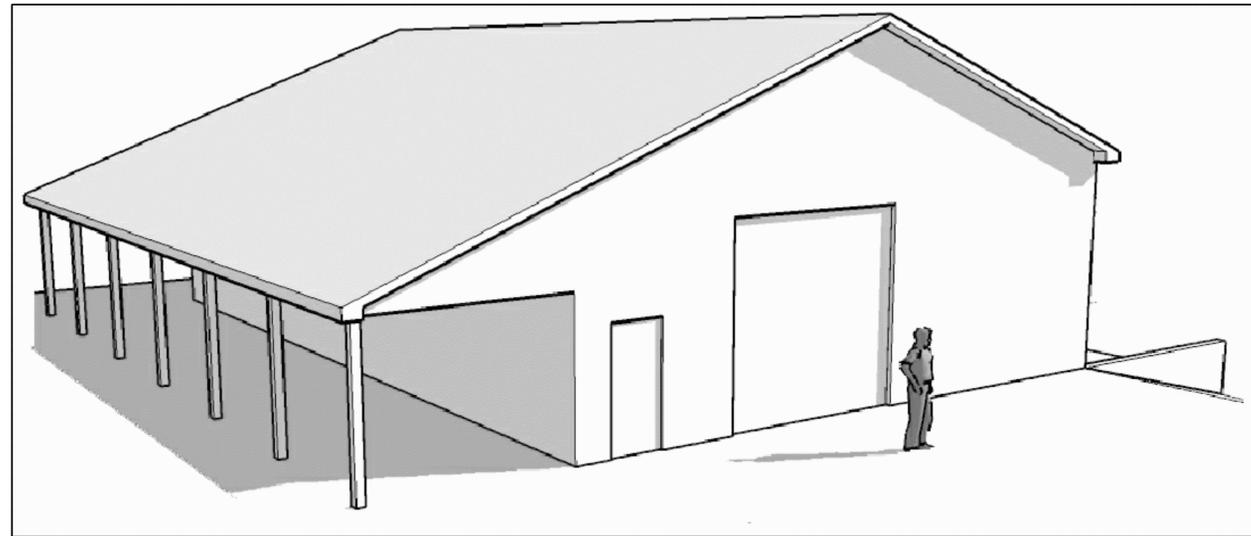


BALD MOUNTAIN SHOOTING RANGE

LAKE ORION, MICHIGAN

NEW POLE BARN

PROJECT NO. 41-7769



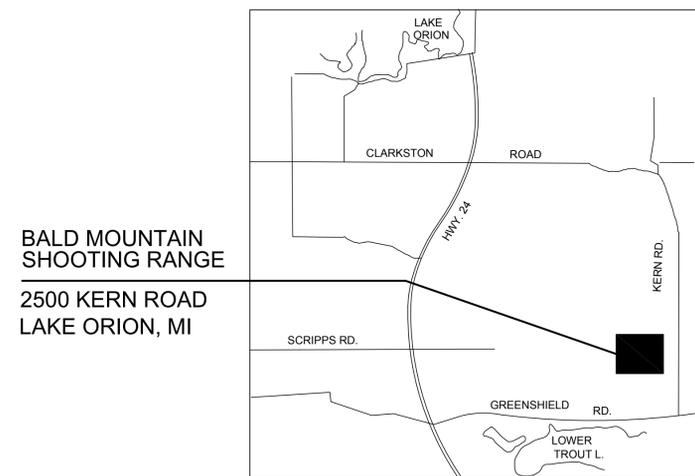
DRAWING INDEX

- T TITLE SHEET

- SURVEY
- TS TOPOGRAPHICAL SURVEY

- CIVIL
- C1 DEMOLITION PLAN, SITE PLAN AND SITEWORK NOTES

- ARCHITECTURAL
- A1 FLOOR PLAN, FOUNDATION PLAN, TRUSS BRACING PLAN, ELECTRICAL NOTES, AND GENERAL NOTES
- A2 ELEVATIONS, SECTIONS AND DETAILS

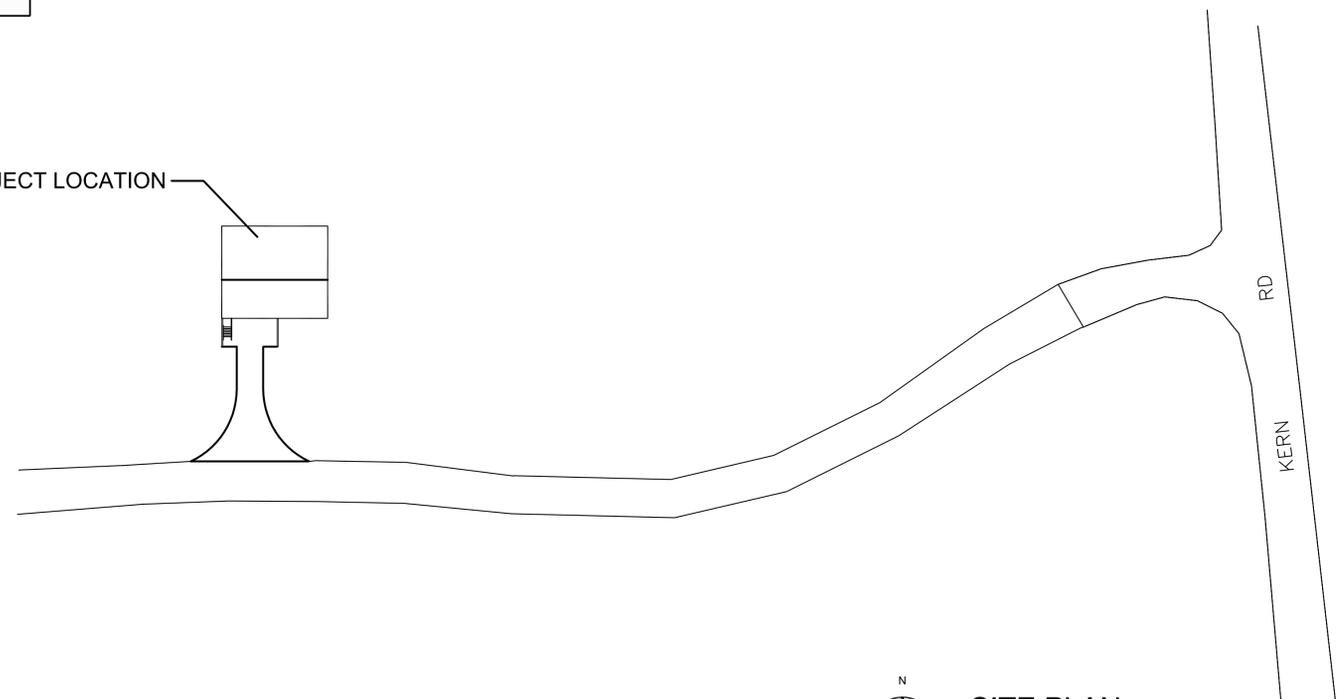


BALD MOUNTAIN SHOOTING RANGE
2500 KERN ROAD
LAKE ORION, MI



72 HOURS
(3 WORKING DAYS)
**BEFORE YOU DIG
CALL MISS DIG**
800-482-7171
(TOLL-FREE)

PROJECT LOCATION



Part of Bald Mountain Recreation Area



SURVEY INFORMATION	
JOB NUMBER	1207
SURVEY DATE	11/9/2009
FIELD WORK BY	RR, JB
DRAWN BY	RR
SHEET	1 OF 1

The Basis of Bearing of this survey is Michigan State Plane, NAD 83, South Zone(GEOD 09). Distances are grid with a combined scale factor of 0.99987191. Multiply these distances by this scale factor to achieve ground distances.

△ CONTROL POINTS

CP 1 ROD AND CAP "DNR SURVEY PT" AT CORNER OF SIDEWALK
 N: 456367.71
 E: 13431920.12
 ELEV: 926.36'
 WITNESSES:
 S END OF RETAINING WALL NNE 24'
 CHAIN LINK FP CORNER WSW 32'

LEGEND

- △ CONTROL POINT
- GOVERNMENT CORNER
- + SIGN
- 🌳 DECIDUOUS TREE
- - - - - EDGE OF GRAVEL
- — — — — FENCE
- ⋯⋯⋯ EDGE OF BRUSH



STATE OF MICHIGAN
 DEPARTMENT OF NATURAL RESOURCES
 OFFICE OF LAND AND FACILITIES
 DESIGN & CONSTRUCTION SECTION
 P.O. BOX 30033 LANSING, MI 48905-7933
 517.241.1919 VOICE 517.241.4278 FAX

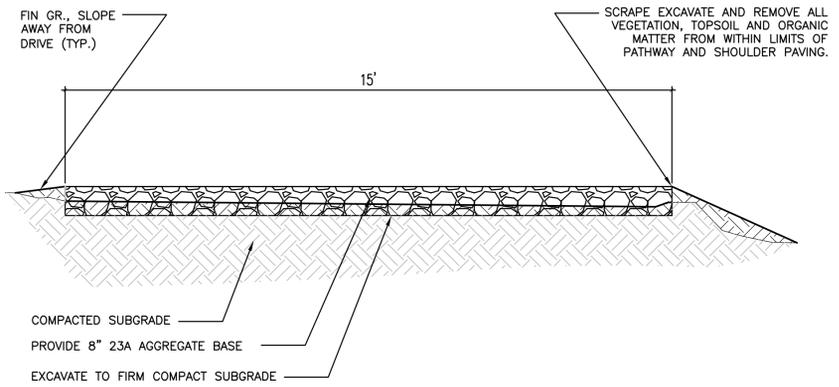
110809	BIDS & CONSTRUCTION
10/26/09	90% OWNER REVIEW

NEW POLE BARN
BALD MOUNTAIN SHOOTING RANGE
 OAKLAND COUNTY

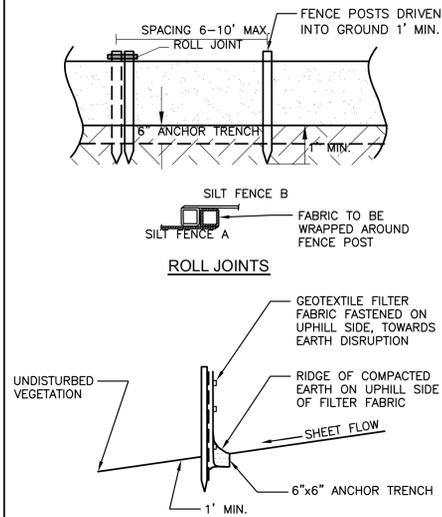
TOPOGRAPHICAL SURVEY

PROJECT NO.	41-7789
INDEX	66680
PCA	71550
DRAWN BY	RR
DESIGNED BY	RR
PROJ. MGR.	PS

TS



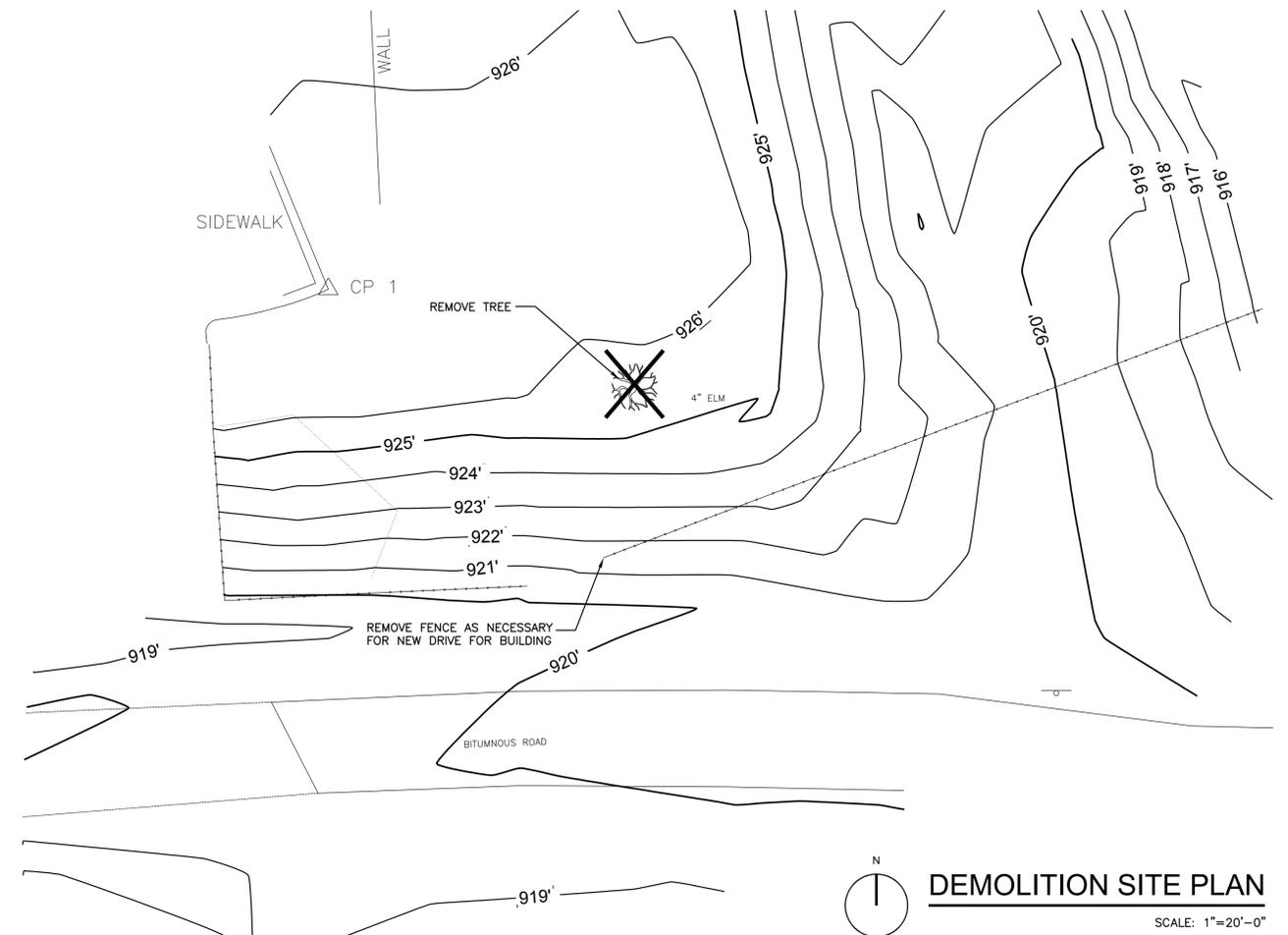
1 **TYPICAL DRIVE DETAIL**
NOT TO SCALE



SILT FENCE DETAIL
NOT TO SCALE

SILT FENCE NOTES

1. INSTALL PARALLEL TO A CONTOUR.
2. SILT FENCE SHALL BE MADE OF WOVEN GEOTEXTILE FABRIC.
3. DIG A 6" TRENCH ALONG THE AREA WHERE THE FENCE IS TO BE INSTALLED.
4. PLACE 6" OF THE SILT FENCE BOTTOM FLAP INTO THE TRENCH.
5. BACKFILL THE TRENCH WITH SOIL AND COMPACT THE SOIL ON BOTH SIDES. CREATE A SMALL RIDGE ON THE UP-SLOPE SIDE OF THE FENCE.
6. INSTALL WOODEN STAKES 6 - 10' APART AND DRIVE INTO THE GROUND A MINIMUM OF 12".
7. STAPLE THE GEOTEXTILE FABRIC TO THE WOODEN STAKES.
8. JOIN SECTIONS OF SILT FENCE BY WRAPPING ENDS TOGETHER (SEE DRAWING).
9. INSPECT FREQUENTLY AND IMMEDIATELY AFTER EACH STORM EVENT. CHECK SEVERAL TIMES DURING PROLONGED STORM EVENTS. IF NECESSARY, REPAIR IMMEDIATELY.
10. IF THE SEDIMENT HAS REACHED 1/3 THE HEIGHT OF THE FENCE, THE SOIL SHALL BE REMOVED AND DISPOSED OF IN A STABLE UPLAND SITE.
11. THE FENCE SHALL BE RE-INSTALLED IF WATER IS SEEPING UNDERNEATH IT OR IF THE FENCE HAS BECOME INEFFECTIVE.
12. SILT FENCE SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED AND UP-SLOPE AREA HAS STABILIZED.



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

SESC NOTES

1. ALL WORK SHALL COMPLY WITH THE APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL (SESC) RULES AND REGULATIONS (SOIL EROSION AND SEDIMENTATION CONTROL - 1994 PA 451, PART 91, AS AMENDED, MCL 324.9101 ET SEQ.).
2. INSTALL ALL SILT FENCE, RIP RAP SOIL EROSION AND ANY OTHER SEDIMENTATION CONTROL MEASURES PRIOR TO DEMOLITION OR CONSTRUCTION.
3. THE CONTRACTOR SHALL REVIEW THE SESC PLAN IN ORDER TO PREPARE AND ISSUE FOR APPROVAL AN "SESC IMPLEMENTATION PLAN", WHICH INDICATES THE CONTRACTOR'S INTENDED IMPLEMENTATION OF THE SESC PLAN FOR THE PROJECT, INCLUDING A SCHEDULE.
4. THE NEAREST WATERBODY IS THE WETLAND AREA TO THE SOUTH AND EAST OF THE PROPOSED BUILDING (50-100' AWAY).
5. SOIL TYPE IS TYPE A.
6. NO SOIL EROSION CONTROL INSPECTION IS REQUIRED SINCE DISTURBED AREA IS LESS THAN ONE ACRE. HOWEVER, CONTRACTOR SHALL IMPLEMENT AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY THE PROJECT'S SESC PLAN. SESC MEASURES SHALL COMPLY WITH DMB'S SOIL EROSION AND SEDIMENTATION CONTROL GUIDEBOOK, DATED FEBRUARY 2005, AND AS DIRECTED BY THE ENGINEER. THE DNR SESC INSPECTOR SHALL INSPECT THE SITE AT PROGRESS MEETINGS, OR IF FAILED OR IMPROPERLY MAINTAINED MEASURES ARE REPORTED BY LOCAL STAFF.
7. THE CONTRACTOR WILL PERFORM SWEEPING AS NEEDED TO REMOVE ANY SEDIMENT TRACKED OFF SITE. FREQUENCY OF SWEEPING WILL BE BASED ON SITE CONDITIONS.
8. THE CONTRACTOR WILL PERFORM DUST CONTROL AS NEEDED BASED ON SITE CONDITIONS.
9. DISTURBED AREAS THAT WILL REMAIN IDLE DURING CONSTRUCTION MUST BE TEMPORARILY STABILIZED, INCLUDING SOIL STOCKPILES.
10. THE CONTRACTOR SHALL CORRECT NON-COMFORMING SESC MEASURES WITHIN 24 HOURS, IF WATERS OF THE STATE ARE BEING IMPACTED OR WITHIN 48 HOURS FOR ROUTINE MAINTENANCE ITEMS. OTHER SESC MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NEVER MORE THAN FIVE (5) DAYS AFTER DETECTION.
11. THE CONTRACTOR SHALL COMPLETE PERMANENT SOIL EROSION CONTROL MEASURES FOR ANY DISTURBED LAND AREA WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. THE CONTRACTOR SHALL MAINTAIN TEMPORARY CONTROL MEASURES UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.
12. THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED. CARE SHALL BE TAKEN DURING REMOVAL TO PREVENT SOIL EROSION AND SEDIMENTATION.
13. AFTER THE COMPLETION OF THE PROJECT, PERMANENT SESC MEASURES WILL BE MAINTAINED BY THE PROPERTY OWNER.
14. THIS PLAN SHOWS A GENERAL OVERVIEW OF SESC MEASURE LOCATIONS, REFER TO CONTRACT PLAN SHEETS FOR SPECIFIC LOCATIONS AND LAYOUT.

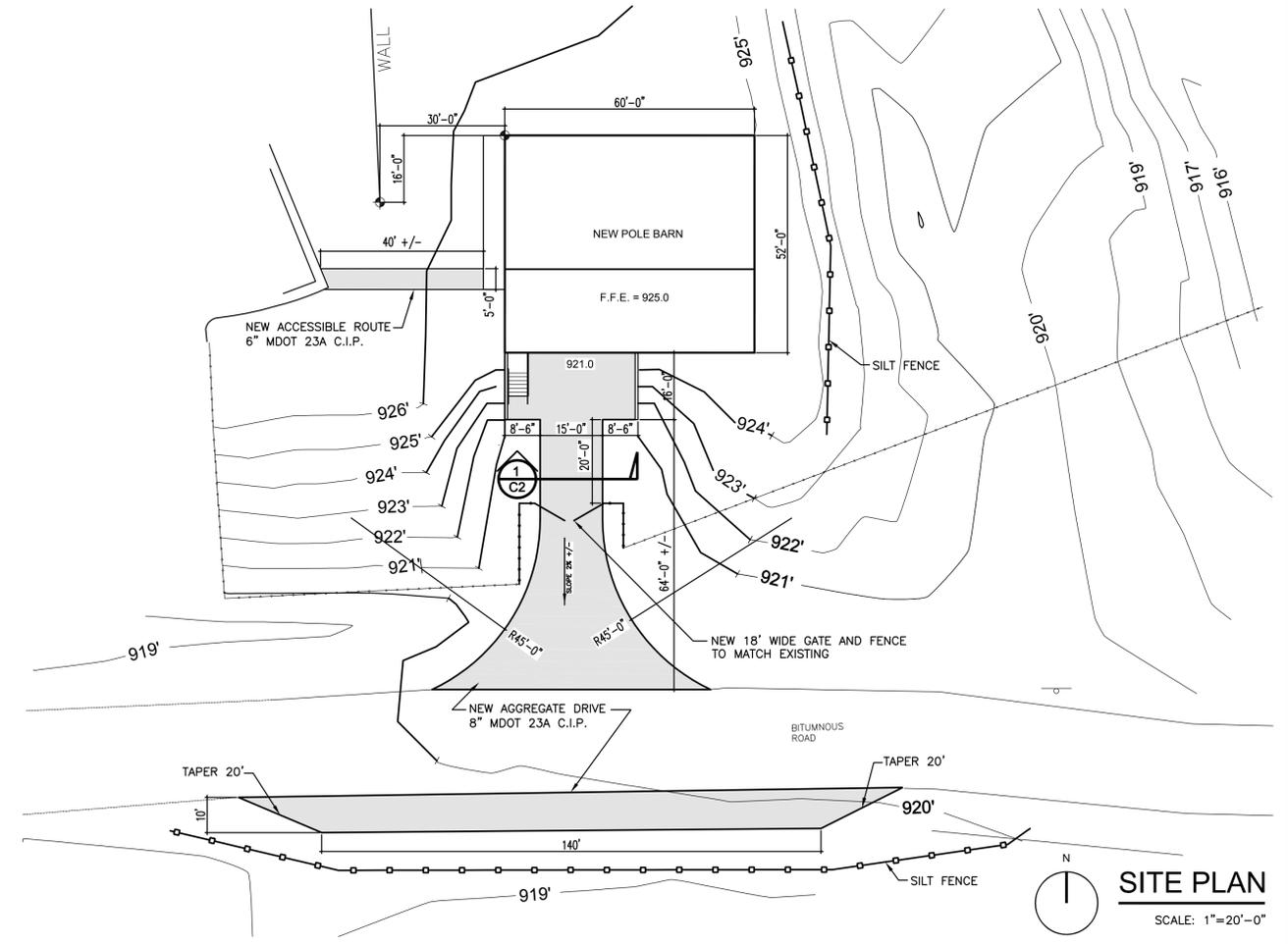
GENERAL NOTES

1. THIS DRAWING INDICATES THE APPROXIMATE LOCATION OF KNOWN UNDERGROUND UTILITIES BASED UPON A COMBINATION OF ORIGINAL AND AS-BUILT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE TO HAND DIG, IDENTIFY AND LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO DEMOLITION OR CONSTRUCTION.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST "AMERICANS WITH DISABILITIES ACT - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES".
3. THE RUNNING SLOPES ON SIDEWALKS AND ADA ROUTES SHALL NOT EXCEED 1:20 (5%) UNDER ANY CIRCUMSTANCE. TARGET = 4.5% +/- 0.5%. SIDEWALKS AND ADA ROUTES SHALL HAVE CROSS SLOPES WITHIN THE RANGE OF 1% TO 2%, AND SHALL NOT EXCEED 2% UNDER ANY CIRCUMSTANCE. TARGET = 1.5% +/- 0.5%.
4. ADA PARKING AREA AND ACCESS HATCH AREA SHALL HAVE SLOPES LESS THAN 2% IN ANY DIRECTION.
5. IF ANY ARTIFACTS ARE DISCOVERED DURING THE CONSTRUCTION PROCESS ALL WORK IS TO STOP AND THE OFFICE OF THE STATE ARCHEOLOGIST SHALL BE NOTIFIED.
6. BIDS FOR CONSTRUCTION OF ALL WORK SHOWN ON THE PLANS ARE SOLICITED ON A LUMP-SUM BASIS. NO SEPARATE PAYMENT OR ADJUSTMENTS TO THE LUMP-SUM BID WILL BE MADE UNLESS SPECIFICALLY INDICATED ON THE PLANS AND IN THE PROPOSAL OR WHEN ADDITIONAL WORK IS AUTHORIZED IN WRITING BY THE ENGINEER.
7. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER OF ANY DEVIATION FROM THIS PLAN.
8. TOPSOIL STRIPPED FROM WITHIN THE CONSTRUCTION SITE MAY BE STOCKPILED FOR REUSE AT AREAS APPROVED BY THE ENGINEER. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE FOR RESTORATION PURPOSES, THE CONTRACTOR SHALL IMPORT TOPSOIL TO THE PROJECT SITE AT NO CHANGE IN CONTRACT PRICE. TOPSOIL SUPPLIED BY CONTRACTOR SHALL BE APPROVED BY ENGINEER.
9. TREES 4" AND LARGER REMOVED AS PART OF THE WORK SHALL BE CUT INTO 8' TO 10' LENGTHS FREE FROM ALL LIMBS AND BRANCHES AND SHALL BE STOCKPILED IN AN AREA DESIGNATED BY THE ENGINEER. LIMBS, BRUSH, AND BRANCHES SHALL BE CHIPPED AND ALL CHIPS SHALL BE STOCKPILED IN AN AREA DESIGNATED BY THE PROJECT MANAGER. ALL STUMPS SHALL BE REMOVED FROM THE PARK SITE.
10. THE CONTRACTOR SHALL NOTE THAT NOT ALL TREES WERE LOCATED AS PART OF THE SITE SURVEY. THE CONTRACTOR SHALL USE HIS JUDGMENT AS TO THE NUMBER OF TREES PRESENT WITHIN THE CONSTRUCTION SITE AND WHICH ARE NOT INDICATED ON THE CONSTRUCTION DRAWINGS. NO CHANGE IN THE LUMP-SUM PRICE WILL BE MADE FOR REMOVAL OF TREES, BRUSH, AND STUMPS WHICH ARE REQUIRED IN THE LUMP-SUM PRICE FOR CONSTRUCTION OF THE PROJECT AND WHICH ARE NOT SHOWN ON THE CONSTRUCTION DRAWINGS.
11. CONTRACTOR SHALL REMOVE FROM THE PROJECT SITE ALL BRUSH, LIMBS, AND STUMPS WHICH ARE REMOVED AS PART OF THE WORK. BURNING OF TREES, STUMPS, AND LIMBS ON THE SITE WILL NOT BE PERMITTED.

12. CONTRACTOR SHALL REMOVE ONLY THOSE TREES NEEDED TO PROPERLY COMPLETE THE WORK AND/OR THOSE NOTED ON THE PLANS FOR REMOVAL. ALL OTHER TREES SHALL BE PROTECTED. REMOVAL OF TREES BEYOND THOSE IDENTIFIED FOR REMOVAL SHALL BE APPROVED BY THE PROJECT MANAGER IN WRITING PRIOR TO REMOVAL.
13. CONTRACTOR WILL BE HELD RESPONSIBLE TO REIMBURSE THE CONTRACT FOR TREES THAT ARE DAMAGED.

SITWORK NOTES

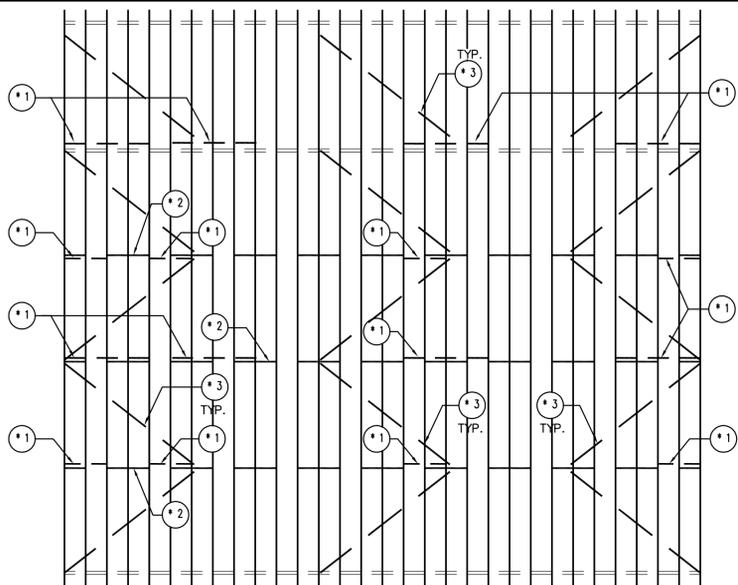
1. CONTRACTOR AND ENGINEER SHALL IDENTIFY APPROPRIATE CONSTRUCTION ACCESS ROUTES DURING PRE-CONSTRUCTION MEETING. CONTRACTOR & ENGINEER SHALL MARK UP CONSTRUCTION PLAN AND AGREE TO CONSTRUCTION ACCESS ROUTES FOR ALL MATERIALS AND EQUIPMENT. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO ANY DEVIATION FROM ROUTES.
2. CONTRACTOR IS REQUIRED TO OBTAIN BUILDING PERMIT AND ELECTRICAL PERMIT FROM THE STATE OF MICHIGAN DEPARTMENT OF LABOR AND ECONOMIC GROWTH, PRIOR TO CONSTRUCTION. CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH THE LATEST STATE OF MICHIGAN BUILDING CODE.
3. ALL CONSTRUCTION LAYOUT SHALL BE COMPLETED BY CONTRACTOR APPROVED BY ENGINEER PRIOR TO CONSTRUCTION.
4. REGRADE AND COMPACT EXISTING SUBBASE AS REQUIRED TO ACCOMMODATE THE FINAL GRADES SHOWN ON THE PLANS. PLACE AND COMPACT GRAVEL BASE IN MAXIMUM 12" LIFTS AS REQUIRED TO ACCOMMODATE THE FINAL GRADES. BASE SHALL BE COMPACTED TO 95% OF ITS UNIT DENSITY.
5. FORM FOOTINGS. (NOTIFY ENGINEER 48 HOURS PRIOR TO POURING FOOTINGS). ENGINEER WILL INSPECT FORMS, REINFORCEMENT AND SUBGRADE PRIOR TO PLACING CONCRETE.
6. RESTORE ALL DISTURBED LAWN AREAS & STOCKPILE AREAS TO ORIGINAL GRADE WITH 4" TOPSOIL, FERTILIZER, SEED AND MULCH. USE MULCH BLANKET FOR SLOPES GREATER THAN 1 ON 4.
7. TOPSOIL STRIPPED FROM WITHIN THE CONSTRUCTION SITE MAY BE STOCKPILED FOR REUSE AT AREAS APPROVED BY THE ENGINEER. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE FOR RESTORATION PURPOSES, THE CONTRACTOR SHALL IMPORT TOPSOIL TO THE PROJECT SITE AT NO CHANGE IN CONTRACT PRICE. TOPSOIL SUPPLIED BY CONTRACTOR SHALL BE APPROVED BY ENGINEER.



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

110809	BIDS & CONSTRUCTION	90% OWNER REVIEW
10/26/09		

PROJECT NO.	41-7769
INDEX	06680
PCA	71550
DRAWN BY	PS
DESIGNED BY	PS
PROJ. MGR.	PS



BRACING NOTES:
 THE BRACING SHOWN ON THESE BRACING PLANS IS REQUIRED FOR PERMANENT BRACING. THE BRACING IS BASED ON THE MINIMUM REQUIREMENTS OF THE THE BUILDING COMPONENT SAFETY INFORMATION, BCSI 2006, GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES. THE TRUSS SHOP DRAWINGS MUST BE CHECKED TO DETERMINE IF ADDITIONAL BRACING IS REQUIRED. THE CONTRACTOR SHALL VERIFY THE FINAL BRACING REQUIREMENTS W/ THE ARCH./ENG. BEFORE SETTING ANY TRUSSES.

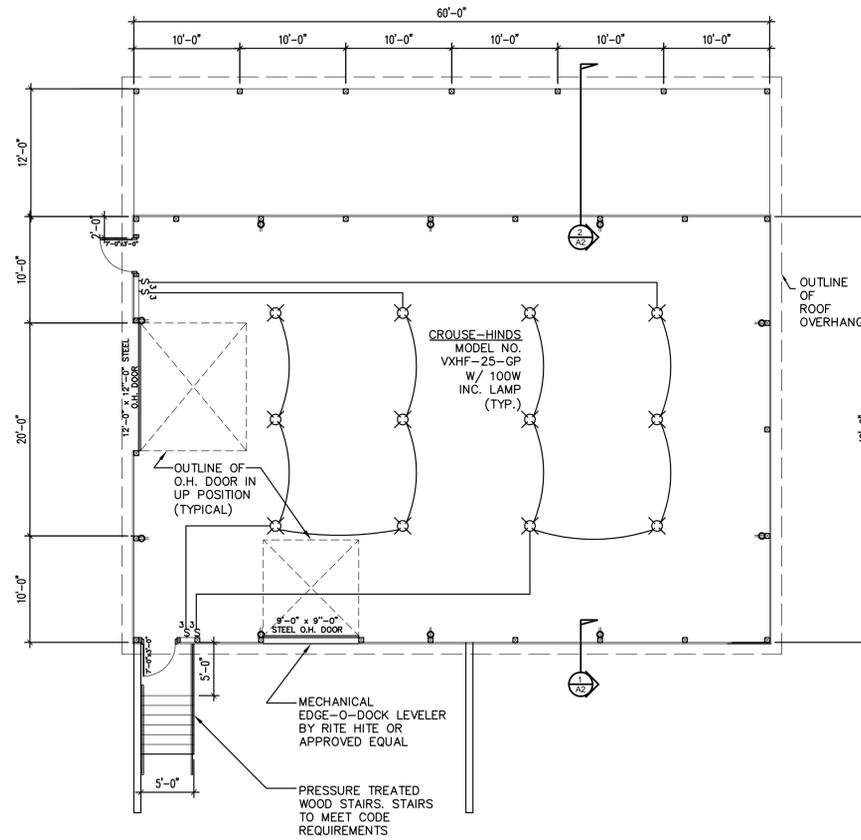
- ① DIAGONAL BRACING IN WEB OF TRUSS, FROM BOTTOM CHORD TO TOP CHORD.
- ② CONT. PERMANENT LATERAL BOTTOM CHORD BRACING.
- ③ CONT. PERMANENT DIAGONAL BOTTOM CHORD BRACING.

1. THE BRACING PLANS SHOWN SHALL BE USED IN CONJUNCTION WITH BCSI 2006, GUIDE.
2. ALL CONTINUOUS LATERAL BRACES SHALL BE LAPPED OVER (2) TRUSSES MINIMUM.
3. WHERE A BRACE CROSSES OR ENDS ON A TRUSS, NAIL THE BRACE TO THE TRUSS W/ AT LEAST (2) 0.131" DIAMETER MIN. x 3 1/2" MIN. NAILS.
4. ALL BRACING LUMBER SHALL BE 2x4 MIN., #2 S-P-F OR BETTER.
5. ALL TOP CHORD TEMPORARY TRUSS BRACING SHALL BE AS REQUIRED BY THE BCSI 2006, GUIDE. THIS TEMPORARY BRACING IS NOT SHOWN, BUT, THE CONTRACTOR IS RESPONSIBLE FOR THIS BRACING DURING ERECTION/CONSTRUCTION. IF IN QUESTION, ASK BEFORE SETTING ANY TRUSSES.
6. ALL CONTINUOUS LATERAL BRACES (CLB) SHOWN ON THE TRUSS MANUFACTURER'S SHOP DRAWINGS MUST BE DIAGONALLY BRACED AT BOTH ENDS OF BUILDING AND AT 20' SPACING MAX.



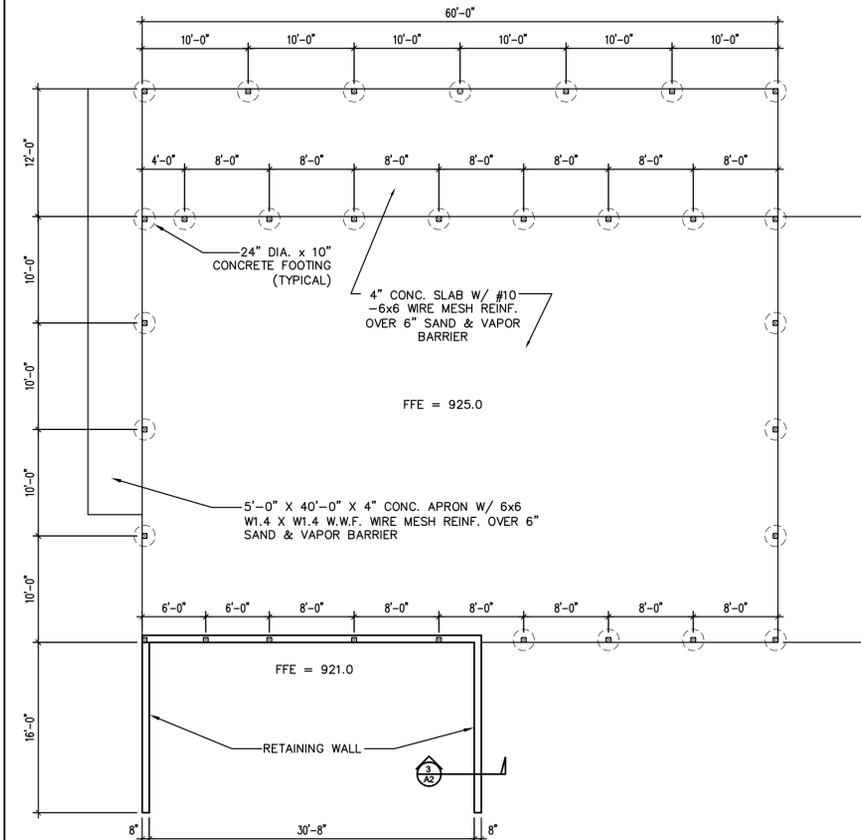
TRUSS BOTTOM CHORD AND WEB BRACING

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



FLOOR PLAN

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



FOUNDATION PLAN

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

GENERAL

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE AND TO CROSS-CHECK DETAILS AND DIMENSIONS ON THE DRAWINGS WITH RELATED SHOP DRAWINGS.
2. ALL ENGINEERING DESIGN, CONSTRUCTION, AND TESTING SHALL CONFORM TO THE REQUIREMENTS OF THE MICHIGAN BUILDING CODE 2003 EDITION (HERE IN REFERRED TO AS THE CODE).
3. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. SAFETY, CARE OF ADJACENT PROPERTIES DURING CONSTRUCTION, AND COMPLIANCE WITH LOCAL REGULATIONS REGARDING SAFETY IS, AND SHALL BE, THE CONTRACTOR'S RESPONSIBILITY.
4. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
5. DESIGN LOADS: PER 2003 MICHIGAN BUILDING CODE AND ANSI/ASCE7-02

BUILDING :		
MINIMUM ROOF SNOW	=	20 PSF
METAL PLATE CONN. WOOD TRUSSES:		
TRUSS TOP CHORD DEAD LOAD	=	7 PSF
TRUSS BOTTOM CHORD DEAD LOAD	=	10 PSF
UNBALANCED ROOF SNOW LOADS:		
PER ASCE 7-02, SECTION 7.6		
Is, IMPORTANCE FACTOR	=	1.0
Cs, EXPOSURE FACTOR (B, PART. EXP.)	=	1.0
Ct, THERMAL FACTOR	=	1.2
UNBALANCED, LEEWARD SIDE	=	30 PSF
UNBALANCED, WINDWARD SIDE	=	0 PSF
GROUND SNOW LOAD, PER 2003 MBC	=	25 PSF
WIND LOAD INFO. : PER 2003 MBC OR ANSI/ASCE7-02		
BASIC WIND SPEED	=	90 MPH
WIND IMPORTANCE FACTOR, Iw	=	1.0
WIND EXPOSURE	=	B
INTERNAL PRESSURE COEF.	=	± 0.18

SECTION 1609.6 AND TABLE 1609.6.2.1(1) OF THE BUILDING CODE IS USED FOR THE MWFRS.

SEISMIC DESIGN : CATEGORY = A
SITE CLASS = D

FOUNDATION

1. ALL FOOTINGS SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AS SPECIFIED IN SOILS REPORT.
2. ALL FILL AND BACKFILL MATERIALS SHALL BE NON-COHESIVE SOILS COMPACTED TO 95% MAXIMUM DENSITY PER A.S.T.M. D1557-70 METHOD. FILL SHALL BE PLACED IN 9" LIFTS MAXIMUM AND COMPACTED BEFORE PLACING THE NEXT LIFT.

CONCRETE

1. ALL READY MIX CONCRETE SHALL CONFORM TO A.S.T.M. C 94.
2. MEASURING, MIXING, TRANSPORTING, AND PLACING OF ALL CONCRETE SHALL COMPLY W/ ACI 304R-89.
3. ALL REINFORCING BARS, DOWELS, ANCHOR BOLTS AND ANY INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING OF CONCRETE.
4. AIR ENTRAINED CONCRETE SHALL BE USED FOR ALL SIDEWALKS, PAVING, PLATFORMS, CURBS, AND ALL CONCRETE ELEMENTS EXPOSED TO THE WEATHER.
5. ALL CONCRETE SHALL DEVELOP THE FOLLOWING FOUNDATIONS 3000 PSI

WOOD

1. ALL DIMENSIONAL LUMBER SHALL BE SPRUCE-PINE-FIR W/ A GRADE STAMP OF #2 OR BETTER MINIMUM.
2. ALL WOOD SHEATHING DESIGNATED ON THE CONSTRUCTION DOCUMENTS SHALL BE APA RATED SHEATHING WITH A SPAN RATING CONSISTENT W/ ITS USE.
3. ALL P.T. WOOD SHALL BE SOUTHERN PINE WITH A GRADE STAMP OF #2 OR BETTER, MIN. LUMBER THAT IS TREATED W/ ACQ MUST BE ISOLATED FROM STEEL THAT IS NOT STAINLESS, OR, IS NOT GALVANIZED. THE HEAVIER THE GALVANIZING THE BETTER.
4. THE QUANTITY AND SIZE OF FASTENERS CONNECTING WOOD FRAME MEMBERS TOGETHER AND SHEATHING MATERIALS TO WOOD FRAME MEMBERS SHALL NOT BE LESS THAN THAT SPECIFIED IN TABLE 2304.9.1 OF THE CODE.
5. ALL BOLTS THROUGH WOOD SHALL HAVE STANDARD CUT WASHERS EXCEPT WHERE METAL SIDE PLATES ARE SPECIFIED. BOLT HOLES SHALL BE BORED 1/32" TO 1/16" LARGER THAN THE BOLT DIAMETER.
6. ALL NAILS AND SCREWS THAT ARE EMBED. IN P.T. LUMBER MUST BE HOT DIP GALVANIZED PER ASTM A153.
7. ISOLATE PRESSURE TREATED LUMBER FROM ALL STEEL THAT IS NOT STAINLESS OR GALVANIZED.

METAL WALL & ROOF FASTENER REQUIREMENTS

1. FASTEN METAL ROOF AND SIDING TO PURLINS WITH (5) #9 GASKETED SCREWS AT EACH 36" PANEL WIDTH. IF IN QUESTION, ASK BEFORE SETTING METAL WALL AND ROOFING.

METAL WOOD CONNECTIONS

1. ALL METAL CONNECTORS SHALL BE INSTALLED AS RECOMMENDED BY THE PRODUCT MANUFACTURER. THE CORRECT NUMBER OF FASTENERS AND SIZE OF FASTENERS SHALL BE USED. IF IN QUESTION, ASK BEFORE PROCEEDING.

METAL PLATE CONNECTED WOOD TRUSSES

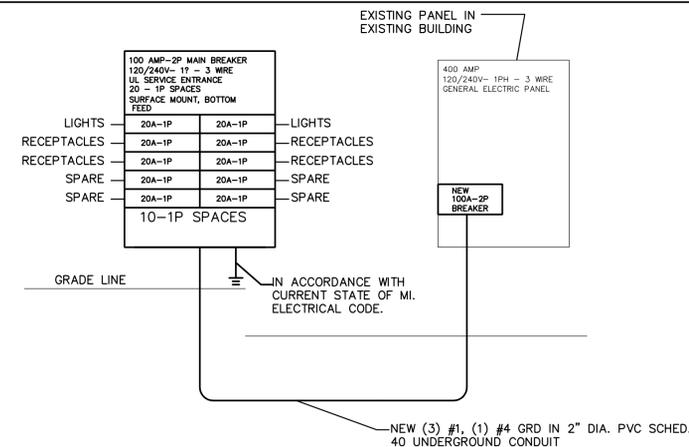
1. THE CONTRACTOR SHALL BRACE THE TRUSSES AS SPECIFIED BY THE TRUSS MANUFACTURER. THIS BRACING IS MORE THAN LIKELY ONLY FOR INDIVIDUAL MEMBERS AND IS NOT THE PERMANENT BRACING. THE PERMANENT BRACING SHALL BE AS SHOWN THE PRELIMINARY BRACING PLAN AND AS REQUIRED BY THE BCSI 1-06, GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.

WOOD WALL BRACING

1. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE/DESIGN THE TEMPORARY WALL BRACING THAT IS REQUIRED BEFORE SETTING ANY TRUSSES. THE TEMPORARY BRACING MUST INCLUDE IN PLANE AND OUT OF PLANE BRACING FOR THE WALLS.

REINFORCING STEEL

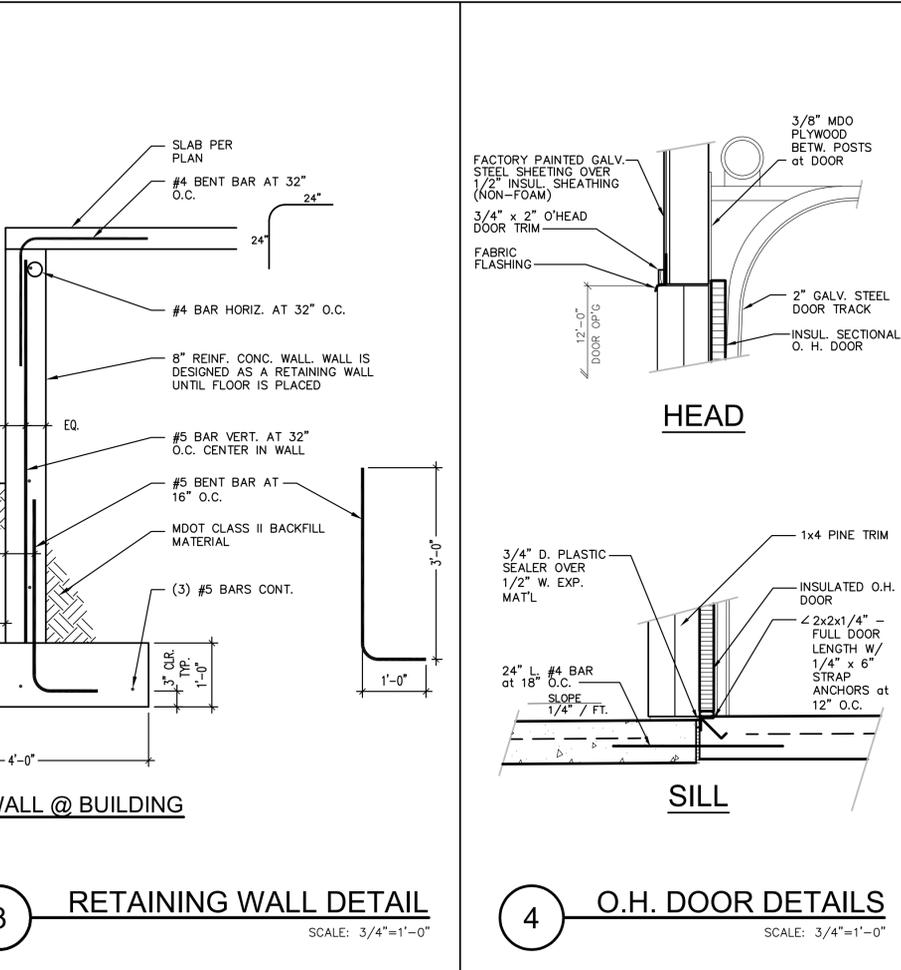
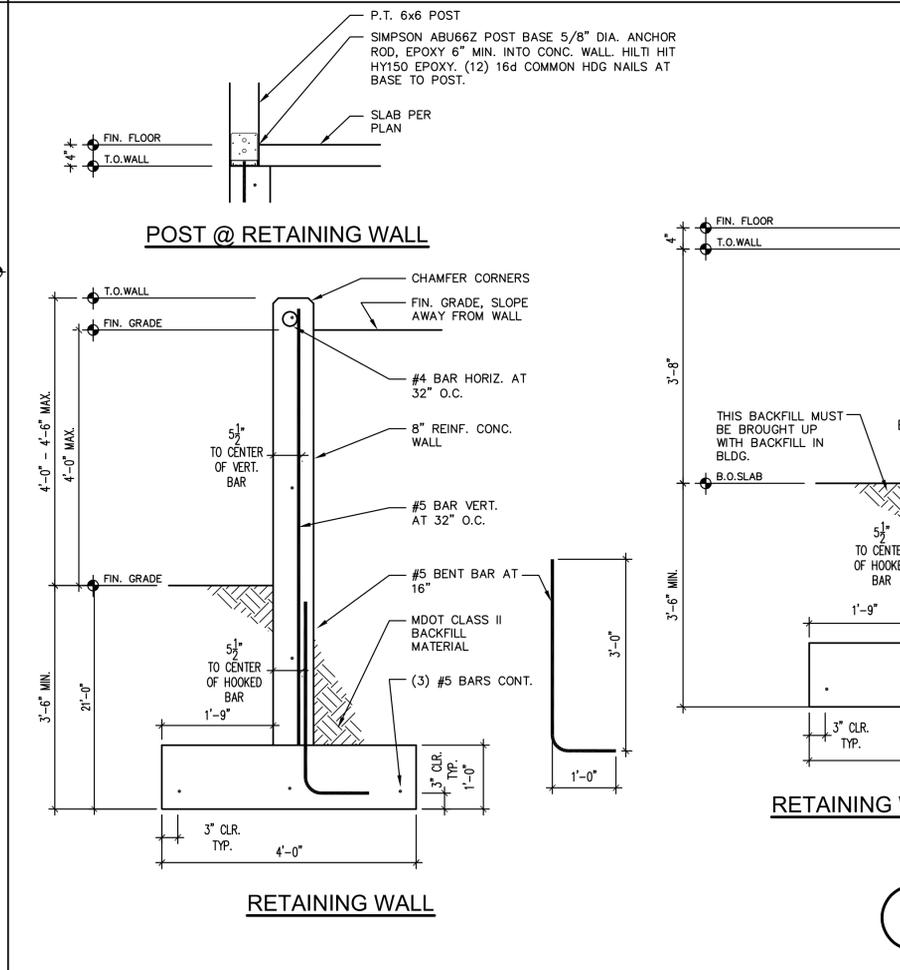
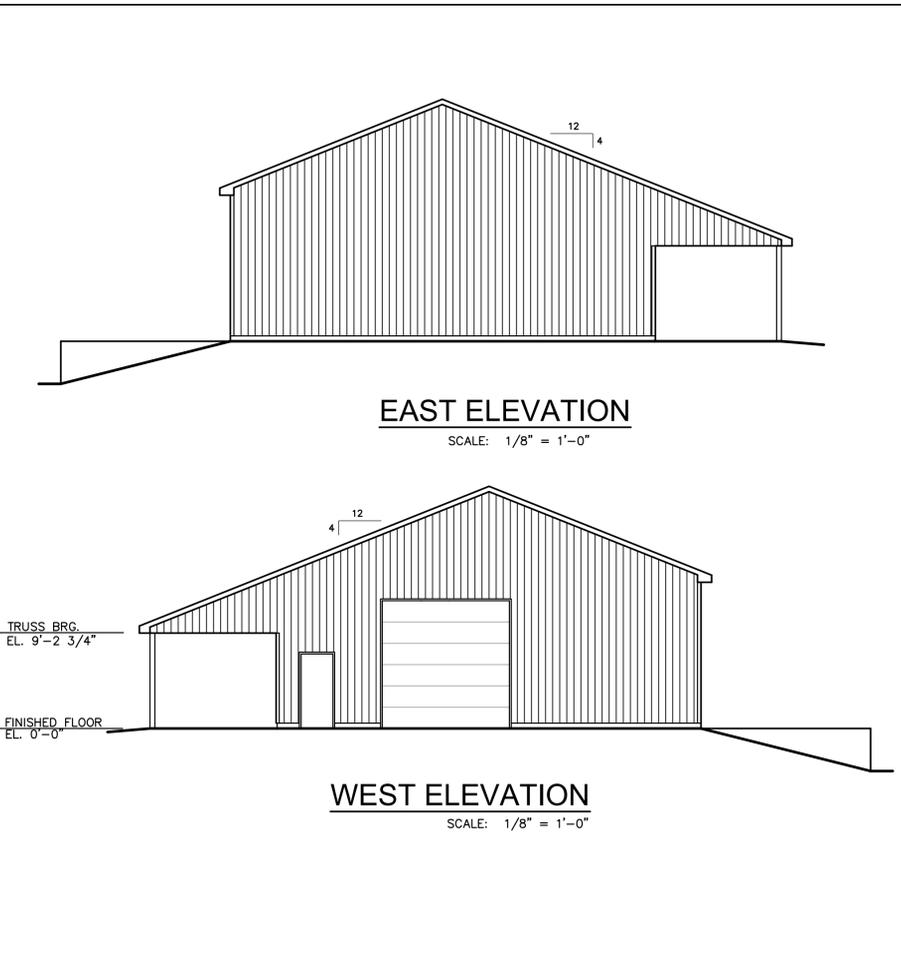
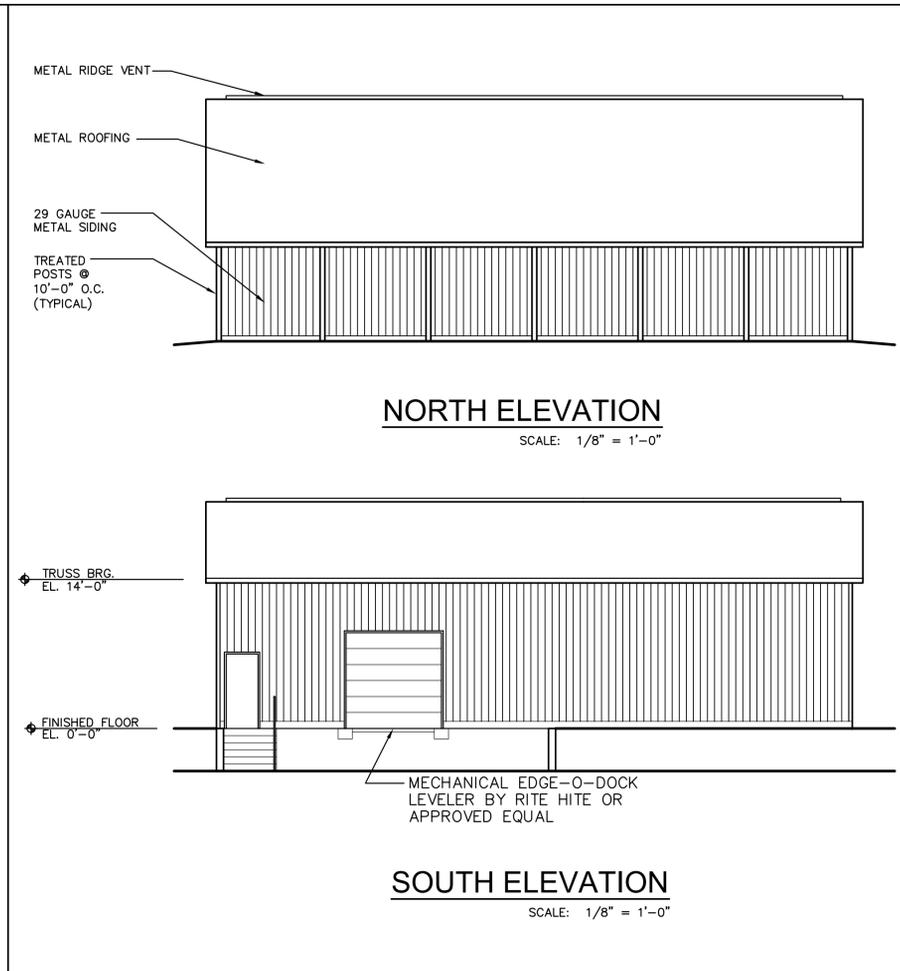
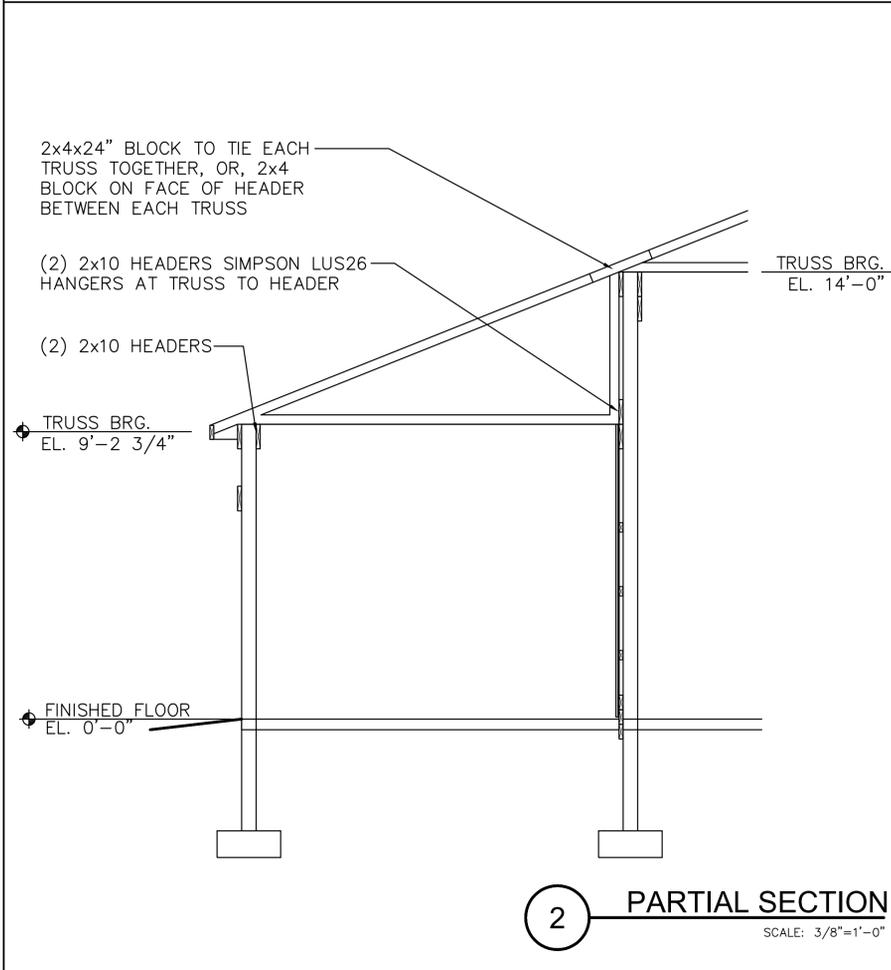
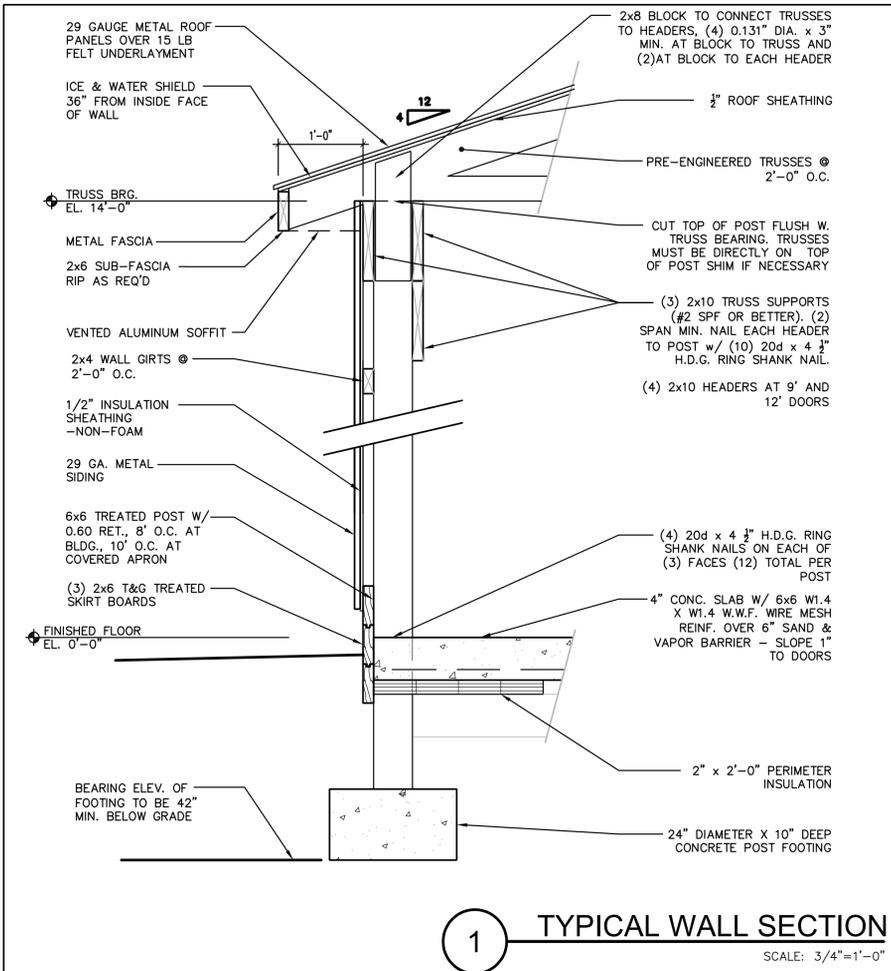
1. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO A.S.T.M. A-615 GRADE 60.
2. ALL REINFORCING BARS MARKED "CONTINUOUS" MAY BE SPLICED WITH A LAP OF 24 BAR DIAMETERS IN CONCRETE AND 48 BAR DIAMETERS IN MASONRY, BUT NOT LESS THAN 24 INCHES, UNLESS NOTED OTHERWISE.
3. ALL MASONRY REINFORCING SHALL BE PLACED AND SUPPORTED IN CONFORMANCE WITH THE PROVISIONS OF THE LATEST EDITION OF A.C.I. 530.1/ ASCE 6/ TMS 602.
4. TIE WIRE SHALL CONFORM TO A.S.T.M. A-82.
5. WELDED WIRE FABRIC SHALL BE SPLICED WITH A MINIMUM LAP OF TWO MODULES.
6. WELDED WIRE FABRIC SHALL CONFORM WITH A.S.T.M. A-185.
7. REINFORCING STEEL: ASTM A-615 GRADE 60.
8. ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING MINIMUM CONCRETE COVERAGE, UNLESS NOTED OTHERWISE:
 - CONCRETE PLACED AGAINST EARTH = 3"
 - CONCRETE WITH FORMED SURFACES IN CONTACT WITH EARTH = 2"
 - CONCRETE EXPOSED TO WEATHER = 2"
 - SLABS, WALLS, AND JOISTS NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH (#11 BARS AND SMALLER) = 1 1/2"
 - BEAMS, GIRDERS AND COLUMNS NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH = 1 1/2"



ELECTRICAL PANEL DIAGRAM

ELECTRICAL NOTES

1. ALL DUPLEX RECEPTACLES SHALL BE 20 AMP, 125 VOLT INDUSTRIAL HEAVY DUTY SPECIFICATION GRADE GFCI RECEPTACLES WITH BUILT IN TEST & RESET BUTTONS, EQUAL TO HUBBLE #GF 5362.
2. RECEPTACLES SHALL BE WIRED FOR END OF LINE TYPE CONFIGURATION.
3. ALL RECEPTACLES, LIGHTING CONTROLS AND ALL OTHER ELECTRICAL SWITCH GEAR SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR TO THE CENTER LINE OF THE DEVICE.
4. ALL BUILDING WIRING SHALL BE "THHN" OR "THWN" IN RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT OR ELECTRICAL METAL TUBING AS PER CURRENT STATE OF MICHIGAN CODE.
5. UNDERGROUND SERVICE ENTRANCE WIRING FROM EXISTING PANEL TO NEW BUILDING PANEL SHALL BE TYPE "USE" IN PVC SCHED. 40 CONDUIT. MAINTAIN A MINIMUM BURY OF 30". PRIOR TO TRENCHING CONTACT OWNER TO IDENTIFY ANY EXISTING UNDERGROUND UTILITIES.
 - CIRCUIT NUMBERS REPRESENT SINGLE POLE SPACES IN THE ELECTRICAL PANEL AND DO NOT CORRESPOND TO ACTUAL PANEL PHASING.
6. CIRCUIT BREAKER ARRANGEMENT INDICATED ON THE ELECTRICAL RISER DIAGRAM DO NOT NECESSARILY CORRESPOND TO ACTUAL BREAKER ARRANGEMENT OF PANEL PHASING. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO BALANCE LOADS ON THE PANELS AT TIME OF INSTALLATION. EVERY ATTEMPT SHOULD BE MADE TO GROUP SIMILAR LOADS AND LOCATE ALL SPARES AND SPACES AT THE BOTTOM OF THE PANEL.
8. PROVIDE A TYPEWRITTEN DIRECTORY IN ALL SERVICE PANEL DOORS ACCURATELY INDICATING ROOMS AND/OR EQUIPMENT BEING SERVED.
9. LIGHT FIXTURE SHALL BE EQUAL TO APPLETON # V-51, ENCLOSED AND GASKETED, 150 WATT, INCANDESCENT INDUSTRIAL FIXTURE. PROVIDE UNIT WITH MALLEABLE IRON CEILING MOUNT HUB, STEEL WIRE GLOBE GUARDS AND 12" DIA. STANDARD PORCELAIN DOME.
10. MOUNT LIGHT FIXTURES ON BOTTOM CHORD OF TRUSSES.
11. ELECTRICAL PANEL SHALL BE EQUAL TO SQUARE D, TYPE QO LOAD CENTER IN A NEMA 1 ENCLOSURE, WITH TYPE QO THERMAL MAGNETIC, MOLDED CASE CIRCUIT BREAKERS.
12. CONTRACTOR SHALL OBTAIN AND PAY FOR STATE OF MICHIGAN ELECTRICAL PERMIT FOR THE WORK REQUIRED IN THIS PROJECT.



STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF LAND AND FACILITIES
DESIGN & CONSTRUCTION SECTION
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Michigan
DNR

110909
10/26/09
BIDS & CONSTRUCTION
90% OWNER REVIEW

NEW POLE BARN
BALD MOUNTAIN SHOOTING RANGE
OAKLAND COUNTY

ELEVATIONS, SECTIONS AND DETAILS

PROJECT NO.	41-7769	PS
INDEX	66880	PS
PCA	71650	PS
DRAWN BY		PS
DESIGNED BY		PS
PROJ. MGR.		PS

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