME B16.22. O-RINGS FOR COPPER PRESS FITTINGS SHALL BE EPDM.
- B. DOMESTIC WATER - INSIDE BUILDING UNDERGROUND
 - 1. TYPE "K" SOFT COPPER TUBE ASTM B88-83A WITH NO JOINTS IF POSSIBLE, OTHERWISE SOLDER WITH PRESSURE RATED FITTINGS.
 - 2. CROSS-LINKED POLYETHYLENE (PEX-A) TUBING WITH NO FITTINGS IF POSSIBLE, OTHERWISE ASTM F1960 COLD EXPANSION FITTINGS. THE USE OF PEX-B OR PEX-C IS NOT PERMISSIBLE.

2.03 VALVES

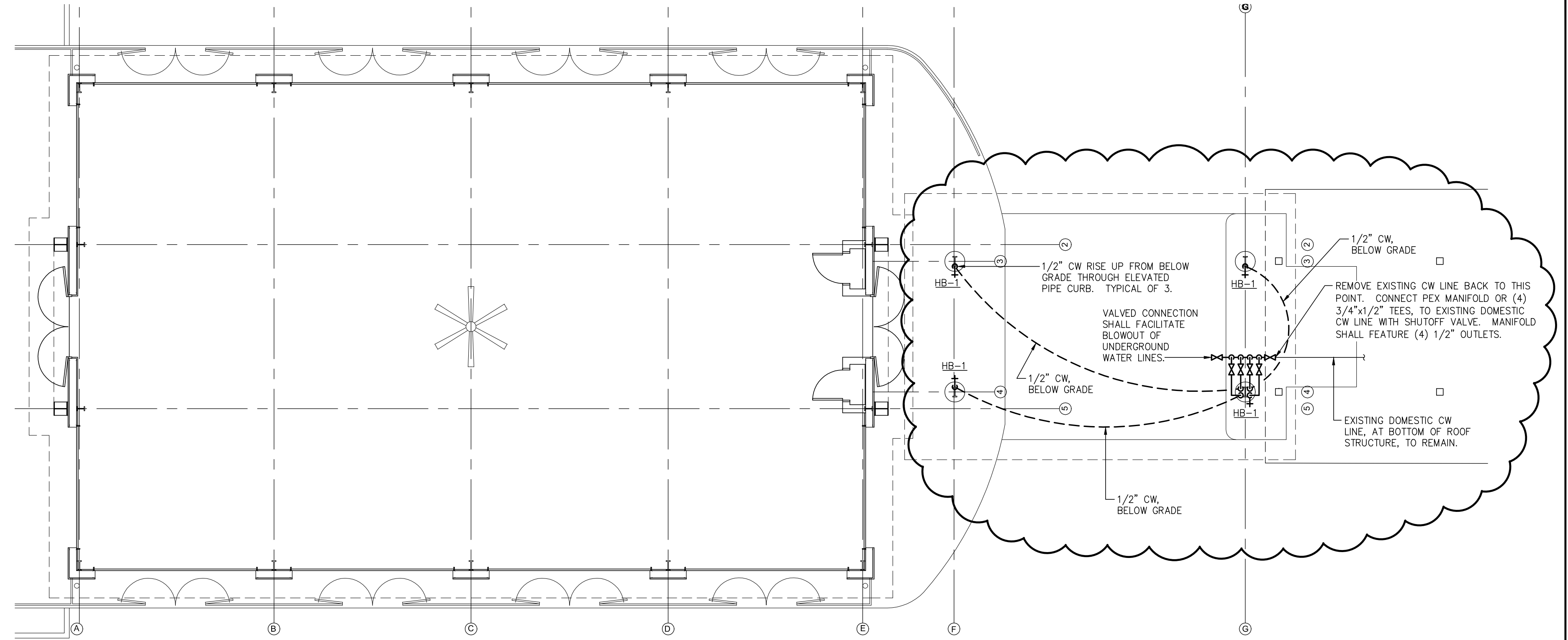
- A. DOMESTIC WATER PIPING
 - 1. BALL: 125 PSI, LEAD-FREE BRONZE BODY, TEFLON TRIM, WATTS #LFB6000 WITH EXTENDED HANDLE SLEEVE FOR INSULATION.
 - 2. CHECK: 125 PSI, LEAD-FREE BRONZE BODY AND TRIM, APOLLO #1011-LF.
 - 3. GATE: 125 PSI, LEAD-FREE BRONZE BODY AND TRIM, APOLLO #1011-LF.
 - 4. BUTTERFLY: 150 PSI, CAST IRON BODY WITH TAPPED LUGS, EPDM TRIM, GRINNELL SERIES 8000.
- B. APPROVED MANUFACTURERS
 - 1. WATTS, APOLLO, CRANE, GRINNELL, NORDSTROM, NIBCO, STOCKHAM, SMITH, MILWAUKEE.

2.05 PLUMBING FIXTURES

- A. GENERAL: THE CONTRACTOR SHALL FURNISH, INSTALL, AND CONNECT ALL PLUMBING FIXTURES, SPECIALTIES AND TRIM AS SHOWN ON THE DRAWINGS AND AS HEREINAFTER DESCRIBED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, ROUGH-IN DIMENSIONS, MOUNTING HEIGHTS, ETC., OF FIXTURES WITH THE PLUMBER WITH THE ARCHITECTURAL DRAWINGS AND THE MANUFACTURER'S SPECIFICATIONS.
- B. FIXTURE SETTING: FIXTURES SHALL BE SET IN A NEAT, FINISHED, AND UNIFORM MANNER. MAKE THE CONNECTIONS TO ALL FIXTURES AT RIGHT ANGLES TO THE WALL, UNLESS OTHERWISE DIRECTED.
- C. FIXTURE SCHEDULE: REFER TO THE FIXTURE SCHEDULE ON DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- D. APPROVED MANUFACTURERS:
 - 1. HOSE BIBBS: WOODFORD, NIBCO, WATTS, ZURN

PART 3 EXECUTION

- A. ALL EQUIPMENT INSTALLATION PROCEDURES SHALL BE BASED ON FUNDAMENTAL ENGINEERING AND CONSTRUCTION PRINCIPLES IN CONFORMANCE WITH ALL APPLICABLE CODES, STANDARDS AND ORDINANCES.
- B. THE PLUMBING CONTRACTOR SHALL INSTALL ALL PLUMBING EQUIPMENT IN CONFORMANCE WITH MANUFACTURER ISSUED INSTRUCTIONS AND RECOMMENDATIONS.
- C. THE PLUMBING CONTRACTOR SHALL NOT KNOWINGLY INSTALL WORK THAT IS IN ERROR.
- D. PROVIDE ONE (1) YEAR WARRANTY ON ALL LABOR AND MATERIALS UNLESS NOTED OTHERWISE.
- E. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES REQUIRED FOR HIS WORK.
- F. THE PLUMBING CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF HIS COMPLETED WORK.
- G. THE SYSTEMS REPRESENTED IN THESE CONTRACT DOCUMENTS HAVE THE INTENT OF PROVIDING ENERGY-EFFICIENT, SAFETY AND COMFORT FOR THE PROPOSED FACILITY.
- H. THE PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES ON THE PROJECT.
- I. ALL MATERIALS AND EQUIPMENT INSTALLED SHALL FULLY COMPLY WITH THE SAFE DRINKING WATER ACT OF 1974, INCLUDING PUBLIC LAW 111-380, COMMONLY REFERRED TO AS THE "NO LEAD LAW".
- J. PROCEDURES FOR FLUSHING AND DISINFECTION
 - 1. PROCEDURES SHALL MEET THE REQUIREMENTS OF AWWA C651 AND C652 AS WELL AS ALL APPLICABLE LOCAL REGULATIONS.
 - 2. DISINFECTION AND FLUSHING SHALL BE COMPLETED WITHIN THREE WEEKS PRIOR TO WHOLE OR PARTIAL BENEFICIAL OCCUPANCY. IF BENEFICIAL OCCUPANCY OF ANY PART OF THE BUILDING IS DELAYED MORE THAN TWO WEEKS BUT LESS THAN FOUR WEEKS AFTER DISINFECTION, FLUSHING OF ALL FIXTURES SHALL AGAIN BE COMPLETED. IF BENEFICIAL OCCUPANCY OF ANY PART OF THE BUILDING IS DELAYED FOUR WEEKS OR MORE AFTER DISINFECTION, THE NEED FOR DISINFECTION AND FLUSHING SHALL BE DETERMINED BY A RISK ASSESSMENT CONDUCTED BY THE WATER PROGRAM TEAM / OWNER.
 - 3. CONFIRMATION THAT THE BUILDING WATER SYSTEM PERFORMANCE MEETS DESIGN PERFORMANCE PARAMETERS INDICATED IN THE CONTRACT DOCUMENTS.



PARTIAL PLUMBING PLAN
SCALE: 1/8" = 1'-0"

PLUMBING FIXTURE SCHEDULE

| DESCRIPTION | SYMBOL | CW | HW | WASTE | VENT | SPECIFICATIONS |
|-------------|--------|------|-----|-------|------|---|
| HOSE BIBB | HB-1 | 3/4" | --- | --- | --- | WOODFORD #24P-3/4, WITH BRASS EXTERIOR FINISH, WHEEL HANDLE, 3/4" INLET AND 3/4" HOSE THREAD WITH VACUUM BREAKER. |

GENERAL NOTES:

- 1. DOMESTIC WATER FIXTURE SUPPLY PIPING, SIZED AS NOTED ON THE DRAWINGS, SHALL EXTEND UNFINISHED TO WITHIN 30" FROM THE POINT OF CONNECTION TO THE PLUMBING FIXTURE.
- 2. EXTEND INDIVIDUAL DOMESTIC WATER DISTRIBUTION LINES TO FIXTURES AS REQUIRED. LINES SHALL BE SIZED AS INDICATED IN THE PLUMBING FIXTURE SCHEDULE.
- 3. INSTALL SHUT-OFF VALVES AT ALL DOMESTIC WATER FIXTURE SUPPLY CONNECTIONS.
- 4. PROVIDE ALL HANGERS, SUPPORTS AND MISCELLANEOUS STEEL REQUIRED FOR THE PROPER INSTALLATION OF ALL PIPING AND EQUIPMENT.
- 5. COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES.
- 6. MAINTAIN REQUIRED MANUFACTURERS' CLEARANCES ON ALL EQUIPMENT.

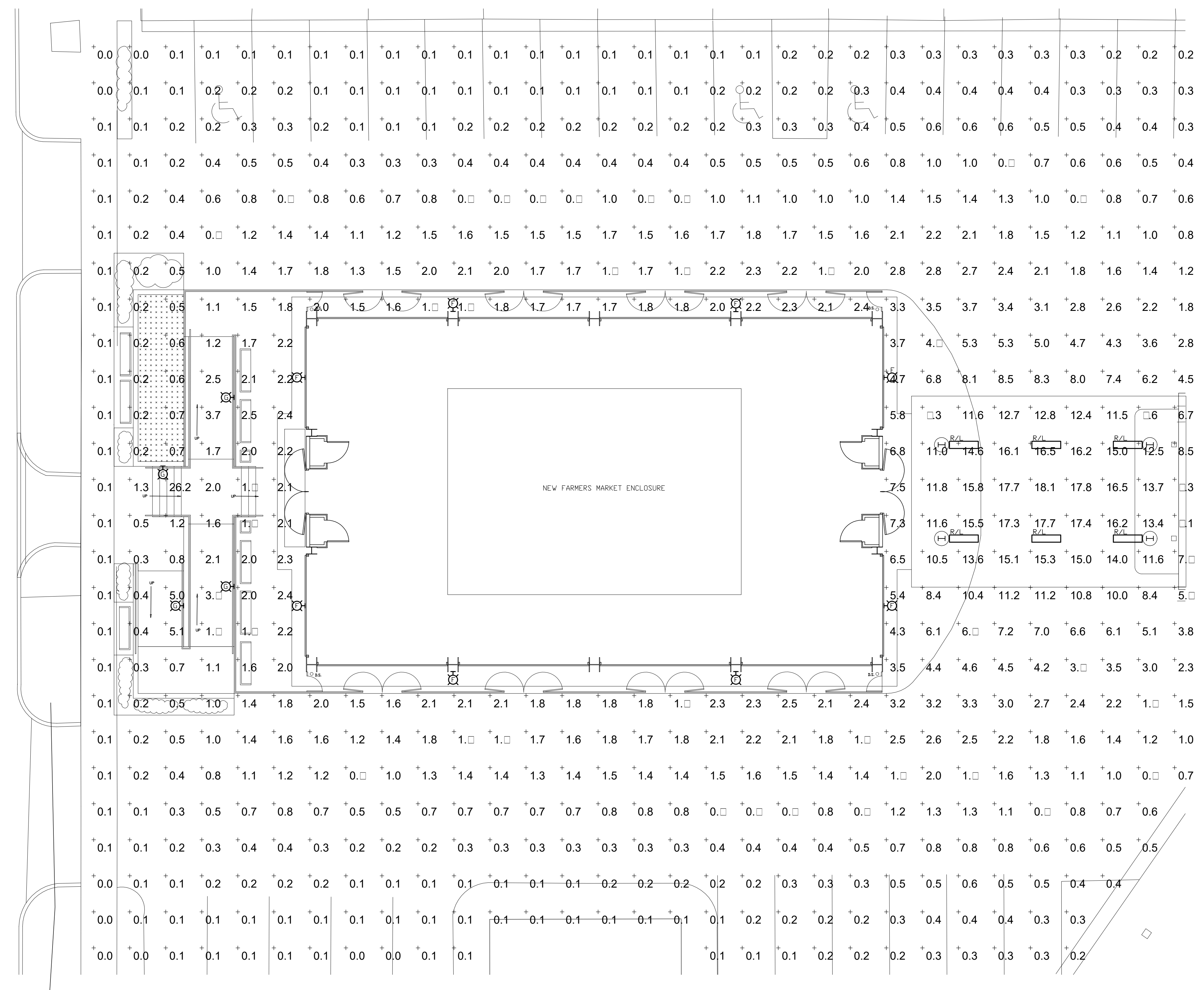
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DR. MPW CK. ---
4/11/17 BIDDING
9/22/16 ADDENDUM #1
9/06/16 BIDDING
8/25/16 REVIEW
DATE STATUS
JOB ITB No. 4454
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ELECTRICAL SITE PHOTOMETRIC PLAN
SCALE: 1/8" = 1'-0"

| FIXTURE SCHEDULE | | | | | |
|------------------|---------------|----------------------------|-------|--|--|
| MARK | LAMP CATEGORY | LAMP QTY/TYP | VOLTS | DESCRIPTION | MFR. AND CATALOG SERIES |
| R/L | FLUOR | 3-32W-T8 3500K | 120 | REMOVE AND RELOCATE EXISTING 48" BY 12" SURFACE MOUNTED, VAPORTIGHT, ENCLOSED AND GASKETED, CUSTOM MOUNTING BRACKETS, UL WET LOCATION LISTED, FIBERGLASS HOUSING, HIGH GLOSS BAKED ENAMEL WHITE FINISH, IMPACT RESISTANT 50% DR ACRYLIC PRISMATIC LENS, 15% UP-LIGHT, STAINLESS STEEL LATCHES, SPECULAR ALUMINUM REFLECTOR, -20 DEGREE F RAPID START ELECTRONIC BALLAST, INTERNAL SLOW-BLOW FUSE, NO MOUNTING HOLES INTO LAMP/BALLAST COMPARTMENT. CLEAN AND RE-LAMP UPON RELOCATION. M.H. APPROX. 14'6" | ORIGINALLY SPECIFIED AS: INTEL-ENERGY SERIES CLS-HIF-4N-33218-3S1-20 DEG-SF-CB -WP-120VOLT |
| F | LED | 27W - 4000K 2300 LUMENS | 120 | OUTDOOR LOW PROFILE WALL SCONCE, CAST ALUM. HOUSING, INTEGRAL ELECTRONIC DRIVER, DARK BRONZE FINISH. TYPE 2 DISTRIBUTION, M.H. 11'0" AFF. | LITHONIA DSXWLED-10C-700-40K-T2M -DDBXD-REV OR EQUAL BY PHILIPS OR COOPER |
| G | LED | 8W - 4000K 310 LUMENS | 120 | OUTDOOR STEP LIGHT, FLUSH MOUNTED, 12 INCH WIDE BRASS COVER WITH BLACK MILLIGROOVE TRIM FOR LOW GLARE, WIDE DISTRIBUTION, WET LOCATION LISTED, INTEGRAL ELECTRONIC DRIVER, BRUSHED BRASS FINISH. M.H. 18" AFF. | WINONA STEP13-WL9L-LST2A-WHT40K-REV OR EQUAL BY PHILIPS OR COOPER |

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| SHEET | E-PM1 | | |
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09-02-2016



D-Series Size 1 LED Wall Luminaire

Catalog Number, Notes, Type

Hit the Tab key or mouse over the page to see all interactive elements.

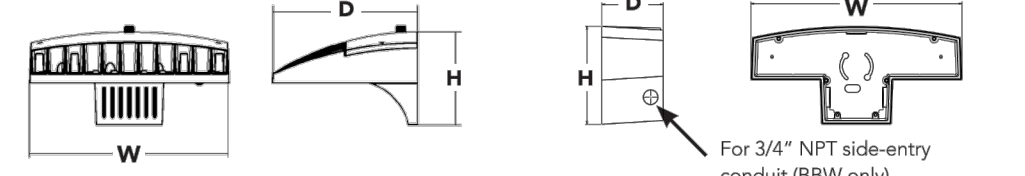
d-series

Specifications Luminaire

Width: 13-3/4" (34.9 cm) Weight: 12 lbs (5.4 kg) Depth: 10" (25.4 cm) Height: 6-3/8" (16.2 cm)

Back Box (BBW, ELCW)

Width: 13-3/4" (34.9 cm) Depth: 4" (10.2 cm) Height: 6-3/8" (16.2 cm)



Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DBDXTD

Ordering information table with columns: Series, LEDs, Drive Current, Color temperature, Distribution, Voltage, Mounting, Control Options, Other Options, Finish.

- NOTES: 1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz)... 2. Only available with 20C, 700mA or 1000mA...

Accessories

Accessories table with columns: Item, Description, Part Number.

FIXTURE TYPE "F"

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown...

Large performance data table with multiple columns for LED types, drive currents, and color temperatures, listing lumen outputs.

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Table showing Lumen Multiplier values for ambient temperatures from 0°C to 40°C.

Projected LED Lumen Maintenance

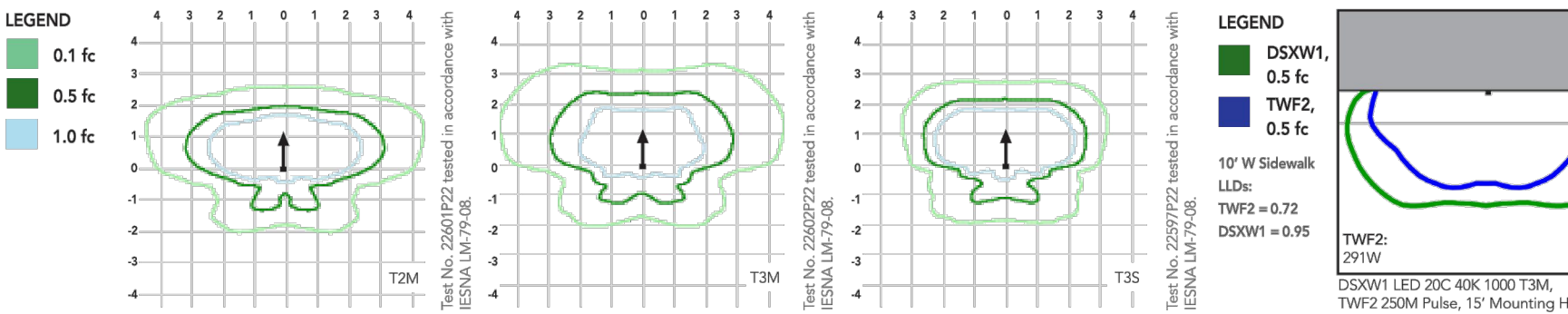
Data references the extrapolated performance projections for the DSXW1 LED 20C 1000 platform in 20°C ambient...

To calculate LMF, use the lumen maintenance factor that corresponds to the desired number of operating hours below...

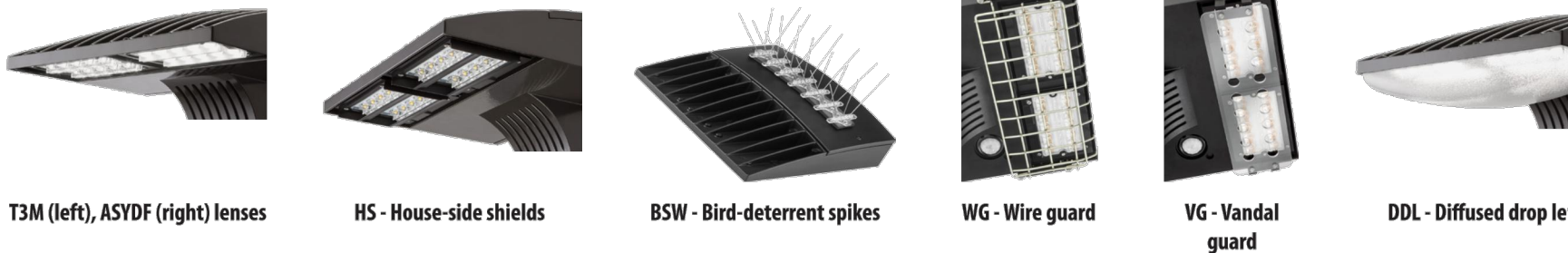
Table showing Lumen Maintenance Factor for operating hours of 0, 25,000, 50,000, and 100,000.

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Wall Size 1 homepage.



Options and Accessories



FEATURES & SPECIFICATIONS

INTENDED USE: The energy savings, long life and easy-to-install design of the D-Series Wall Size 1 make it the smart choice... CONSTRUCTION: Two-piece die-cast aluminum housing with integral heat sink fins...

INSTALLATION: Included universal mounting bracket attaches securely to any 4" round or square outlet box... LISTINGS: CSA certified to U.S. and Canadian standards... WARRANTY: Five year limited warranty...

LITHONIA LIGHTING One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com

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Project information block including logos for DECA Design Engineers & Consulting Associates, Inc. and KOHLER ARCHITECTURE, INC., project name NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET, and a professional seal for Martin M. Braun, a Professional Engineer.

FIXTURE TYPE "G"

WINONA[®]
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SPECIFICATIONS STEP

STEP 13
9-LONG

Type:
Project:
Qty:

Construction
Die-cast housing with solid aluminum, brass, or stainless steel faceplate. Step13-9 is a surface mount step light that mounts over a Steel City 2-1/8" deep, rectangular box H4BD or equivalent (by others). Interior option faceplate mounts with no visible fasteners.

Source
Light source consists of six powerful LEDs available in five white color temperatures and six colored LED choices.

Optics
A concealed optic provides a long light distribution for illumination of large areas.

Electrical
Integral electronic drivers are multi volt input 120-277V, and available in standard or 0-10V dimming. Non-dimming units consume 8.04W. Dimming units consume 18W.

Environment
ETL / cETL listed dry location or optional wet location.

Finish
Recessed surfaces have a ribbed design with matte black finish to reduce glare. Faceplates are available in five metal finishes with protective clear coat or one of seven polyester powder coat painted finishes. A primer only finish is also available for field painting.

Warranty
5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/terms_and_conditions.aspx

Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Assembled in America (Buy American Act Compliant)

| Size | Dist. | Lumens | Watt | LPW |
|--------|-------|--------|------|------|
| 9-LONG | Long | 310 | 8.04 | 38.6 |

Lighting facts
See page 3 for lighting facts labels.

CATALOG NUMBER

Example: STEP13 INT 9LONG L LST2A WHT30K MVOLT BA

| Series | Environment | Length | Distribution | Source | Color Temperature |
|----------------|---------------------------------|-----------------------------|--------------|------------------|--|
| STEP13 Step 13 | WL Wet Location INT Interior | 9LONG 9 inch nominal length | L Long | LST2A LED Step 2 | WHT27K White (27K) BLU Blue WHT30K White (30K) GRN Green WHT35K White (35K) RED Red WHT40K White (40K) CYN Cyan WHT50K White (50K) RDO Red-Orange AMB Amber |

| Voltage | Driver | Finish | Special |
|---------------------------------|---|---|--|
| MVOLT Multi Volt 120V thru 277V | (Blank) Standard Driver DMD Dimming Driver | BA Brushed Aluminum BB Brushed Brass BSS Brushed Stainless Steel PB Polished Brass PSS Polished Stainless Steel | ABP Antique Brass Paint BSP Brushed Brass Paint LBPS Light Bronze Paint Smooth LSP Light Silver PDP Pale Gold SGB Semi Gloss Black SGW Semi Gloss White PRM Primer Only CMP Custom Paint Finish CMP Custom Metal Finish |

Describe Modification:

Notes
• *Available by modification only. Consult factory.

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SPECIFICATIONS STEP

STEP13
9-LONG

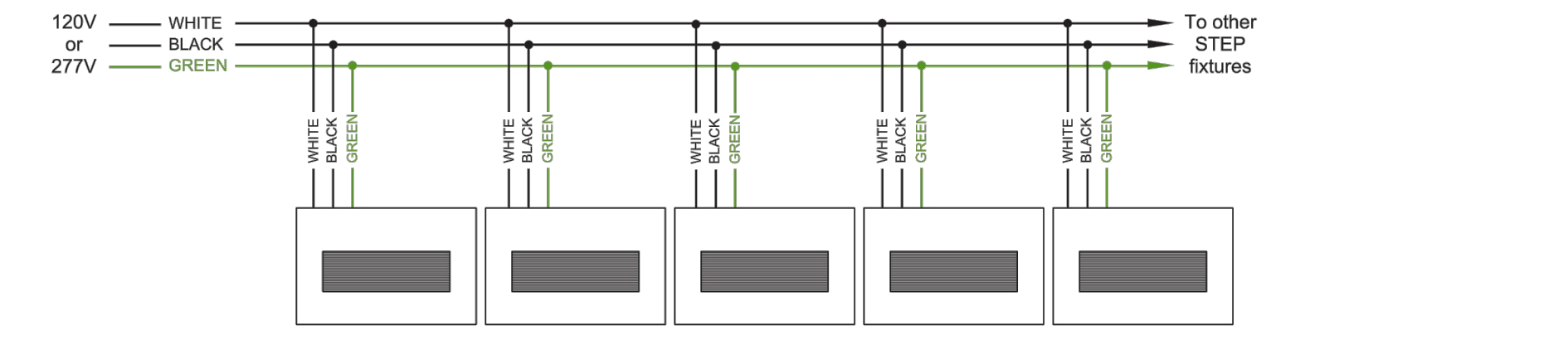
Type:
Project:
Qty:

WIRING & DIMMING

POWER SUPPLY / DIMMING
Dimming drivers require a 0-10V fluorescent-type dimming control.

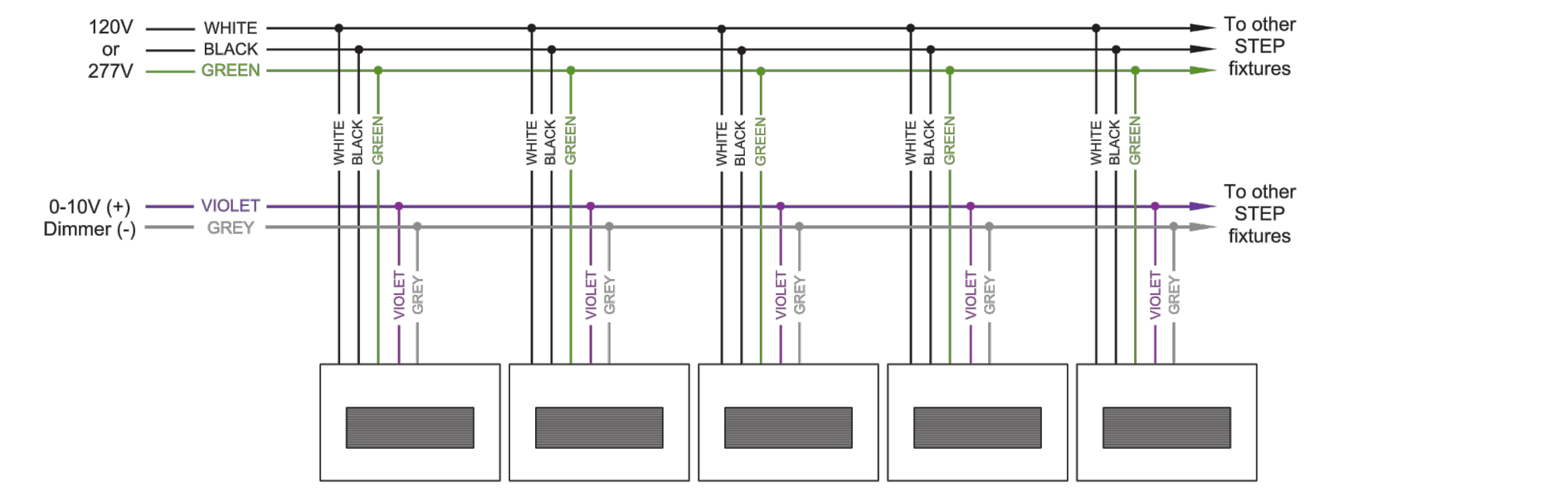
Read all instructions before installation. Do not make live connections!

NON-DIMMING INSTALLATIONS
Connect STEP WHITE wire to power NEUTRAL.
Connect STEP BLACK wire to power HOT.
Connect STEP GREEN wire to power GROUND.



DIMMING INSTALLATIONS

The integral dimming driver is designed to the 0-10V IEC dimming specification 60929 and is compatible with common 0-10V dimmers and dimming systems. Do NOT connect line voltage to dimming input wires.
Connect STEP WHITE wire to power NEUTRAL.
Connect STEP BLACK wire to power HOT.
Connect STEP VIOLET wire to POSITIVE INPUT of Dimming Control.
Connect STEP GREY wire to NEGATIVE INPUT of Dimming Control.



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SPECIFICATIONS STEP

STEP13
9-LONG

Type:
Project:
Qty:

LIGHTING FACTS

Lighting facts
A Report from IESNA

Light Output (Lumens) 310
Watts 8.04
Lumens per Watt (Efficacy) 38.6

Color Accuracy
Color Rendering Index (CRI) 86

Light Color
Correlated Color Temperature (CCT) 3080 (Bright White)

2700K Warm White 3000K Bright White 4000K Daylight 6500K

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: NLSM-LF-910DF (Revised 9/20/2013)
Model Number: Step13-9-L-35K-ND120V
Type: Luminaire - Other

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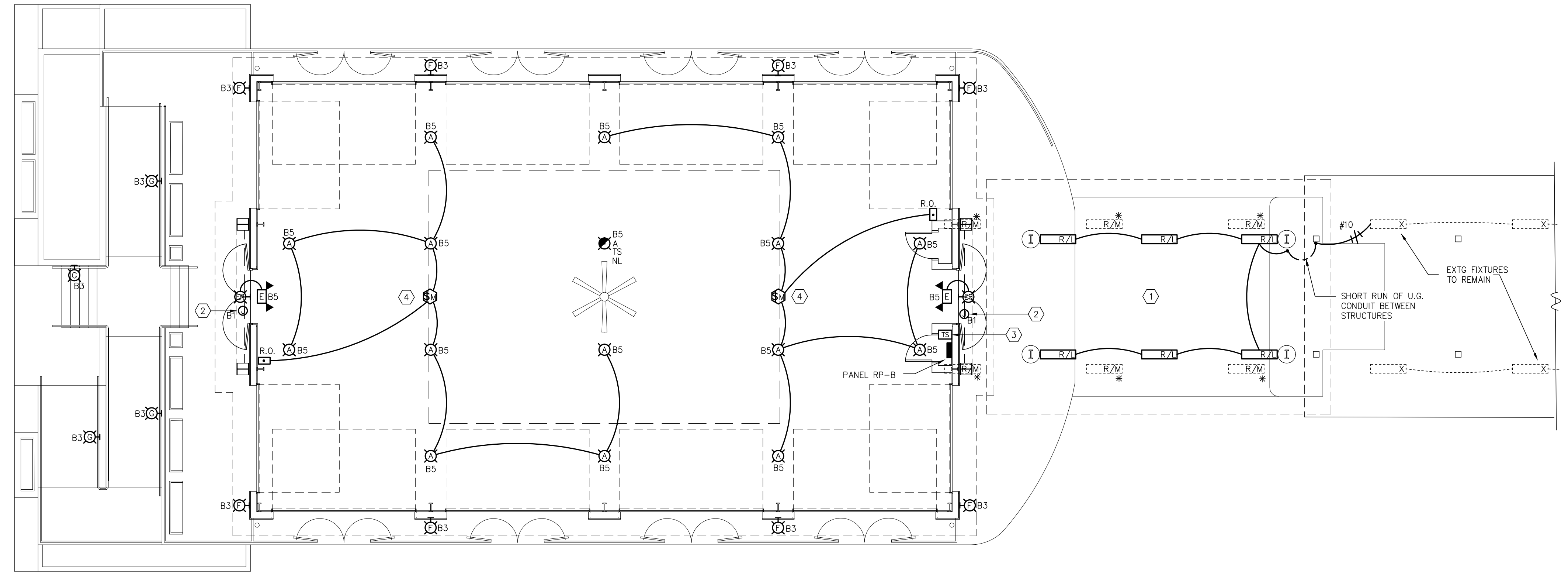
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ELECTRICAL LIGHTING PLAN
SCALE: 1/8" = 1'-0"



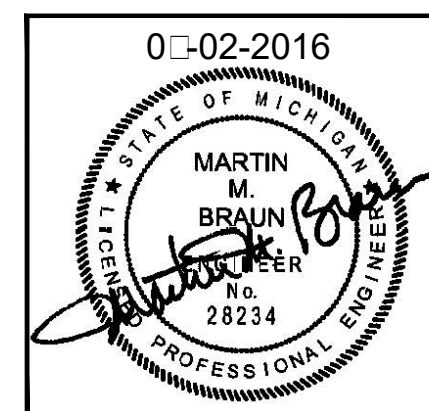
PLAN NOTES

- ① NEW EXTERIOR CANOPY SHALL BE ILLUMINATED WITH FIXTURES REMOVED FROM A SECTION OF CANOPY REMOVED BY THE OWNER OR GENERAL TRADES. E.C. SHALL CAREFULLY REMOVE THE LIGHT FIXTURES, STORE, PROTECT, CLEAN, RE-LAMP AND RE-INSTALL IN A FASHION SIMILAR TO THE EXISTING INSTALLATION. EXISTING 120 VOLT LIGHTING CIRCUIT SHALL BE EXTENDED FROM THE EXISTING CANOPY TO THE NEW CANOPY VIA A NEW UNDERGROUND CONDUIT AND #10 AWG CONDUCTORS. NEW CONDUIT SHALL BE ROUTED DOWN AN EXISTING COLUMN AND BACK UP A NEW COLUMN. COORDINATE THE EXACT LOCATION WITH THE GENERAL TRADES.
- ② PROVIDE FLUSH BOX IN WALL ABOVE DOOR FOR INTERNALLY ILLUMINATED SIGN. SEE ARCHITECTURAL ELEVATIONS AND SIGN DETAILS. SIGN ASSUMED AT 600 VA MAX AT 120 VOLTS, COMPLETE WITH INTEGRAL DISCONNECT SWITCH PER NEC/NEC 600.6
- ③ FOUR ZONE PROGRAMMABLE DIGITAL TIMER WITH 120 VOLT 20 AMPERE CONTACTS. MOUNT ABOVE PANELS. ZONES SHALL BE CONNECTED FOR:
-EXTERIOR LIGHTS (CIRCUIT B3)
-EXTERIOR SIGNS (CIRCUIT B1)
-INTERIOR NIGHT LIGHT (CIRCUIT B5TS)
-SPARE
- ④ OCCUPANCY/PHOTO SENSORS SHALL BE BOX MOUNTED AND SUSPENDED FROM STRUCTURE AT APPROXIMATELY 11 FEET AFF. COORDINATE EXACT PLACEMENT WITH ARCHITECT AND MANUFACTURER'S RECOMMENDATIONS FOR OPTIMUM COVERAGE. PHOTOSENSOR TO FACE DOWN, AND PROVIDE 0-10V DIMMING SIGNAL TO ASSOCIATED FIXTURES. PROVIDE LIGHTING CIRCUIT WITH ADDITIONAL 2#18 TRN FOR DIMMING SIGNAL. ALL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS.

FIXTURE SCHEDULE

| MARK | LAMP CATEGORY | LAMP QTY/TYP | VOLTS | DESCRIPTION | MFR. AND CATALOG SERIES |
|------|---------------|-------------------------|-------|--|---|
| R/L | FLUOR | 3-32W-T8 | 120 | REMOVE AND RELOCATE EXISTING 48" BY 12" SURFACE MOUNTED, VAPORTIGHT, ENCLOSED AND GASKETED, CUSTOM MOUNTING BRACKETS, UL WET LOCATION LISTED, FIBERGLASS HOUSING, HIGH GLOSS BAKED ENAMEL WHITE FINISH, IMPACT RESISTANT 50% DR ACRYLIC PRISMATIC LENS, 15% UP-LIGHT, STAINLESS STEEL LATCHES, SPECULAR ALUMINUM REFLECTOR, -20 DEGREE F RAPID START ELECTRONIC BALLAST, INTERNAL SLOW-BLOW FUSE, NO MOUNTING HOLES INTO LAMP/BALLAST COMPARTMENT. CLEAN AND RE-LAMP UPON RELOCATION. M.H. APPROX. 14'6" | ORIGINALLY SPECIFIED AS: INTEL-ENERGY SERIES CLS-HF-4N-332T8-3S1-20 DEG-SF-CB -WP-120VOLT |
| A | LED | 59W - 4000K 6500 LUMENS | 120 | 16" DIA. DECORATIVE PENDANT, PRISMATIC GLASS SHADE, 3/8" CONDUIT STEM SUSPENDED, SLOPE CEILING SURFACE MOUNTED CANOPY/BOX, GALVANIZED OR GLOSS ENAMEL PAINT FINISH TRIM FOR FIXTURE AND STEM AS SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS. CUT STEMS FOR FIXTURE MOUNTED AT 11 FEET A.F.F. TO BOTTOM INTEGRAL 0-10V DIMMABLE DRIVER. | PREXL16LEDX-65L-40K-DS10-1-HM-PR16-DR16-CN-CW-REV OR ARCHITECT APPROVED EQUAL |
| E | LED HALOGEN | INCLUDED | 120 | COMBINATION EXIT/EGRESS LIGHT, WALL OR CEILING MOUNTED, SINGLE OR DOUBLE FACE AS REQUIRED, 6-INCH RED LETTERS IN WHITE STENCIL FACE, POLYCARBONATE HOUSING, ARROWS AS SHOWN, WITH TWO HI-INTENSITY ADJUSTABLE FLOOD LIGHT HEADS, UNIVERSAL MOUNTING CANOPY WITH BUILT-IN 90 MINUTE EXTRA CAPACITY BATTERY BACKUP AND OUTDOOR WEATHER PROOF REMOTE FLOODLIGHT HEAD WHERE SHOWN ON PLAN. M.H. 8'0" UNO | LITHONIA #LHQM-SW3R-HO/ELA-NX-H0606 SURELITE LPXH-70R-WH-DH / 616W-REV OR EQUAL BY CHLORIDE |
| F | LED | 27W - 4000K 2300 LUMENS | 120 | OUTDOOR LOW PROFILE WALL SCONCE, CAST ALUM. HOUSING, INTEGRAL ELECTRONIC DRIVER, DARK BRONZE FINISH. TYPE 2 DISTRIBUTION, M.H. 11'0" AFF. | LITHONIA DSXWLED-10C-700-40K-12M -DOBXD-REV OR EQUAL BY PHILIPS OR COOPER |
| G | LED | 8W - 4000K 310 LUMENS | 120 | OUTDOOR STEP LIGHT, FLUSH MOUNTED, 12 INCH WIDE BRASS COVER WITH BLACK MILLIGROOVE TRIM FOR LOW GLARE, WIDE DISTRIBUTION, WET LOCATION LISTED, INTEGRAL ELECTRONIC DRIVER, BRUSHED BRASS FINISH. M.H. 18" AFG. | WINONA STEP13-WL9L-LST2A-WHT40K-REV OR EQUAL BY PHILIPS OR COOPER |

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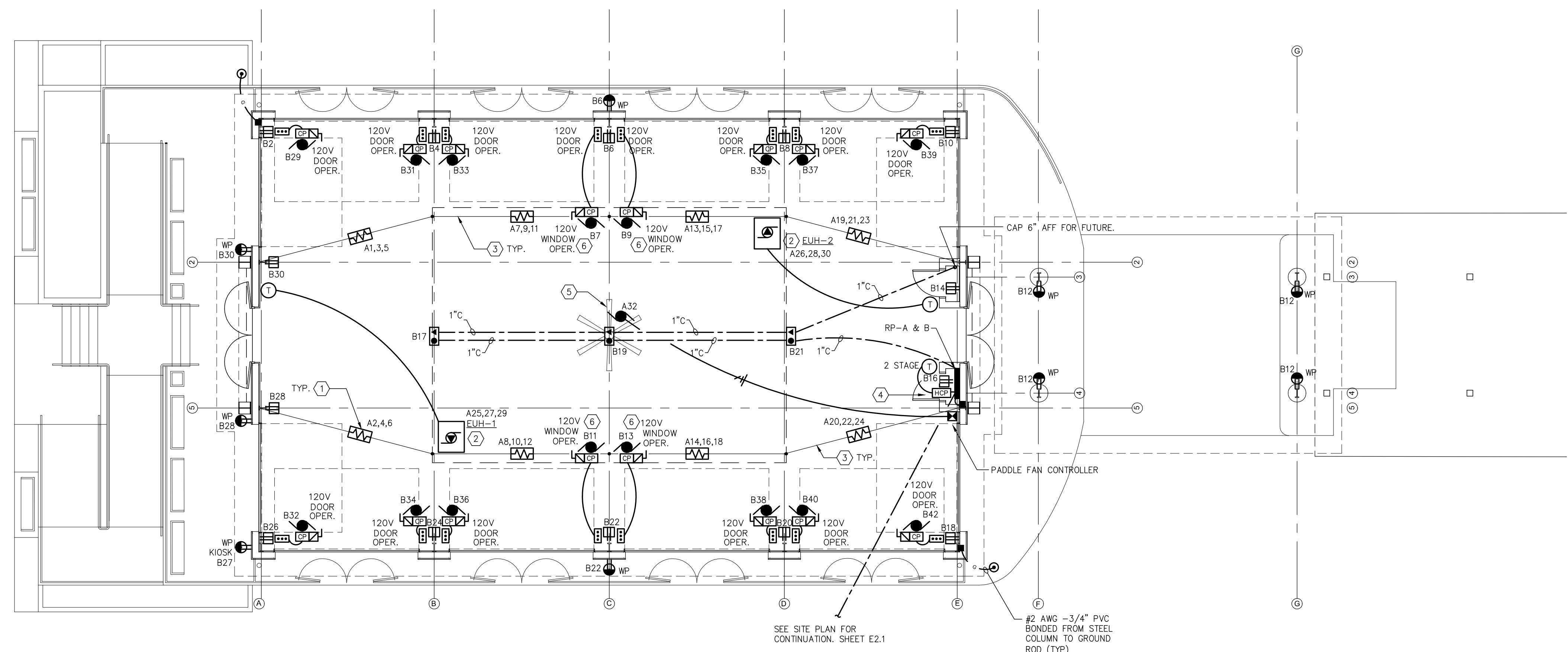


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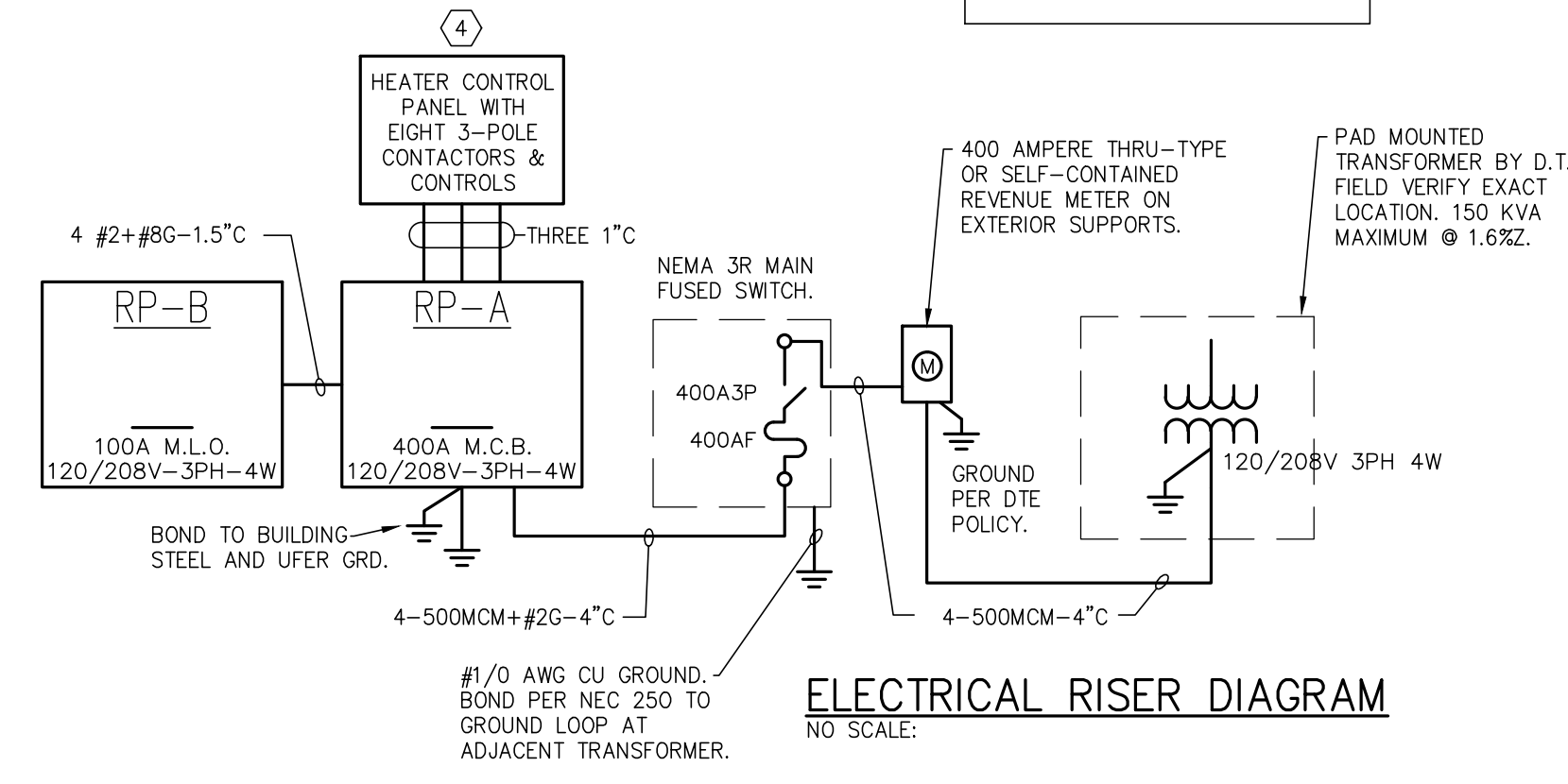
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ELECTRICAL POWER & SYSTEMS PLAN

SCALE: 1/8" = 1'-0"

- SHEET NOTES**
- 6 KW 208 VOLT 3 PHASE INFRARED HEATER WITH SAFETY GRILLE. BERKO MODEL XRM6083-WG60 SERIES. PROVIDE TWO POINT HANGING SUSPENSION AT 14 FEET AFF MINIMUM TO BOTTOM, VIA GALVANIZED STRUT AUXILIARY SUPPORTS ABOVE. COORDINATE EXACT HEATER LOCATION AND SUPPORTS WITH OVERHEAD DOOR TRACKS AND LIGHT FIXTURES TO MAINTAIN MINIMUM MANUFACTURER'S RECOMMENDED CLEARANCES. FEED EACH WITH 3/16"X10G-1/2" FROM RP-A VIA HEATER CONTROL PANEL (HCP).
 - 15 KW 208 VOLT 3 PHASE SUSPENDED ELECTRIC UNIT HEATER WITH INTEGRAL DISCONNECT, CONTROL RELAY AND REMOTE WALL MOUNTED MATCHING THERMOSTAT; BERKO MODEL HUAA2024-DS25 SERIES. MOUNT AS HIGH AS POSSIBLE, BUT BELOW THE CLERESTORY GLASS. FEED EACH WITH 3/16"X10G-3/4" FROM RP-A.
 - SUSPEND STRUT VIA THREADED ROD FROM STRUCTURE ABOVE AND TO COLUMNS AT EAST AND WEST WALLS. LOCATE AT APPROXIMATELY 15 FEET AFF TO MISS LIGHT FIXTURES. STRUT SHALL BE SIMILAR TO UNISTRUT P1001 SERIES, SIZED FOR THE WEIGHT AND SPAN OF THE INSTALLED EQUIPMENT. COMPLETE WITH A SAFETY FACTOR OF 2.5.
 - HEATER CONTROL PANEL BY BERKO OR EQUAL, COMPLETE WITH 30 AMPERE 3-POLE CONTACTOR FOR EACH RADIANT HEATER, 24 VOLT CONTROL TRANSFORMER, HOA SELECTOR SWITCH AND TWO PILOT LIGHT LIGHTS, ONE FOR EACH STAGE. AUTO CONTROL FROM ADJACENT 2-STAGE THERMOSTAT. CONNECT EVERY OTHER HEATER TO A STAGE. LOCATE ABOVE PANEL RP-A.
 - MACROAIR AIRVOLUTION HVLS FAN OR ARCHITECT APPROVED EQUAL. 8'-0" DIAMETER, 54,000 cfm MAXIMUM DISPLACEMENT (FORWARD), 35,000 cfm DISPLACEMENT (REVERSE), 3,600 SQUARE FEET MAXIMUM AFFECTED AREA, 120 VOLT, 1 PHASE, 11.6 MAXIMUM AMP DRAW, 15 AMP RECOMMENDED FUSE. FAN SHALL BE MOUNTED MINIMUM 12'-0" ABOVE FINISH FLOOR TO BOTTOM. FURNISH WITH WALL MOUNTED DIGITAL TOUCH PAD CONTROLLER. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - CLERESTORY STRUCTURE, MOTORIZED WINDOW OPERATORS, AND ASSOCIATED ELECTRICAL CIRCUITS, DEVICES AND CONTROL WIRING, ARE INCLUDED IN AN ALTERNATE BID ITEM. SEE FORM OF PROPOSAL.
 - CAREFULLY ARRANGE PANELS WITHIN CLOSET TO PROVIDE PROPER WORKING CLEARANCE PER MEC/NEC 110.26. AT THE CONTRACTOR'S OPTION, PANELS RP-A AND RP-B MAY BE COMBINED INTO A SINGLE 84 CIRCUIT PANEL WITH COMMON 400 AMPERE INTERIOR. MAXIMUM REACH HEIGHT TO ANY BREAKER HANDLE IS LIMITED TO 79" PER MEC/NEC 404.8.



ELECTRICAL RISER DIAGRAM

NO SCALE

PANELBOARD SCHEDULE

PANEL: RP-A
 MAINS: 400A M.C.B.
 VOLTS: 120/208V-3ø-4W-SN
 MOUNTING: SURFACE

NOTES:
 GFCI BREAKER
 30 MILLIAMPERE EQUIPMENT
 GROUND FAULT TRIP
 SHUNT TRIP

ARC FAULT
 SWITCHED NEUTRAL
 MOTOR OPERATED
 TIMER CONTROLLED

| LOAD DESCRIPTION | NOTES | VOLT AMPS | C.B. AMP P | A | B | C | C.B. AMP P | VOLT AMPS | NOTES | LOAD DESCRIPTION | |
|--------------------|-------|-----------|------------|-------|-------|-------|------------|--------------------|-------|------------------|--|
| 1 RADIANT HTR 1 | (2) | 2000 | 25 3 | 4000 | | | 3 25 | 2000 | (2) | RADIANT HTR 5 | |
| 3 | (2) | 2000 | 25 3 | | 4000 | | 3 25 | 2000 | (2) | | |
| 5 | (2) | 2000 | 25 3 | | | 4000 | 3 25 | 2000 | (2) | | |
| 7 RADIANT HTR 2 | (2) | 2000 | 25 3 | 4000 | | | 3 25 | 2000 | (2) | RADIANT HTR 6 | |
| 9 | (2) | 2000 | 25 3 | | 4000 | | 3 25 | 2000 | (2) | | |
| 11 | (2) | 2000 | 25 3 | | | 4000 | 3 25 | 2000 | (2) | | |
| 13 RADIANT HTR 3 | (2) | 2000 | 25 3 | 4000 | | | 3 25 | 2000 | (2) | RADIANT HTR 7 | |
| 15 | (2) | 2000 | 25 3 | | 4000 | | 3 25 | 2000 | (2) | | |
| 17 | (2) | 2000 | 25 3 | | | 4000 | 3 25 | 2000 | (2) | | |
| 19 RADIANT HTR 4 | (2) | 2000 | 25 3 | 4000 | | | 3 25 | 2000 | (2) | RADIANT HTR 8 | |
| 21 | (2) | 2000 | 25 3 | | 4000 | | 3 25 | 2000 | (2) | | |
| 23 | (2) | 2000 | 25 3 | | | 4000 | 3 25 | 2000 | (2) | | |
| 25 EUH 1 | | 5000 | 60 3 | 10000 | | | 3 60 | 5000 | | EUH 2 | |
| 27 | | 5000 | 60 3 | | 10000 | | 3 60 | 5000 | | | |
| 29 | | 5000 | 60 3 | | | 10000 | 3 60 | 5000 | | | |
| 31 SPARE | | 0 | 20 1 | 1400 | | | 1 15 | 1400 | | HVLS FAN | |
| 33 SPARE | | 0 | 20 1 | | 0 | | 1 20 | 0 | | SPARE | |
| 35 SPARE | | 0 | 20 1 | | 0 | | 1 20 | 0 | | SPARE | |
| 37 SPARE | | 0 | 60 3 | 11060 | | | 3 100 | 11060 | | RP-B | |
| 39 | | 0 | 60 3 | | 9320 | | 3 100 | 9320 | | | |
| 41 | | 0 | 60 3 | | | 10380 | 3 100 | 10380 | | | |
| | | | 38460 | | 35320 | | 36380 | | | | |
| | | | 108% | | 98% | | 99% | | | | |
| TOTAL LOAD: | | 110160 | | | | | | TOTAL AMPS: | | 306.0 | |

PANELBOARD SCHEDULE

PANEL: RP-B
 MAINS: 100A M.L.O.
 VOLTS: 120/208V-3ø-4W-SN
 MOUNTING: SURFACE

NOTES:
 GFCI BREAKER
 30 MILLIAMPERE EQUIPMENT
 GROUND FAULT TRIP
 SHUNT TRIP

ARC FAULT
 SWITCHED NEUTRAL
 MOTOR OPERATED
 TIMER CONTROLLED

| LOAD DESCRIPTION | NOTES | VOLT AMPS | C.B. AMP P | A | B | C | C.B. AMP P | VOLT AMPS | NOTES | LOAD DESCRIPTION | |
|---------------------|-------|-----------|------------|------|------|------|------------|--------------------|-------|-------------------|--|
| 1 EXTERIOR SIGNS | (2) | 1200 | 20 1 | 1560 | | | 1 20 | 360 | | NORTH WALL | |
| 3 EXTERIOR LTS | (2) | 300 | 20 1 | | 660 | | 1 20 | 360 | | NORTH WALL | |
| 5 INTERIOR LTS | (2) | 1000 | 20 1 | | | 1540 | 1 20 | 540 | | NORTH WALL + EXT. | |
| 7 WINDOW OPERATOR | | 1200 | 20 1 | 1560 | | | 1 20 | 360 | | NORTH WALL | |
| 9 WINDOW OPERATOR | | 1200 | 20 1 | | 1560 | | 1 20 | 360 | | NORTH WALL | |
| 11 WINDOW OPERATOR | | 1200 | 20 1 | | | 1920 | 1 20 | 720 | | EAST CANOPY | |
| 13 WINDOW OPERATOR | | 1200 | 20 1 | 1560 | | | 1 20 | 360 | | N.E. CLOSET | |
| 15 SPARE | | 0 | 20 1 | | 360 | | 1 20 | 360 | | S.E. CLOSET | |
| 17 FLOOR BOX WEST | | 360 | 20 1 | | | 720 | 1 20 | 360 | | SOUTH WALL | |
| 19 FLOOR BOX CENTER | | 360 | 20 1 | 720 | | | 1 20 | 360 | | SOUTH WALL | |
| 21 FLOOR BOX EAST | | 360 | 20 1 | | 900 | | 1 20 | 540 | | SOUTH WALL + EXT. | |
| 23 EXTERIOR GATE | | 500 | 20 1 | | | 860 | 1 20 | 360 | | SOUTH WALL | |
| 25 EXTERIOR GATE | | 500 | 20 1 | 860 | | | 1 20 | 360 | | SOUTH WALL | |
| 27 EXTERIOR KIOSK | | 500 | 20 1 | | 1040 | | 1 20 | 540 | | WEST WALL + EXT. | |
| 29 DOOR OPERATOR | | 1200 | 20 1 | | | 1740 | 1 20 | 540 | | WEST WALL + EXT. | |
| 31 DOOR OPERATOR | | 1200 | 0 1 | 2400 | | | 1 20 | 1200 | | DOOR OPERATOR | |
| 33 DOOR OPERATOR | | 1200 | 0 1 | | 2400 | | 1 20 | 1200 | | DOOR OPERATOR | |
| 35 DOOR OPERATOR | | 1200 | 0 1 | | | 2400 | 1 20 | 1200 | | DOOR OPERATOR | |
| 37 DOOR OPERATOR | | 1200 | 0 1 | 2400 | | | 1 20 | 1200 | | DOOR OPERATOR | |
| 39 DOOR OPERATOR | | 1200 | 0 1 | | 2400 | | 1 20 | 1200 | | DOOR OPERATOR | |
| 41 SPACE | | 0 | 0 1 | | | 1200 | 1 20 | 1200 | | DOOR OPERATOR | |
| | | | 11060 | | 9320 | | 10380 | | | | |
| | | | 108% | | 91% | | 101% | | | | |
| TOTAL LOAD: | | 30760 | | | | | | TOTAL AMPS: | | 85.4 | |

"RP-A" LOAD SUMMARY

| LOAD TYPE | CONNECTED VA | DEMAND FACTOR | DEMAND VA | |
|-------------------------------------|--------------|---------------|----------------|--------|
| LIGHTING LOAD | NEC 230.42 | 1300 | 125.00% | 1625 |
| SIGNS | NEC 220.14F | 1200 | 125.00% | 1500 |
| DEDICATED RECEPTACLE | NEC 220.14A | 1500 | 100.00% | 1500 |
| GENERAL RECEPTACLE | NEC 220.14I | 7560 | PER NEC 220.44 | 7560 |
| DOOR/WINDOW OPERATORS | NEC 220.60 | 19200 | 50.00% | 9600 |
| HVAC EQUIPMENT | NEC 220.60 | 79400 | 100.00% | 79400 |
| TOTAL KVA | 110160 | | | 101185 |
| TOTAL AMPS @ 208 VOLT-3PHASE | | 306 | | 281 |

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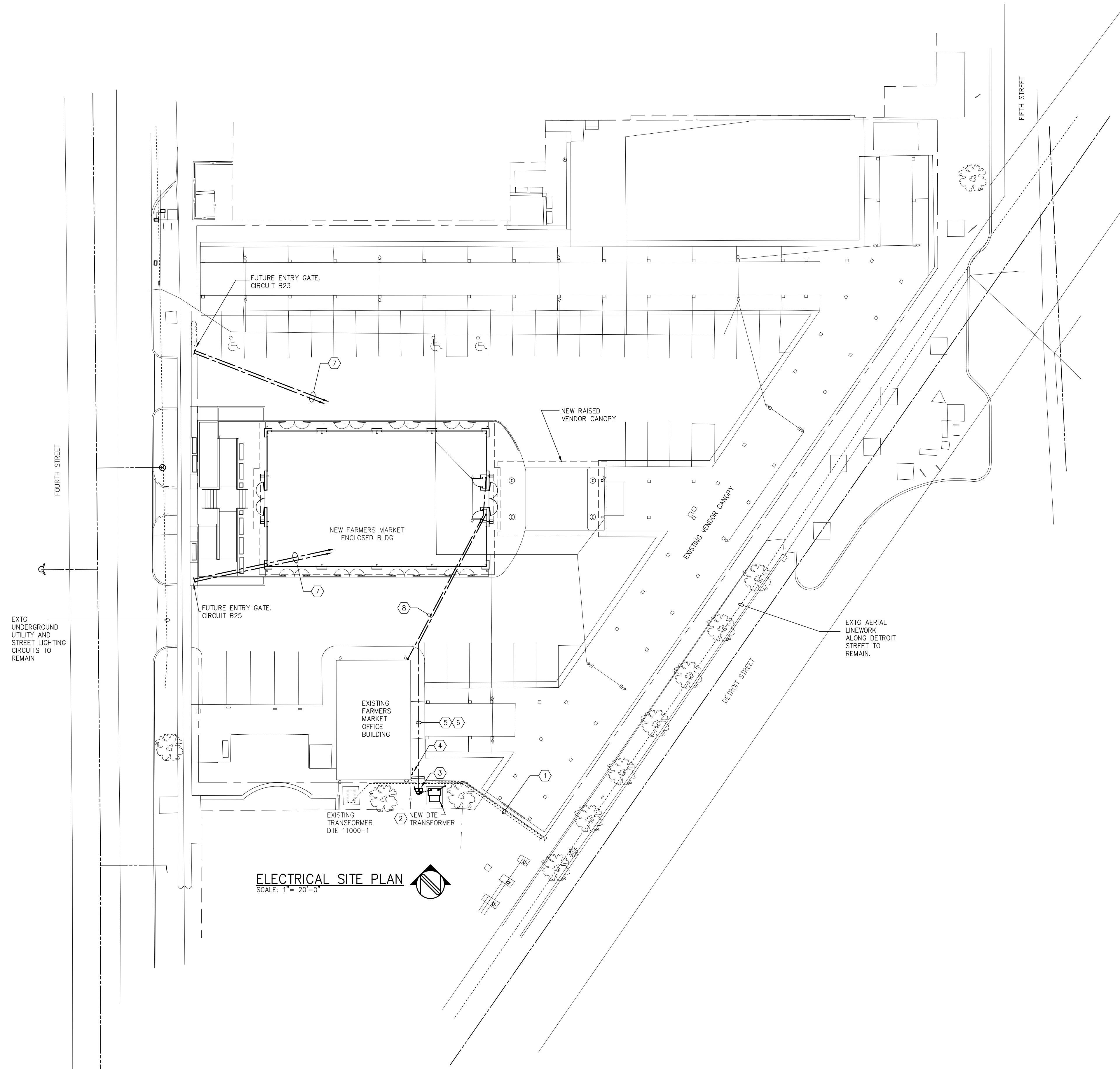
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 engineering@decagroup.com

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1118 WEST FRONT STREET
 MONTROSE, MICHIGAN, 48161
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| | |
|------|-----|
| DR. | CK. |
| DECA | MMB |

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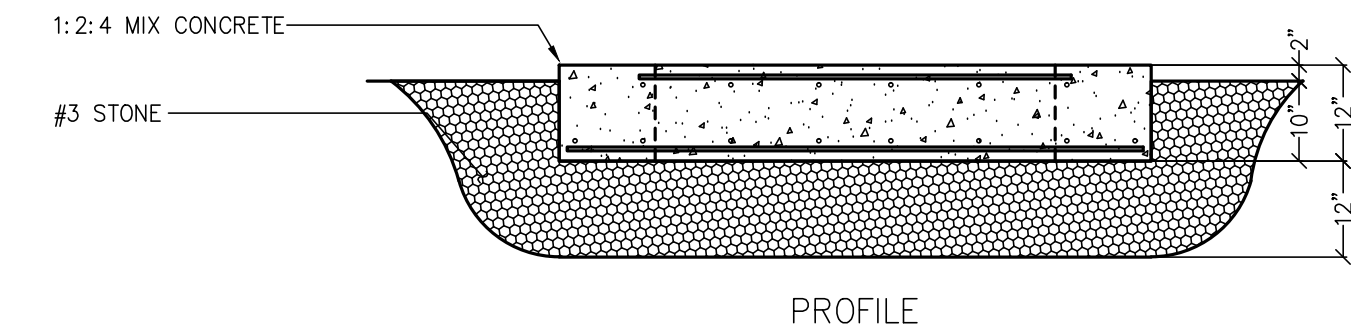
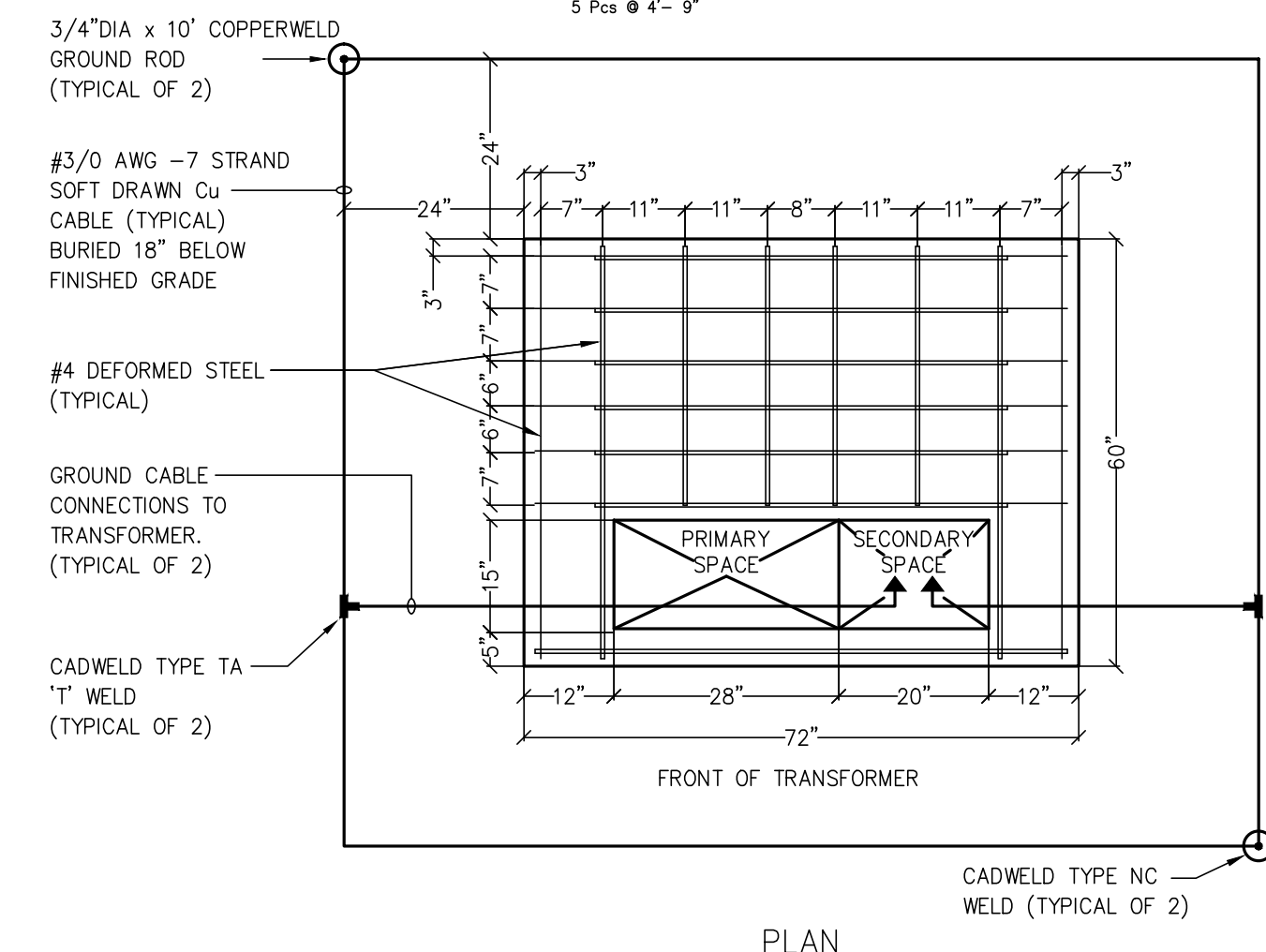


ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"

- PLAN NOTES**
- ASSUMED LOCATION OF UNDERGROUND PRIMARY AND SECONDARY SERVICE CONDUITS. EXERCISE **EXTREME** CAUTION EXCAVATING IN THIS AREA. CALL 811 (MICHIGAN MISS DIG) TO LOCATE UNDERGROUND UTILITIES BEFORE BEGINNING WORK.
 - NEW TRANSFORMER BY D.T.E. CONCRETE PAD WITH 4" DIA. UG LONG SWEEP RGS ELBOW AND GROUND RING BY E.C. D.T.E. WILL UN-COVER AND CONNECT TO EXISTING SPARE UG CONDUIT AT THIS LOCATION IN ORDER TO SERVE NEW PAD MOUNTED TRANSFORMER.
 - PROVIDE GALVANIZED STEEL SUPPORTS WITH CONCRETE FOUNDATION FOR NEW BACK-TO-BACK THRU-TYPE REVENUE METER AND NEW 400 AMPERE NEMA 3R FUSED MAIN SWITCH. COORDINATE EXACT LOCATION WITH OWNER AND D.T.E. REVENUE METER SOCKET BY E.C. PER UTILITY COMPANY STANDARDS. GROUND SOCKET PER UTILITY COMPANY STANDARDS. GROUND MAIN SERVICE DISCONNECT TO TRANSFORMER GROUND LOOP.
 - EXISTING 600 AMPERE SINGLE PHASE METER AND C/T CABINET FOR EXISTING OFFICE BUILDING TO REMAIN WITHOUT CHANGE.
 - NEW UNDERGROUND FEEDER TO NEW BUILDING. SEE SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE SIZES. ROUTE UNDER PRESENT SIDEWALK AREA, AVOIDING EXISTING BUILDING AND CANOPY FOUNDATIONS. CAREFULLY EXCAVATE ALONG BUILDING AS EXISTING UNDERGROUND UTILITIES ARE NOT COMPLETELY KNOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY UTILITY LINE DAMAGED BY THE NEW WORK, TO THE SATISFACTION OF THE OWNER. REMOVE AND REPLACE CONCRETE SIDE WALK DISTURBED BY THE NEW WORK, TO MATCH EXISTING CONDITIONS. SEE GENERAL TRADES SPECIFICATIONS.
 - AT THE CONTRACTOR'S OPTION, THIS UNDERGROUND FEEDER MAY BE INSTALLED VIA DIRECTLY BORED CONDUIT INSTALLATION, BUT CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION AND FIELD INVESTIGATION TO ACCOMPLISH SUCH. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY UTILITY LINE DAMAGED BY THE NEW WORK, TO THE SATISFACTION OF THE OWNER.
 - PROVIDE 1" UG PVC CONDUIT FOR POWER AND A SEPARATE 1" PVC CONDUIT FOR COMMUNICATIONS, STUBBED BELOW GRADE FOR FUTURE TRAFFIC GATE AND CONTROLLER. FIELD VERIFY EXACT LOCATION FOR CONDUIT STUBS WITH OWNER. POWER CONDUIT SHALL BE ROUTED TO PANELBOARD. COMMUNICATIONS CONDUIT SHALL BE ROUTED TO NORTH CLOSET, AND STUBBED 6" AFF.
 - PROVIDE 2" UG PVC FROM NEW BUILDING NORTH CLOSET, TO JUST OUTSIDE EXISTING OFFICE BUILDING. STUB & CAP 6" AFF EACH END FOR FUTURE COMMUNICATIONS.

BILL OF MATERIALS (APPROX.)

| | |
|--------------------|----------------------------------|
| STEEL #4 DEFORMED: | CONCRETE: 1:1 CU. Yds. 1:2-4 MIX |
| 7 Pcs @ 5'-10" | #3 STONE: 1.2 CU. YD. |
| 6 Pcs @ 4'-5" | |
| 8 Pcs @ 2'-8" | |
| 5 Pcs @ 4'-9" | |

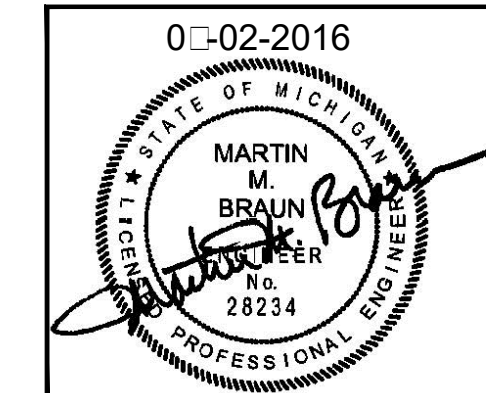


- TRANSFORMER PAD NOTES:**
- CONDUITS SHALL NOT PROJECT ABOVE PAD.
 - CONCRETE TO BE 3000psi STRENGTH BY 7 DAYS. USE PORTLAND CEMENT TYPE 3 OR 3A.
 - 48" CLEARANCES MUST BE MAINTAINED ON BOTH SIDES AND REAR OF PAD. 72" CLEARANCE MUST BE MAINTAINED IN FRONT OF PAD.
 - REINFORCING RODS ARE TO BE #4 DEFORMED STEEL AND HAVE A MINIMUM COVER OF 2".

TYPICAL PAD MOUNTED TRANSFORMER CONCRETE PAD DETAIL
NO SCALE - PROVIDE PER UTILITY COMPANY STANDARDS

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3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 FOR THE LOCATION OF UNDERGROUND FACILITIES



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ELECTRICAL SPECIFICATIONS

A SCOPE OF WORK: FURNISH AND INSTALL ALL LABOR, MATERIALS, TOOLS, ETC., TO PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION, AS INDICATED ON THE PLANS. CONTRACTOR SHALL REFER TO THE WORK INDICATED ON THE ASSOCIATED PLUMBING, ARCHITECTURAL, STRUCTURAL PLANS, ETC., AS WORK SHOWN THEREON MAY AFFECT OR INCLUDE ADDITIONAL ELECTRICAL WORK. ALL MATERIALS INCLUDED IN THE WORK SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE; EACH ITEM SHALL BE U.L. LISTED OR LABELED TO ASSURE ITS SUITABILITY AND APPROVAL FOR THE PURPOSE SHOWN. ALL LABOR SHALL BE PERFORMED BY QUALIFIED AND SKILLED WORKERS, IN A NEAT AND WORKMANLIKE MANNER, AND IN ACCORDANCE WITH INDUSTRY STANDARDS AND PRACTICES.

B GUARANTEE: THE CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT, THAT ALL WORK WILL BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS (EXCEPT INCANDESCENT AND HALOGEN LAMPS), FOR A PERIOD OF ONE YEAR FROM PROJECT ACCEPTANCE, AND THAT ALL SYSTEMS WILL PROVIDE ALL SPECIFIED AND REQUIRED FUNCTIONS. SHOULD ANY DEFECTS IN MATERIALS OR WORKMANSHIP REQUIRE REVISION OR REPAIR OF ANY PART OF THE ELECTRICAL, PLUMBING OR ARCHITECTURAL LAYOUT, ALL SUCH REVISION, NEW OR REVISED DRAWINGS AND DETAILING REQUIRED THEREOF, CALCULATIONS, SUBMITTALS, ETC., AS WELL AS REPAIRS (TO MATCH EXISTING ADJACENT CONDITIONS) SHALL WITH THE APPROVAL OF THE ARCHITECT, BE PREPARED BY THE CONTRACTOR AT HIS OWN EXPENSE, WHERE SUCH APPROVED DEVIATION REQUIRES A DIFFERENT QUANTITY OR ARRANGEMENT OF CONDUIT, WIRING, STARTERS, PANELS, ETC., DUCTWORK, PIPING AND EQUIPMENT FROM THAT SPECIFIED OR REQUIRED, THE CONTRACTOR, WITH THE APPROVAL OF THE ARCHITECT, SHALL PROVIDE ALL SUCH MATERIALS AND EQUIPMENT REQUIRED BY THE REVISION, AT NO ADDITIONAL COST TO THE OWNER.

C COORDINATION: CONTRACTOR SHALL COORDINATE HIS PORTION OF THE WORK WITH THAT OF OTHER CONTRACTORS, ALL AFFECTED UTILITY COMPANIES, THE OWNER, AND THE OPERATIONS OF THE OWNER. ALL CONFLICTS, SCHEDULING, AND PROCEDURES SHALL BE RESOLVED IN THE BEST INTEREST OF THE OWNER AND THE SUCCESSFUL COMPLETION OF THE PROJECT. ALL SHUTDOWN WORK SHALL BE PERFORMED AT TIMES WHICH WILL NOT INTERFERE WITH THE REGULAR OPERATION OF THE FACILITY AND THE OWNER. CONTRACTOR SHALL NOTIFY ALL AFFECTED PARTIES IN WRITING AT LEAST SEVEN DAYS PRIOR TO SHUTDOWNS AND CUT-OVERS. UTILITY COMPANY BACKCHARGES WILL BE PAID DIRECTLY BY THE OWNER.

D PERMITS & CODES: CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH PERMITS, PLAN APPROVALS, TAXES & INSURANCE. ALL WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES, AS WELL AS THE LATEST ADOPTED EDITION OF THE FOLLOWING: 1) MICHIGAN ELECTRICAL CODE; 2) NATIONAL ELECTRICAL SAFETY CODE; 3) NATIONAL BUILDBUILDING CODE; 4) ANSI STANDARDS; 5) IEEE STANDARDS; 6) UNDERWRITERS LABORATORY LISTINGS; 7) ASTM STANDARDS; 8) NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION STANDARDS; 9) APPLICABLE NFPA CODES. COPY OF THE FINAL ELECTRICAL INSPECTION DOCUMENT, FROM THE AUTHORITY HAVING JURISDICTION, SHALL BE SUBMITTED TO THE OWNER AT PROJECT COMPLETION.

E AS-BUILT DRAWINGS: CONTRACTOR SHALL ACCURATELY AND NEATLY RECORD ANY DEVIATIONS FROM THE PLANS AND SPECIFICATIONS, INCLUDING FINAL CONDUIT ROUTING, BRANCH CIRCUIT NUMBERS, "IN-USE" ELECTRICAL SAFETY COLORS, UNDERGROUND FEEDERS AND DUCTBANKS SHALL BE LOCATED BY DIMENSION TO ASSIST IN FUTURE EXCAVATIONS. AS-BUILTS SHALL BE REGULARLY UPDATED DURING THE COURSE OF CONSTRUCTION, AND DELIVERED TO THE OWNER WITHIN 30 DAYS OF PROJECT ACCEPTANCE.

F CLOSE-OUT: CONTRACTOR SHALL PROVIDE FIELD TESTING, CHECK-OUT AND SYSTEM DEMONSTRATIONS TO OWNER TO ASSURE PROPER PERFORMANCE AND ADJUSTMENT OF ITEMS PROVIDED UNDER THE CONTRACT. REMOVE ALL DEBRIS CREATED BY THE ELECTRICAL WORK AND CLEAN ALL FIXTURES, PANELS, BOXES, ETC., INSIDE AND OUTSIDE. PROVIDE A BINDER WHICH INCLUDES: COPIES OF EACH SHOP DRAWING, PREVENTATIVE MAINTENANCE PROCEDURES FOR EACH ITEM REQUIRING MAINTENANCE, OPERATION & INSTRUCTION MANUALS, AND LITERATURE SUPPLIED WITH ELECTRICAL EQUIPMENT AND ADDRESS OF A QUALIFIED SERVICE AGENCY FOR EACH SYSTEM. PROVIDE INSTRUCTION TO PERSONNEL SELECTED BY THE OWNER, TO FAMILIARIZE THEM WITH THE LOCATION OF SIGNIFICANT EQUIPMENT, TRAIN THEM ON EQUIPMENT FUNCTIONS, REVIEW MAINTENANCE PROCEDURES AND COORDINATE INFORMATION AVAILABLE IN THE CLOSE-OUT BINDER.

G CUTTING & PATCHING: PROVIDE CUTTING AND PATCHING OF ALL MATERIALS NECESSARY FOR THE INSTALLATION AS INDICATED OR SPECIFIED. NEATLY REMOVE AND LEGALLY DISPOSE OF ELECTRICAL COMPONENTS AND ITEMS NO LONGER IN USE. PROTECT THE STRUCTURE, FINISHINGS, FINISHES AND MATERIALS ADJACENT TO THE CUTTING AND PATCHING. PATCH EXISTING FINISHED SURFACES AND EQUIPMENT USING NEW MATERIALS AND METHODS, TO MATCH ADJACENT WORK, UTILIZING EXPERIENCED INSTALLERS. PATCHING OF FIRE RATED PARTITIONS, CEILING AND OTHER ASSEMBLIES, SHALL MATCH THE RATING OF THE RATED BARRIER WITH MATERIALS LISTED AND IDENTIFIED FOR SUCH USE, AND SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE GENERAL TRADES SPECIFICATIONS.

H FIRE-RATING: OPENINGS AROUND CONDUITS OR IN SLEEVES FOR CONDUITS PENETRATING FIRE-RATED FLOOR SLABS, WALLS, PARTITIONS, CEILING, OR SMOKE PARTITIONS, SHALL BE SEALED AT BOTH SIDES OF THE PENETRATION. INSULATION SHALL NOT EXTEND THROUGH SLEEVES. PACK OPENINGS WITH CALCIUM SILICATE BLOCK, DOW CORNING 3-6548 RTV SILICON FOAM, 3M CP25 CAULK, OR 303 PUTTY BARRIER SYSTEM OR MATERIAL HAVING THE SAME FIRE-RATING AS THE FLOOR OR WALL PENETRATED. FIBERGLASS IS NOT ACCEPTABLE.

I LABELS: PROVIDE ENGRAVED PLASTIC LAMINATE NAMEPLATES, SECURELY FASTENED TO EQUIPMENT, FOR ALL NEW PANELS, STARTERS, TERMINAL CABINETS, CONTROL PANELS, LARGE PULL BOXES, AND OTHER MAJOR COMPONENTS. NAMEPLATES SHALL BE 1 BY 3 INCHES, MINIMUM, BLACK LETTERS ON WHITE FIELD. LETTERING SHALL INCLUDE ITEM NAME, VOLTAGE AND PHASE. ALL PANELBOARD AND SWITCHBOARD NAMEPLATES SHALL INDICATE THE SOURCE OF SUPPLY PER NEC 408.4. SEE NEC/NEC 110.218 FOR FIELD INSTALLED WARNING LABEL REQUIREMENTS.

J GROUNDING: GROUND AND BOND ALL METAL RACEWAYS, BOXES, FIXTURES, ENCLOSURES, ETC., PER NEC ARTICLE 250. NEW SERVICES AND PANELS SHALL BE BONDED TO THE GROUNDING ELECTRODE SYSTEM, INCLUDING THE CONCRETE ENCASED REINFORCING STEEL ON GRADE WHERE AT LEAST 20 FEET OF #4 BAR IS INSTALLED. GROUNDING CONDUCTORS IN PVC RACEWAY SHALL BE EXTENDED TO THE BUILDING STRUCTURAL STEEL, INCOMING POINT OF THE INTERIOR METAL WATER LINE IF INSTALLED, AND SUPPLEMENTAL GROUND ROD(S) WHERE REQUIRED. GROUNDING ELECTRODE CONDUCTOR SPLICES, TAPS AND CONNECTIONS SHALL BE MADE VIA AN EXOTHERMIC WELD PROCESS (CADWELD OR EQUAL) OR IRREVERSIBLE CIRCUMFERENTIAL CRIMP TYPE FITTINGS (BURNDY HYPRSS OR EQUAL). ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR, ROUTED WITH THE CIRCUIT, SIZED PER NEC 250.122.

K WIRE: FURNISH AND INSTALL ALL WIRE, TERMINATIONS AND CONNECTION DEVICES AS SHOWN OR REQUIRED. UNLESS OTHERWISE NOTED, ALL LINE VOLTAGE CIRCUITS SHALL BE STRANDED, COPPER, 800 VOLT MINIMUM (75 DEGREE C THIN/THIN OR XHHW). (UNDER ALTERNATE PRIZE OPTION: CONDUCTORS #3/0 AWG AND LARGER MAY BE STRANDED ELECTRICAL GRADE STANDARD OR COMPACT STRANDED ALUMINUM CONDUCTORS WITH 90 DEGREE C RATED XHHW INSULATION, PROPERLY UPSIZED FOR THE AMPACITY EQUIVALENT TO THE COPPER CONDUCTORS SHOWN. CONDUIT SHALL ALSO BE UPSIZED FOR ALUMINUM CONDUCTORS.) BRANCH CIRCUIT WIRING SHALL BE #12 AWG MINIMUM. WHERE THE CIRCUIT LENGTH EXCEEDS 100 FEET, FROM THE PANEL TO THE FARTHEST DEVICE, UTILIZE #10 AWG MINIMUM. PHASE CONDUCTORS FOR 240 VOLT (AND LOWER) SYSTEMS SHALL BE BLACK, RED & BLUE; ASSOCIATED NEUTRALS, WHITE; CONNECTIONS AND TAPS FOR WIRE #4 AWG AND LARGER SHALL BE MADE WITH SOLDERLESS PRESSURE TYPE CONNECTORS AND LUGS. ALL LOW VOLTAGE CABLE SHALL BE MULTI-CONDUCTOR, COPPER, WITH WIRE SIZE, SHIELD, JACKET, COLOR-CODED INSULATION, TERMINATIONS, ETC. AS RECOMMENDED BY THE SYSTEM SUPPLIER. INSULATING AND JACKET MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION ENVIRONMENT (I.E. UNDERGROUND, PLENUM, HIGH AMBIENT TEMPERATURE, ETC.).

L BRANCH CIRCUITS: BRANCH CIRCUIT WIRING SHALL CORRESPOND TO THE CIRCUIT NUMBERING SHOWN ON THE PLANS. BUT THE CONTRACTOR SHALL BE PERMITTED MINOR CHANGES TO OPTIMIZE THE PIPING REQUIRED. THE QUANTITY OF CIRCUITS SHALL NOT BE REDUCED, NOR SHALL SEPARATE CIRCUITS BE COMBINED. ROUTING SHALL BE AT THE DISCRETION OF THE CONTRACTOR BUT THE INSTALLATION SHALL MEET ALL OTHER SPECIFIED CRITERIA. IN GENERAL, NOT MORE THAN FOUR BRANCH CIRCUITS SHALL BE PERMITTED IN A CONDUIT HOME RUN AND NOT MORE THAN NINE CURRENT CARRYING WIRES SHALL BE PERMITTED IN ANY RACEWAY. WHERE "HOME RUNS" ARE SHOWN ON PLAN, THE QUANTITY OF THESE RUNS SHALL BE MAINTAINED AS A MINIMUM.

M RACEWAYS: UNLESS NOTED OTHERWISE, ALL NEW LINE VOLTAGE WIRING SHALL BE INSTALLED IN SPECIFIED RACEWAYS. RACEWAYS SHALL BE INSTALLED, CONCEALED WITHIN CONSTRUCTION, UNLESS NOTED OTHERWISE. RACEWAYS INSTALLED UNDERGROUND, CAST IN CONCRETE, OR EXPOSED OUTDOORS SHALL BE RIGID METAL CONDUIT 40, HOT-DIPPED GALVANIZED STEEL INSTALLED PER NEC 344, COMPLETE WITH THREADED FITTINGS, DOUBLE LOCK-NUTS AND BUSHINGS AT BOXES AND CABINETS. FIELD CUT THREADS SHALL BE COATED WITH Z.R.C. COLD GALVANIZING SPRAY OR OTHER RUST-INHIBITING MATERIAL AFTER INSTALLATION. INTERIOR CONDUIT IN TRADE SIZES 1/2 INCH THRU 4 INCH DIA. SHALL BE ELECTRICAL METALLIC TUBING, INSTALLED PER NEC 358, COMPLETE WITH STEEL COMPRESSION OR SET-SCREW FITTINGS. UNDERGROUND AND INTERIOR, UNDER-SLAB CONDUIT MAY BE SCHEDULE 40 PVC PER NEC 352, IN TRADE SIZES 3/4 INCH THRU 4 INCH DIA., COMPLETE WITH INSULATED GROUND WIRE, AND RGS ELBOWS WHERE RISER IS EXPOSED. CONNECTIONS TO RECESSED FIXTURES, AND OTHER ITEMS SUBJECT TO VIBRATION OR OCCASIONAL MOTION, SHALL BE MADE WITH FLEXIBLE METAL, ZINC-COATED STEEL CONDUIT, COMPLETE WITH STEEL FITTINGS, IN LENGTHS NOT TO EXCEED 6 FEET, INSTALLED PER NEC 348. WHERE SUBJECT TO DAMPENESS OR OILY ENVIRONMENTS, FLEXIBLE CONDUIT SHALL BE NEOPRENE JACKETS, COMPLETE WITH APPROVED FITTINGS.

N BOXES: DEVICE BOXES SHALL BE DEEP, GALVANIZED, STAMPED STEEL BOXES, WITH PLASTER RINGS WHERE REQUIRED. INTERIOR PULL AND JUNCTION BOXES SHALL BE NEMA 1 GALVANIZED OR PAINTED STAMPED STEEL WITH SCREW COVERS. SMALL EXTERIOR BOXES SHALL BE CAST TYPE WITH GASKETED COVERS, OR NEMA 4X STAINLESS STEEL FOR LARGER BOXES. FLUSH-IN-GRADE EXTERIOR BOXES SHALL BE NON-METALLIC, 12 BY 12 BY 12 INCH MINIMUM, WITH MATCHING COVER, QUARTZITE PC SERIES, SYNTECTECH S SERIES, OR EQUAL.

P DISCONNECTS: SAFETY SWITCHES SHALL BE HEAVY DUTY, H.P. RATED, 250 OR 600 VOLTS AC RATED TO MATCH THE CIRCUIT, SHOWING WITH GROUND LUG, REJECTION STYLE FUSE CLIPS AND NEMA 1 ENCLOSURE INDOORS OR NEMA 3R ENCLOSURE OUTDOORS, AS MANUFACTURED BY SQUARE D, SIEMENS, GENERAL ELECTRIC, OR CUTLER-HAMMER.

Q FUSES: FUSES SHALL BE DUAL-ELEMENT, TIME-DELAY, REJECTION STYLE, CLASS RK-5 FOR FUSES UP TO 600 AMPERES; BUSMANN TYPE "FRN" (250 VOLT) OR TYPE "FRS" (600 VOLT). LARGER FUSES SHALL BE CLASS L, BOLT-IN STYLE; BUSMANN "HI-CAP". FUSES MANUFACTURED BY MERSEN OR LITTLEFUSE, WILL BE ACCEPTABLE. PROVIDE ONE SET OF THREE SPARE FUSES FOR EACH SIZE AND TYPE INSTALLED.

R STARTERS: STARTERS: PROVIDE A MANUAL STARTER, WITH OVERLOAD, PILOT LIGHT, TOGGLE SWITCH OPERATOR, AND NEMA 1 ENCLOSURE (FLUSH MOUNTED WHEREVER POSSIBLE), FOR EACH FRACTIONAL HORSEPOWER, SINGLE PHASE, MOTOR LARGER THAN 1/10 HP. LOCATE STARTERS WHERE SHOWN, OR ADJACENT TO MOTOR. MANUAL STARTERS SHALL BE SQUARE D CLASS 2510, OR EQUAL BY ALLEN-BRADLEY, SIEMENS, GENERAL ELECTRIC, OR CUTLER-HAMMER.

S LIGHT FIXTURES: FURNISH AND INSTALL THE LIGHT FIXTURES AS INDICATED ON THE PLANS AND SCHEDULES. FIXTURES SHALL BE COMPLETE WITH LAMPS, SOCKETS, GANGSIES, SUSPENSION ACCESSORIES, REFLECTORS, BALLASTS, LENSES, LOUVERS, PLASTER FRAMES, ETC. PRISMATIC LENSES SHALL BE 100% ACRYLIC, ONE-EIGHTH INCH NOMINAL THICKNESS. FLUORESCENT TUBE SOCKETS SHALL BE TWIST AND LOCK. FLUORESCENT BALLASTS SHALL BE ELECTRONIC, HIGH POWER FACTOR, 20% THD MAXIMUM. SELF-CONTAINED EMERGENCY LIGHTING UNITS SHALL INCLUDE BUILT-IN BATTERIES, CHARGER, TRANSFER RELAY; SUCH UNIT EQUIPMENT SHALL BE CONNECTED TO THE NORMAL OR NIGHT LIGHT CIRCUIT IN THE SPACE, BUT AHEAD OF ANY LOCAL SWITCHES. FIXTURES SHALL NOT RELY ENTIRELY ON THE CEILING SUSPENSION SYSTEM FOR MOUNTING, BUT SHALL ALSO BE SUPPORTED FROM THE STRUCTURE. PROVIDE A SEPARATE POWER CONNECTION FOR EACH FIXTURE OR CONTINUOUS AND CONTIGUOUS FIXTURE ROW (THROUGH-WIRING NOT PERMITTED). EXTERIOR FIXTURES SHALL ALSO BE PROVIDED WITH THE POLES, ANCHOR BOLTS, GROUNDING, LOW TEMPERATURE BALLASTS, ETC., AS NOTED OR REQUIRED.

T LIGHTING CONTROLS: WHERE DIMMING OF LED FIXTURES IS INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN, FOR CONTROL BY INDIVIDUAL DEVICES OR SYSTEMS, FOR MANUAL OR AUTOMATIC FUNCTIONS, THIS CONTRACTOR SHALL PROVIDE DEVICES AND SYSTEMS THAT ARE CAREFULLY SELECTED AND COORDINATED WITH THE DIMMING BALLASTS OR DRIVERS SUPPLIED WITH THE ASSOCIATED LIGHTING FIXTURES, TO PROVIDE A COMPLETE AND PROPERLY OPERATING DIMMING CONTROLS. INTERCONNECTING WIRING SHALL BE PROVIDED PER THE MANUFACTURER'S REQUIREMENTS. OTHER DEVICES AND SYSTEMS SUPPLIED BY OTHER VENDORS WILL BE CONSIDERED AS LONG AS THE SPECIFIED DIMMING FUNCTIONS ARE PROVIDED. DUE TO THE CHANGING NATURE OF SUCH CONTROLS, OTHER COMPONENTS SUCH AS WIRELESS, LINE VOLTAGE DIMMERS, 0-10V DIMMING DEVICES AND SIMILAR COMPONENTS WILL BE CONSIDERED ACCEPTABLE PROVIDED THEY MEET THE FUNCTIONS SPECIFIED AND EQUIVALENT LEVEL OF QUALITY AND MAINTAINABILITY.

U WIRING DEVICES: DEVICES SHALL BE COMMERCIAL GRADE, COMPLETE WITH THERMOPLASTIC FACE OR HANDLE, OF THE TYPE, RATING, AND CONFIGURATION AS INDICATED ON THE PLANS. DEVICES SHALL BE SUPPLIED FROM A SINGLE MANUFACTURER, WHEREVER POSSIBLE, TO STANDARDIZE ON COLOR AND REPLACEMENTS. DEVICE COLOR SHALL BE AS SELECTED BY THE OWNER, TO MATCH THE BUILDING FINISHES. COVER PLATES SHALL BE SMOOTH HIGH IMPACT MATCHING PLASTIC IN FINISHED AREAS, GALVANIZED IN WAREHOUSE OR INDUSTRIAL AREAS, AND GASKETED, FLAP-TYPE PLASTIC "IN-USE" TYPE IN OUTDOOR AREAS. WIRING DEVICES AND COVER PLATES SHALL BE AS MANUFACTURED BY HUBBELL, PASS & SEYMOUR, LEVTON, COOPER, OR SLATER.

V SERVICE ENTRANCE: SELECTED SWITCHBOARDS, PANELBOARDS OR SAFETY SWITCHES, AS INDICATED, SHALL BE U.L. RATED AS SERVICE ENTRANCE EQUIPMENT. THESE SHALL BE COMPLETE WITH AN INSULATED SOLID NEUTRAL ASSEMBLY, REMOVABLE BONDING LINK, AND INTERNAL GROUND LUGS FOR THE BONDING AND GROUNDING CONDUCTORS SHOWN OR REQUIRED. PROVIDE EXTERNAL GROUND LUGS FOR INTERSYSTEM BONDING CONNECTIONS OR A GROUNDING ASSEMBLY AT THE COMMUNICATIONS SERVICE LOCATIONS FOR BONDING THERETO. PROVIDE GROUNDING BUSHINGS AS REQUIRED, AND ADDITIONAL LABELING TO DENOTE SERVICE ENTRANCE USAGE. PROVIDE AN ENGRAVED LABEL DENOTING THE AVAILABLE SHORT CIRCUIT CURRENT, DATE OF CALCULATION, AND ANY ASSUMPTIONS INDICATED ON THE PLANS FOR THAT CALCULATION. SEE NEC 110.24A.

W SUPPORTS: FURNISH AND INSTALL ALL REQUIRED MISCELLANEOUS STEEL SUPPORTS FOR MOUNTING OF PANELS, RACEWAYS, FIXTURES, CABINETS, BOXES, ETC. ALL EQUIPMENT SHALL BE RIGIDLY SUPPORTED FROM THE BUILDING STRUCTURE, WITH COMPONENTS RATED FOR TWICE THE ACTUAL LOAD OR WEIGHT. ALL INTERIOR SUPPORTS SHALL BE GALVANIZED STEEL STRUT WITH MATCHING FITTINGS AND HARDWARE, PLATED THREADED ROD, AND AUXILIARY STRUCTURAL STEEL. EXTERIOR SUPPORTS SHALL BE GALVANIZED STRUT WITH MATCHING FITTINGS AND STAINLESS STEEL HARDWARE. FIELD CUT GALVANIZED SUPPORTS SHALL BE COATED WITH Z.R.C. COLD GALVANIZING SPRAY OR OTHER RUST-INHIBITING MATERIAL AFTER INSTALLATION.

X ELECTRICAL SITE WORK: COORDINATE ALL EXTERIOR WORK WITH AFFECTED UTILITIES AND THE OWNER. PROVIDE THE EXCAVATION, BACKFILL, COMPACTION AND TESTING, NECESSARY TO INSTALL THE UNDERGROUND RACEWAYS, HANDHOLES, AND EQUIPMENT FOUNDATIONS SHOWN ON THE PLANS. ALL PAVING SHALL BE SAWCUT PRIOR TO REMOVAL UNDERGROUND SERVICE CONDUITS. SHALL BE ENCASED IN CONCRETE OR BE PROVIDED WITH A PLASTIC WARNING TAPE IN THE TRENCH ABOVE THE CONDUITS PER NEC 300.5. UTILIZE HEAVY WALL HOPE CONTINUOUS PLASTIC CONDUIT RATED FOR DIRECT BORING APPLICATIONS WHERE INSTALLED VIA DIRECT BORE. REPAIR ALL LAWN, PLANTINGS, PAVEMENT, AND OTHER EXTERIOR FINISHES TO MATCH THE ADJACENT AREAS AT THE COMPLETION OF THE PROJECT. SEE GENERAL TRADES SPECIFICATIONS FOR CONCRETE SIDEWALK OR ASPHALT PAVING REPAIRS.

Y TELEPHONE: FURNISH AND INSTALL THE EMPTY RACEWAYS AS INDICATED FOR THE OWNER'S TELEPHONE SYSTEM, INCLUDING OUTLETS, CONDUIT SLEEVES, AND SERVICE ENTRANCE RACEWAYS. CONDUIT SHALL BE 3/4 IN. TRADE SIZE MINIMUM. PROVIDE A PULL STRING IN EACH EMPTY RACEWAY FOR FUTURE USE. TELEPHONE/DATA CABLE, TERMINATIONS, RECEPTACLES, JACKS, HANDSETS, HUBS, SERVERS, SWITCHING EQUIPMENT, AND CROSS-CUTS WILL BE PROVIDED BY OTHERS.

ELECTRICAL LEGEND

A12 ALPHANUMERIC LABEL INDICATES PANEL AND CIRCUIT TO WHICH ITEM IS CONNECTED (I.E. PANEL A, CIRCUIT 12)

AF ABOVE FINISHED FLOOR

AFG ABOVE FINISHED GRADE

CC CIRCUIT

C.P. COVER PLATE

E.C.T. ELECTRICAL (SUB) CONTRACTOR

EXTG. EXISTING

F.B.O. FURNISHED BY OTHERS, INSTALLED AND/OR WIRING BY ELECTRICAL CONTRACTOR

G.C. GENERAL (SUB) CONTRACTOR

HP HORSEPOWER

L.D. LOCATE AS DIRECTED

MAX MAXIMUM

M.C. MECHANICAL (HVAC, PLBG, FP, OR TC) (SUB) CONTRACTOR

MH MOUNTING HEIGHT TO BOTTOM OF DEVICE, BOX, OR FIXTURE, UNO

MM MINIMUM

OREQ OR EQUAL

PAF PAINTED AFTER FABRICATION

R/M REMOVE

R/L RELOCATE/RELOCATED

TW/TN TWIST/TURN TO LOCK TYPE RECEIPT/PLUG


UNO UNLESS NOTED OTHERWISE


W/ COMPLETE WITH


WC WITH WIRE GUARD


WP WEATHERPROOF DEVICE, ENCLOSURE OR COVER PLATE.


(2) INDICATES NOTE--SEE TABULATION ON SAME SHEET


 FLUORESCENT FIXTURE--SEE SCHEDULE--SHOW TO SCALE (APPROX.)


 FLOODLIGHT FIXTURE--SEE FIXTURE SCHEDULE


 SURFACE/SUSPENDED FIXTURE--SEE SCHEDULE


 WALL MOUNTED FIXTURE--SEE SCHEDULE


 EXIT SIGN--SINGLE OR DOUBLE FACE AS NUMBERED--ARROWS AS NOTED--CEILING OR WALL MOUNTED AS SHOWN--SEE SCHEDULE


 INDICATES FIXTURE WITH TWO LAMPS OR ONE BALLAST/DRIVER ON "NIGHT LIGHT" (I.E. UN-SWITCHED) CIRCUIT.


 EMERGENCY EGRESS LIGHT--SEE SCHEDULE


 LOCAL SWITCH--1 POLE--20A--120/277V--W/C.P.--M.H. 44" HUBBELL #CSB120 OREQ.


 LOCAL KEY SWITCH--1 POLE--120/277V--W/C.P.--M.H. 44" HUBBELL #HBL1221L OREQ.


 OCCUPANCY/VACANCY SENSOR--CEILING MOUNTED--DUAL TECHNOLOGY (PIR/US) SENSING, W/120V POWER PACK AND 20 AMP RELAY--ADJUSTABLE DELAY TIMER--15 MINUTE MINIMUM--WHITE FINISH. WITH INTEGRAL ADJUSTABLE 0-10VOLT PHOTOSENSOR CONTROL FOR DAYLIGHT HARVESTING FROM 40 TO 100 FOOT RANGES. COMPLETE WITH REMOTE WALL MOUNTED CONTROL FOR ON/OFF/DIM OVERIDE. 1000 SQUARE FEET COVERAGE. OFF--WHITE FINISH. AS MANUFACTURED BY HUBBELL LIGHTING CONTROLS, ACITY OR COOPER CONTROLS.


 REMOTE OVERRIDE KEYPAD OR PUSHBUTTON, FOR INTERFACE WITH CEILING MOUNTED SENSOR, COMPLETE WITH ON/OFF/DIM FUNCTIONS, MAXIMUM FOUR HOUR OVER--RIDE. WITH COVER PLATE. M.H. 44" U.N.O.


 DUPLEX RECEPT--20A--120V--NEMA 5--20R W/C.P.--M.H. 16" HUBBELL #5352 OREQ.


 DOUBLE DUPLEX RECEPT--TWO DEVICES TO MATCH ABOVE IN 2 GANG BOX-- W/C.P.--M.H. 16"


 DUPLEX GFI RECEPT--20A--125V--NEMA 5--20R W/C.P.--M.H. 16" IN READILY ACCESSIBLE LOCATION. HUBBELL #GF20 OREQ.


 DOUBLE DUPLEX GFI RECEPT--TWO DEVICES TO MATCH ABOVE IN 2 GANG BOX--W/C.P.--M.H. 16"

 DUPLEX GFI RECEPT--WEATHER AND TAMPER RESISTANT DEVICE TO MATCH ABOVE-- W/EXTRA DUTY W.P. IN USE" METAL FLAP. C.P.--M.H. 24" IN READILY ACCESSIBLE LOCATION. HUBBELL #GRS362TR/MP28E OREQ.


 OUTLET SHALL BE A DUPLEX OR MATCHING RECEPTACLE IF EQUIPMENT IS FURNISHED WITH CORD AND PLUG, OR JUNCTION BOX AND DISCONNECT SWITCH WITH SEALTITE CONNECTION IF EQUIPMENT IS TO BE WIRED DIRECT. IT SHALL BE THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO VERIFY THE REQUIRED OUTLET AND TO WIRE ALL EQUIPMENT COMPLETE.


 FLOOR BOX--SHEET METAL--MULTISERVICE--FLUSH MOUNTED--W/DUPLEX 120V--20 AMP--NEMA 5--20R RECEPT--AND PROVIDERS FOR TELE/DATA JACKS--FLAP COVER WITH FLOORING INSERT TO MATCH FINISHED FLOOR AND FLANGE TRIM. COMPLETE WITH 1" CONDUIT STUB WITH BUSHING TO ADJACENT CLOSET. HUBBELL #3575SS SERIES OREQ.


 WIRE TICKS INDICATE BRANCH CIRCUIT PHASE, NEUTRAL, & GROUND WIRES, RESPECTIVELY


 JUNCTION BOX--REQUIRED WHERE SHOWN


 CONDUIT--CONCEALED IN CEILING, WALL OR FLOOR OF NEW CONSTRUCTION. CONCEALED WHEREVER POSSIBLE IN EXISTING CONSTRUCTION (1/2" DIA. MIN.)


 HOMERUN TO PANEL OR LOCATION NOTED


 INDICATES CONCEALED CONDUIT UNDERGROUND/UNDERFLOOR -- 3/4" MIN.


 SURFACE MOUNTED RACEWAY--W/MATCHING FITTINGS, BOXES, ACCESSORIES, ETC. WIREMOLD V700 SERIES, HUBBELL 750V SERIES OREQ.

 INDICATES LOCAL SWITCHING OR CONTROL FUNCTION


 INDICATES LOW VOLT CABLING ROUTED THRU STRUCTURE, PLENUM OR ATTC SPACE.


 FUSED SAFETY SWITCH--AMP SIZE AS NOTED--VOLTAGE AS RECD--NEMA 1 ENCLOSURE U.S.I.O.--MH 6" TO TOP UNO (NF=NON-FUSED; 3R=NEMA 3R ENCL; GK=NEMA 12 GASKETED ENCL; 4R=NEMA 4X STAINLESS STEEL ENCL)


 DISCONNECT SWITCH--HP RATED--TOGGLE TYPE--20 AMP--1,2,3 POLE AS REQ'D-- 250 VOLT NEMA 1 ENCLOSURE. U.N.O. LOCK ADJACENT TO EQUIPMENT SERVED. (WP=WEATHERPROOF ENCLOSURE)


 MANUAL MOTOR STARTER --120V-1 SPEED--W/OVERLOAD HEATER & PILOT LT. MH 44" (2P= TWO POLE)


 PRE--WIRED CONTROL PANEL WITH MAGNETIC STARTERS, CONTACTORS, ETC., PROVIDED WITH EQUIPMENT. WITH OR WITHOUT DISCONNECT AS SHOWN. POWER FEED WIRING BY E.C.


 MOTOR--FRACTIONAL H.P.--120 OR 208VOLT (EF=EXH. FAN; UH=UNIT HEATER; MD= MOTORIZED DAMPER)


 ELECTRIC HEATING EQUIPMENT--FURNISHED, INSTALLED AND CONNECTED BY E.C.--SEE NOTES ON PLAN

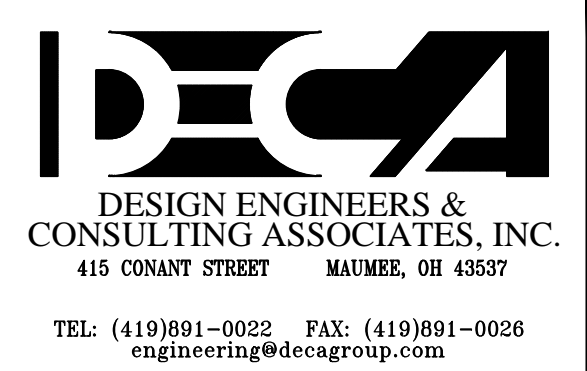
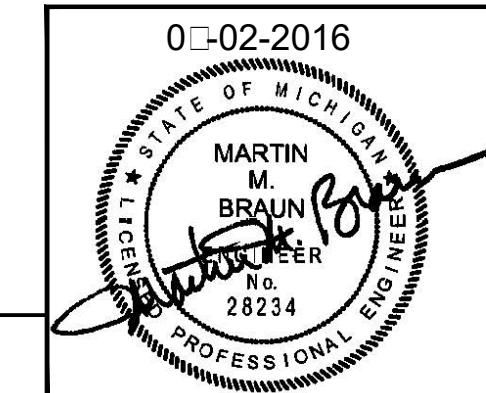
 THERMOSTAT--TO OPERATIONALLY MATCH ELECTRICAL HEATING EQUIPMENT -- 24 VOLT, 50-70 DEGREE RANGE, 7-DAY PROGRAMMABLE, INTEGRAL BATTERY, FURNISHED, INSTALLED AND CONNECTED BY E.C. PER SUPPLIER'S WIRING DIAGRAMS. TWO STAGE WHERE NOTED.

 SUSPENDED ELECTRICAL RADIANT HEATER--FURNISHED, INSTALLED AND CONNECTED BY E.C. SEE NOTES ON PLAN

 ITEMS SHOWN DASHED ARE TO REMAIN -- UNO

 EXCT. POWER PANELS ARE TO REMAIN -- UNO

 DIGITAL TIMER, 365 DAY AND ASTRONOMIC SCHEDULE, 120 VOLT 10 AMPERE OUTPUTS, 4-CHANNEL PROGRAMMABLE TIMER, AUTO DAYLIGHT SAVINGS TIME, BATTERY BACK-UP, NEMA 1 ENCLOSURE, TORK MODEL 2400B OREQ.



NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 25, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
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