

CONSTRUCTION PLANS FOR THE
CITY OF MT. PLEASANT
 IN CO-OPERATION WITH
CHARTER TOWNSHIP OF UNION
 &
FRIENDS OF THE DOG PARK
 PLANS OF PROPOSED
MISSION CREEK OFF-LEASH DOG PARK
 T14N - R4W, SECTION 10 CITY OF MOUNT PLEASANT
 ISABELLA COUNTY, MICHIGAN

PLAN DATE: JULY 2014
 PROJECT MGR: S.M.C.
 REVIEWER: J.B.M.
 SCALE: NO SCALE

ROWE PROFESSIONAL SERVICES COMPANY
 O: (989) 772-2138
 F: (989) 773-7757
 www.roweps.com

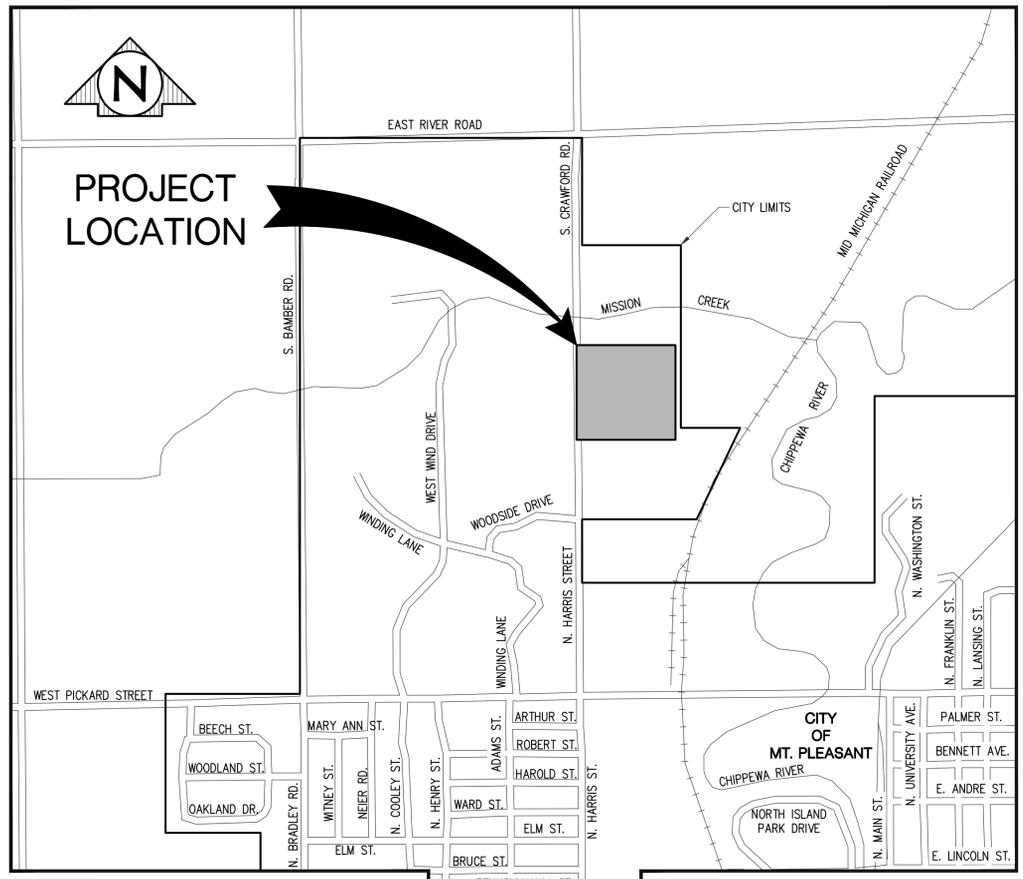


127 S. Main Street
 Mt. Pleasant, MI 48858

PREPARED FOR
CITY OF MT. PLEASANT
OFF-LEASH DOG PARK
 COVER SHEET

PLAN SUBMITTAL LOG

AGENCY	UTILITY	SUBMITTAL DATE
1. CITY OF MOUNT PLEASANT DIVISION OF PUBLIC WORKS 1303 N. FRANKLIN STREET MOUNT PLEASANT, MI 48858 (989) 779-5328 STACIE TEWARI, P.E.	WATERMAIN, SANITARY AND STORM SEWER	6/24/2014 ---
2. CONSUMERS ENERGY CO. 2400 WEISS STREET SAGINAW, MI 48602 (989) 280-3036 MARCIA JANSEN-WILSON	GAS	6/24/2014 ---
3. CONSUMERS ENERGY CO. 1325 WRIGHT AVE. ALMA, MI 48801 (989) 466-4279 RICH KLENDER	ELECTRIC	6/24/2014 ---
4. CHARTER COMMUNICATIONS 915 E. BROOMFIELD RD. MT. PLEASANT, MI 48858 (989) 621-4930 SCOTT VANHOOSE	CABLE	6/24/2014 ---
5. FRONTIER COMMUNICATIONS 345 PINE AVENUE ALMA, MI 48801 (989) 463-0392 MARK MARSHALL	TELEPHONE	6/24/2014 ---
6. WOLVERINE GAS AND OIL 8075 CREEKSIDE DRIVE SUITE 210 PORTAGE, MI 49024 (269) 323-2491 x24 EDWIN PETERS	GAS AND OIL	7/8/2014 ---



LOCATION MAP
NOT TO SCALE

PROJECT DESCRIPTION

THIS PROJECT INCLUDES THE DEVELOPMENT OF AN OFF-LEASH DOG PARK AT MISSION CREEK PARK LOCATED AT 1458 N. HARRIS STREET IN THE CITY OF MOUNT PLEASANT, MICHIGAN.

SHEET INDEX

- 1 COVER SHEET
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- 4 DETAIL SHEET 1
- 5 DETAIL SHEET 2
- 6 DEMOLITION SHEET
- 7 PLAN SHEET
- 8 LAYOUT AND GRADING SHEET
- 9 SITE ELECTRICAL SHEET
- 10 SESC KEY SHEET

OWNER INFORMATION

CITY OF MT. PLEASANT
 320 W. BROADWAY STREET
 MT. PLEASANT, MI 48858



Know what's below.
 Call before you dig.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REV: _____
 SHT# 1 OF 10
 JOB No: 14M0049

STRUCTURE SYMBOLS

- ▣ EXISTING CATCH BASIN IN CURB LINE
- PROPOSED CATCH BASIN IN CURB LINE
- EXISTING CATCH BASIN IN GREEN SPACE
- PROPOSED CATCH BASIN IN GREEN SPACE
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- ▶ PROPOSED CULVERT END SECTION
-) EXISTING HEADWALL
-) PROPOSED HEADWALL
- EXISTING WATER SHUTOFF (SERVICE VALVE)
- EXISTING GATE VALVE AND BOX (STOP BOX)
- PROPOSED GATE VALVE AND BOX
- EXISTING GATE VALVE AND WELL
- PROPOSED GATE VALVE AND WELL
- × EXISTING SPRINKLER HEAD
- EXISTING WATER WELL
- ◆ EXISTING FIRE HYDRANT
- ◆ PROPOSED FIRE HYDRANT
- ▬ PROPOSED WATER MAIN FITTINGS
- EXISTING CLEAN OUT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- ⊠ EXISTING MONITORING WELL

EXISTING TOPOGRAPHICAL SYMBOLS

- ⊕ SIGN
- ⊕ STREET SIGN
- ⊕ END OF PIPE
- ⊕ SWAMP OR WETLAND
- ⊕ DECIDUOUS TREE
- ⊕ CONIFEROUS TREE
- ⊕ TREE STUMP
- ⊕ MAIL BOX
- ⊕ SOIL BORING
- ⊕ ROCK
- ⊕ METAL POST
- ⊕ BUMPER BLOCK

UTILITY SYMBOLS

- UTILITY POLE
- ⋄ GUY ANCHOR CABLE
- * LIGHT POLE / ORNAMENTAL LIGHT
- ◆ POWER LIGHT POLE
- TELEPHONE MANHOLE
- + UNDERGROUND GAS LINE MARKER
- GAS RISER
- GAS VENT
- GAS VALVE
- ⊕ RAILROAD SIGNAL
- * METAL LIGHT POLE
- OUTLET
- CIRCUIT BREAKER PANEL
- ⊠ ELECTRICAL TRANSFORMER PAD
- ⊠ ELECTRICAL TRANSFORMER RISER
- ELECTRIC METER
- TELEPHONE PEDESTAL / RISER
- ⊠ TRAFFIC SIGNAL ON POLE
- PHONE BOTH / PAY PHONE

SURVEY SYMBOLS

- ⊕ MONUMENT
- ▲ BENCHMARK
- △ TRAVERSE POINT
- ▲ SECTION CORNER
- FOUND SURVEY MONUMENTATION

MISCELLANEOUS SYMBOLS

- ⊕ EXISTING STRUCTURE NUMBER
- ⊕ PROPOSED STRUCTURE NUMBER
- ⊕ FLOW DIRECTION
- ⊕ EXISTING RIP-RAP
- ⊕ PROPOSED RIP-RAP

PLAN VIEW LINE TYPES

- 12" STM --- EXISTING STORM SEWER
- 12" CMC --- EXISTING CULVERT
- 12" SAN --- EXISTING SANITARY SEWER
- 12" WM --- EXISTING WATER MAIN
- 12" RW --- EXISTING WATER MAIN
- 60' ROW --- EXISTING RIGHT OF WAY
- 60' ROW --- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING CENTER LINE DITCH
- PROPOSED DITCH CENTERLINE
- EXISTING CENTER LINE ROADWAY
- PARCEL LINE / LOT LINE
- 0/A --- EXISTING OVERHEAD UTILITIES
- 1/2" ELEC --- UNDERGROUND ELECTRICAL LINE
- 4" S-WP GAS --- GAS LINE OR PETROLEUM PIPELINE
- 1/2" TEL --- UNDERGROUND TELEPHONE LINE
- 1/2" CATV --- UNDERGROUND CABLE TV LINE
- 1/2" FIBER --- UNDERGROUND FIBER OPTIC
- 11+00 --- PROJECT CONTROL LINE
- TREE LINE
- X --- EXISTING FENCE
- X --- PROPOSED FENCE
- ○ --- EXISTING GUARD RAIL
- PROPOSED SLOPE STAKE LINE

TOPOGRAPHY

- 960 --- EXISTING CONTOURS MAJOR
- 958 --- EXISTING CONTOURS MINOR
- 960 --- PROPOSED CONTOUR MAJOR
- 958 --- PROPOSED CONTOURS MINOR

PARCEL INFORMATION

- 401-069 PARCEL/TAX IDENTIFICATION NUMBER
- #5324 ADDRESS/BUSINESS NAME

PAVEMENT IDENTIFICATION

- === EXISTING CURB AND GUTTER
- === PROPOSED CURB AND GUTTER
- EXISTING GRAVEL
- PROPOSED AGGREGATE SURFACE

HATCHING LEGEND

- REMOVE PAVEMENT
- COLD MILLING EXISTING PAVEMENT
- REMOVE SIDEWALK
- REMOVE CURB AND GUTTER
- REMOVE AND REPLACE CURB AND GUTTER
- SAND BACKFILL (PROFILE)
- PROPOSED CONCRETE SURFACE

PROPOSED CALLOUTS

- | TOPO CALLOUTS | PLAN VIEW | |
|---------------|-----------|------------------------------|
| ADJ | (ADJ) | ADJUST STRUCTURE |
| ADJ-B/O | (ADJ-B/O) | ADJUST STRUCTURE BY OTHERS |
| REC | (REC) | RECONSTRUCT STRUCTURE |
| REL | (REL) | RELOCATE |
| REL-B/O | (REL-B/O) | RELOCATE BY OTHERS |
| REM | (R) | REMOVE |
| R&R | (R&R) | REMOVE AND REPLACE |
| SALV | (SALV) | SALVAGE |
| SAVE | (S) | SAVE |
| ABN | (A) | ABANDON |
| | (B) | BULKHEAD |
| | (SR-F) | SIDEWALK RAMP TYPE |
| | (6) | SOIL EROSION CONTROL MEASURE |

CAUTION SYMBOLS

- CAUTION●● HAZARDOUS FLAMMABLE MATERIAL UNDERGROUND USED WITH UNDERGROUND GAS & OIL LINES
- CAUTION●● FIBER OPTIC USED WITH FIBER OPTICS LINES



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 OFF-LEASH DOG PARK**

LEGEND SHEET

REV:
 SHT# 2 OF 10
 JOB No: 14M0049

R: \Projects\1400049\Orig\Construction Drawings\Plans.dwg PLOTED: 7/25/2014 3:49 PM

GENERAL CONSTRUCTION NOTES

EMERGENCY CONTACTS

BEFORE BEGINNING WORK ON THE PROJECT, THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH THE NAMES AND TELEPHONE NUMBERS OF EMERGENCY CONTACTS. AT LEAST ONE PERSON REPRESENTING THE CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO EMERGENCIES THROUGHOUT THE LIFE OF THE PROJECT, 24 HOURS A DAY, 7 DAYS A WEEK.

UNDERGROUND UTILITY IDENTIFICATION AND LOCATION

THE CONTRACTOR SHALL CALL MISS DIG (1-800-482-7171) OR 811, A MINIMUM OF THREE WORK DAYS IN ADVANCE OF BEGINNING EXCAVATION. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND NOTIFY UTILITY AGENCIES WITHIN THE PROJECT AREA WHICH DO NOT PARTICIPATE IN THE MISS DIG NOTIFICATION PROGRAM.

PUBLIC UTILITIES

EXISTING UTILITIES ARE SHOWN BASED UPON RECORDS AND LOCATIONS PROVIDED BY UTILITY AGENCIES. THE INFORMATION SHOWN IS CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. UNLESS THE PLANS SPECIFICALLY SHOW THAT EXISTING UTILITIES ARE TO BE MOVED, THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN EXISTING UTILITIES.

VERIFICATION OF UNDERGROUND UTILITIES

THE CONTRACTOR SHALL EXCAVATE AND LOCATE ALL EXISTING UTILITIES IN THE PROJECT AREA IN ADVANCE OF CONSTRUCTION TO VERIFY THEIR ACTUAL LOCATION. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL MAKE SUCH CHANGES TO GRADE AND ALIGNMENT OF PROPOSED WORK AS DIRECTED BY THE ENGINEER TO AVOID CONFLICTS, AT NO INCREASE IN COST TO THE OWNER.

UTILITY SERVICE

UNLESS SPECIFICALLY PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS, ALL EXISTING UTILITIES ARE TO REMAIN IN SERVICE DURING THE PROJECT.

MAINTAINING TRAFFIC

LOCAL AND EMERGENCY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITHIN THE PROJECT AREA.

SCHEDULE

THE CONTRACTOR SHALL COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP WORK ON THE PROJECT ONCE BEGUN.

ALIGNMENT

ALIGNMENT AND GRADES FOR CURB AND GUTTER (INCLUDING THROUGH RAMPS AND DRIVEWAY OPENINGS) SHOWN ON THE PLANS ARE FOR THE TOP, BACK OF CURB, UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE PLANS.

THE HORIZONTAL ALIGNMENT SHOWN ON THE DRAWINGS FOR DRAINAGE STRUCTURES WHICH ARE NOT IN THE CURB LINE AND FOR MANHOLES IS TO THE CENTER OF THE STRUCTURE.

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR MANHOLE CASTINGS, THE ELEVATION PROVIDED IS FOR THE TOP OF THE CASTING.

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR INLETS OR MANHOLE CASTINGS, THE ELEVATIONS PROVIDED ARE CONSIDERED PRELIMINARY. THE CONTRACTOR SHALL MAKE THE FINAL ADJUSTMENT FOLLOWING THE ESTABLISHMENT OF ACTUAL GRADING AND PAVEMENT ELEVATIONS.

CONSTRUCTION STAKING

CONSTRUCTION STAKING IS TO BE PROVIDED BY THE ENGINEER.

SURVEY CORNERS, BENCHMARKS, AND CONTROL POINTS

THE CONTRACTOR SHALL PRESERVE ALL GOVERNMENT CORNERS, PROPERTY CORNERS, BENCHMARKS, SURVEY CONTROL POINTS AND OTHER SURVEY POINTS WITHIN THE PROJECT AREA. WHERE CORNERS, BENCHMARKS, OR SURVEY POINTS ARE ENCOUNTERED WHICH WILL BE DISTURBED BY THE CONTRACTOR'S ACTIVITIES; A LICENSED SURVEYOR SHALL WITNESS THE POINT BEFORE DISTURBANCE AND SHALL RE-SET THE POINT FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PAY THE SURVEYOR TO WITNESS AND TO RE-SET THE POINTS.

EXISTING CONDITIONS

THE UTILITIES AND TOPOGRAPHIC FEATURES SHOWN ARE BASED UPON VISIBLE EVIDENCE, FIELD LOCATED SURFACE STRUCTURES AND VARIOUS UTILITY RECORDS. PHYSICAL UNDERGROUND IMPROVEMENTS ARE APPROXIMATE IN SOME AREAS AND WE DO NOT WARRANT THE LOCATION OF UNSEEN TOPOGRAPHICAL FEATURES. SINCE COMPLETELY ACCURATE RECORDS OF ALL UTILITIES ARE DIFFICULT TO OBTAIN, WE DO NOT WARRANT THE LOCATION OF THE UNDERGROUND PORTION OF THE UTILITIES AS PLOTTED FROM UTILITY RECORDS. MISS DIG SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION.

PROTECTION OF TREES, SHRUBS, AND LANDSCAPING

ALL TREES, SHRUBS, AND LANDSCAPING WITHIN THE CONSTRUCTION AREA WHICH ARE NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED TREES, SHRUBS, AND LANDSCAPING SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION SIGNING AND BARRICADING

THE CONTRACTOR SHALL PROTECT HAZARDOUS AREAS WITH BARRICADES. BARRICADES LEFT IN PLACE AFTER SUNSET SHALL BE LIGHTED.

THE CONTRACTOR SHALL PROVIDE SUITABLE SANDBAGS OR OTHER SUITABLE MEASURES FOR ANCHORING OF TEMPORARY SIGNS AND BARRICADES, TO PREVENT THEIR TIPPING OR DISPLACEMENT BY WIND.

THE CONTRACTOR SHALL PROVIDE SIGNING, BARRICADES, FLAGGERS, CONES, AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION, THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLANS AND SPECIFICATIONS.

TURF ESTABLISHMENT

ALL DISTURBED AREAS WHICH ARE NOT TO BE SURFACED WITH PAVEMENT, AGGREGATE OR OTHER APPROVED SURFACES SHALL BE ESTABLISHED WITH TURF.

TURF AREAS SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE.

DISTURBED AREAS SHALL BE SURFACED WITH FOUR INCHES OF SCREENED TOPSOIL.

THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH TURF WHICH IS FREE OF BARE SPOTS AND FREE OF WEEDS. THE GROUND SURFACE IN TURF AREAS SHALL BE SMOOTH AND PROVIDE A NATURAL TRANSITION TO ADJACENT, UNDISTURBED AREAS.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE WATERING, WEEDING, RESEEDING, AND REWORKING AS NECESSARY TO ESTABLISH TURF AREAS TO THE REQUIRED STANDARD.

ADA COMPLIANCE

ALL PROPOSED CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AND APPLICABLE GUIDELINES OR STANDARDS. WHERE EXISTING CONDITIONS AND/OR THE REQUIREMENTS OF THE PLANS WILL RESULT IN FINISHED CONDITIONS THAT DO NOT MEET THE ADA REQUIREMENTS, GUIDELINES, OR STANDARDS; THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REMOVE AND REPLACE WORK DETERMINED TO BE NOT IN ACCORDANCE WITH APPLICABLE REQUIREMENTS, GUIDELINES, OR STANDARDS.

EARTHWORK

THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF THE EARTHWORK QUANTITIES, AND BASE HIS BID ON HIS DETERMINATION OF THE QUANTITIES OF WORK REQUIRED.

IF ADDITIONAL FILL MATERIAL MUST BE PROVIDED TO ATTAIN THE FINISH GRADES SHOWN ON THE PLANS, THE CONTRACTOR SHALL PROVIDE THE REQUIRED FILL MATERIAL.

EXCESS SOILS RESULTING FROM EXCAVATION AND EARTHWORK SHALL BECOME THE CONTRACTOR'S PROPERTY AND DISPOSED OF PROPERLY, UNLESS AN AREA(S) HAS BEEN DESIGNATED FOR STOCKPILING OR 'BLENDING IN' THE EXCESS MATERIAL WITHIN THE PROJECT LIMITS.

BACKFILL AND EMBANKMENT

BACKFILL OF AN EXCAVATION UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE, SHALL BE SAND, MEETING THE REQUIREMENTS OF GRANULAR MATERIAL CLASS III AS DESCRIBED IN THE 2012 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE SAND BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

BACKFILL OF AN EXCAVATION WHICH IS NOT UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE MAY BE SUITABLE EXCAVATED MATERIAL OR OTHER SOIL, WHICH IS FREE OF ORGANIC MATTER, STONES AND ROCKS, ROOTS, BROKEN CONCRETE, FROZEN MATERIAL, OR DEBRIS. THE BACKFILL SHALL BE COMPACTED TO AT LEAST 90% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL INDICATE THE SOURCE OF SAND USED FOR BACKFILL TO THE ENGINEER, AND PROVIDE THE ENGINEER WITH THE RESULTS OF A GRADATION TEST PERFORMED ON A SAMPLE OF THE SAND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN ADVANCE OF USING SAND FROM OTHER SOURCES.

EMBANKMENT USED TO BUILD THE SUBGRADE TO REQUIRED ELEVATION SHALL BE SUITABLE SOIL EXCAVATED FROM THE PROJECT SITE, OR FURNISHED BY THE CONTRACTOR FROM OTHER SOURCES. SUITABLE SOIL IS FREE FROM ORGANIC MATTER, ROCKS AND STONES, FROZEN MATERIAL, BROKEN CONCRETE, AND DEBRIS.

EMBANKMENT CONSTRUCTED OF GRANULAR SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

EMBANKMENT CONSTRUCTED OF COHESIVE SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

DENSITY TESTING

THE MAXIMUM UNIT WEIGHT OF SAND AND OTHER GRANULAR SOILS WILL BE DETERMINED BY THE ONE POINT CONE TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY CONTROL HANDBOOK, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

THE MAXIMUM UNIT WEIGHT OF COHESIVE SOILS WILL BE DETERMINED BY THE ONE POINT PROCTOR TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY CONTROL HANDBOOK, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

SIDEWALK CONSTRUCTION

SIDEWALKS SHALL BE CONSTRUCTED TO PROVIDE POSITIVE DRAINAGE OF THE SIDEWALK AND ADJACENT SURFACES.

SIDEWALK CROSS SLOPES SHALL NOT EXCEED 2%.

IN TURF AREAS, THE SURFACE OF THE SIDEWALK SHALL BE ABOUT 1/4 INCH HIGHER THAN THE ADJACENT GROUND SURFACES, EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE.

SIDEWALK SHALL BE CONSTRUCTED ON A SAND BASE, COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN SIDEWALK FORMS HAVE BEEN SET AND THE SAND BASE PREPARED. CONCRETE SHALL NOT BE PLACED UNTIL THE ENGINEER HAS OBSERVED THE FORMS. CONCRETE DELIVERY SHALL BE SCHEDULED TO ALLOW SUFFICIENT TIME FOR ADJUSTMENT OF THE FORMS, IN THE EVENT THAT ADJUSTMENT IS NECESSARY.

THE CONTRACTOR SHALL PROTECT FRESH CONCRETE FROM DAMAGE BY THE WEATHER, TRAFFIC, OR VANDALISM. DAMAGED CONCRETE SHALL BE REPLACED BY THE CONTRACTOR'S EXPENSE.

ESTIMATED QUANTITIES (FOR INFORMATION ONLY)

BASE BID

MAINTAINING TRAFFIC	1	LS
MOBILIZATION	1	LS
STONE DUST	135	TON
CLEARING	1.45	ACRE
EARTHWORK	1	LS
SOIL EROSION AND SEDIMENTATION CONTROL	1	LS
CONC SPILL CURB	65	FT
4 INCH CONCRETE SIDEWALK	1978	SFT
AGGREGATE SURFACE, 6 INCH	585	SYD
4 INCH PAVEMENT MARKING, REGULAR DRY, BLUE	193	FT
TURF ESTABLISHMENT	1	LS
PAVT, REINFORCED, CONCRETE, 6 INCH	74	SYD
CONDUIT, 4 INCH	20	FT
6" X 6" X 12' TREATED TIMBER FOR POSTS	29	EA
FENCE, CHAIN LINK, 72 INCH	1878	FT
FENCE GATE, 10 FOOT, FOR 72 INCH CHAINLINK FENCE	2	EA
FENCE GATE, 5 FOOT, FOR 72 INCH CHAINLINK FENCE	4	EA
FENCE GATE, 6 FOOT, FOR 72 INCH CHAINLINK FENCE	4	EA
BARRIER FREE PARKING SIGN IN CONCRETE BOLLARD	3	EA
PAVT MRKG, REGULAR DRY, HANDICAP SYM, BLUE	3	EA
REMOTE KEY FOB SYSTEM, COMPLETE	1	EA
SITE ELECTRICAL	1	LS
DOG WASTE BAG DISPENSER WITH SIGNS AND BAGS	2	EA
TRASH RECEPTACLE	6	EA
SIGN ALLOWANCE	1	LS
UTILITY ALLOWANCE	1	LS

ALTERNATE #1 – PAVILION

24' X 14' PAVILION, COMPLETE	1	LS
LED LIGHTS, COMPLETE	3	EA

ALTERNATE #2 – 1" WATER SERVICE, FOUNTAINS, CONCRETE PADS

4 INCH CONCRETE SIDEWALK	48	SFT
1 INCH WATER SERVICE, TYPE 'K' COPPER	72	FT
24 INCH DRY WELL, ADA COVER, AND STONE	2	EA
WATER FOUNTAIN	2	EA
1 INCH WATER METER AND BACKFLOW PREVENTOR	1	LS

ALTERNATE #3 – BENCHES

BENCH	5	EA
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ALTERNATE #4 – TREE PROTECTION, TREE PROTECTION BENCHES

TREE PROTECTION, BENCHES	1	LS
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ALTERNATE #5 – SMALL AND LARGE DOG AREA EXPANSION

CLEARING	0.52	ACRE
EARTHWORK	1	LS
TURF ESTABLISHMENT	1	LS
FENCE, CHAIN LINK, 72 INCH	133	FT

ALTERNATE #6 – DOG RUN

STONE DUST	235	TON
CLEARING	0.17	ACRE
EARTHWORK	1	LS
CONCRETE SPILL CURB	32	FT
4 INCH CONCRETE SIDEWALK	397	SFT
FENCE, CHAIN LINK, 72 INCH	290	FT
FENCE GATE, 5 FOOT, FOR 72 INCH CHAINLINK	2	EA
KEY FOB READER, COMPLETE	2	EA

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NOTE SHEET

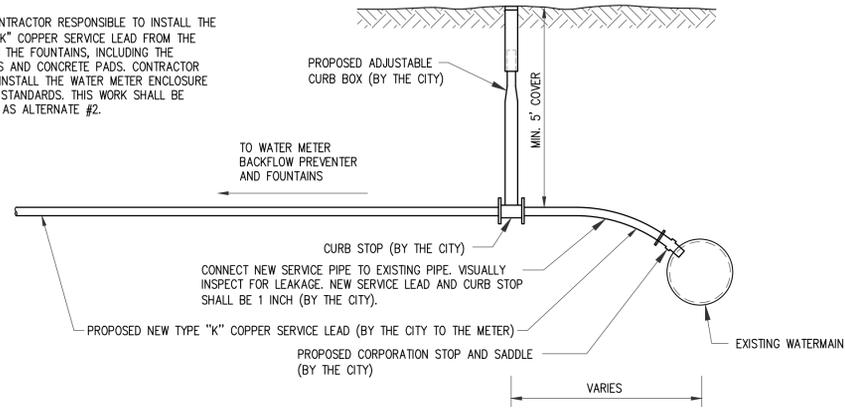


REVISIONS	

REV:

SHT# 3 OF 10
JOB No: 14M0049

NOTE: CONTRACTOR RESPONSIBLE TO INSTALL THE 1" TYPE "K" COPPER SERVICE LEAD FROM THE METER TO THE FOUNTAINS, INCLUDING THE FOUNTAINS AND CONCRETE PADS. CONTRACTOR ALSO TO INSTALL THE WATER METER ENCLOSURE PER CITY STANDARDS. THIS WORK SHALL BE INCLUDED AS ALTERNATE #2.



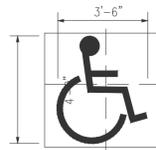
WATER SERVICE LEAD DETAIL (ALTERNATE #2)
NOT TO SCALE



BARRIER FREE RESERVED PARKING ONLY MDOT R7-8 NO SCALE
BARRIER FREE VAN ACCESSIBLE SIGN MDOT R7-8 NO SCALE

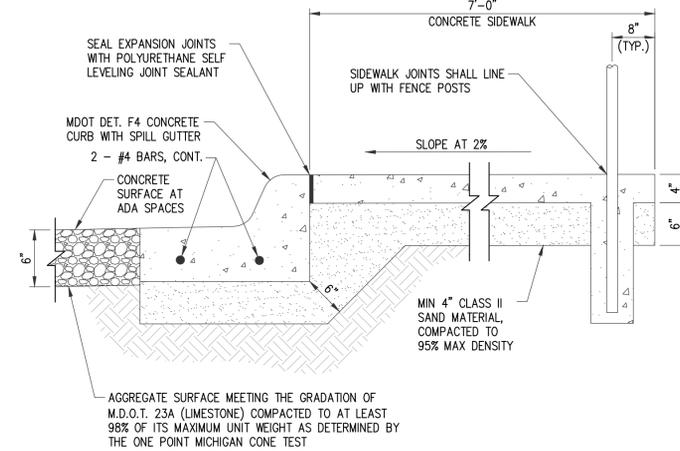
NOTE:
1. ALL SIGNS SHALL BE PROVIDED AND INSTALLED ACCORDING TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

BARRIER FREE PARKING SIGNAGE
NOT TO SCALE

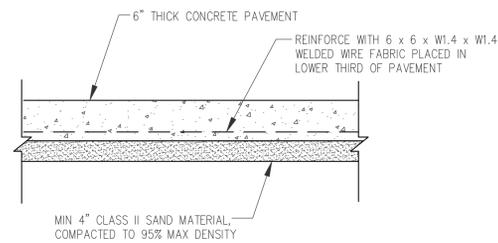


NOTES:
1. SYMBOL SHALL BE APPLIED AT A WIDTH OF 4" AND PAINTED WHITE ON BLUE BACKGROUND.
2. CENTERLINE OF SYMBOL SHALL BE PARALLEL TO PARKING STALL STRIPE AND IN CENTER OF STALL.

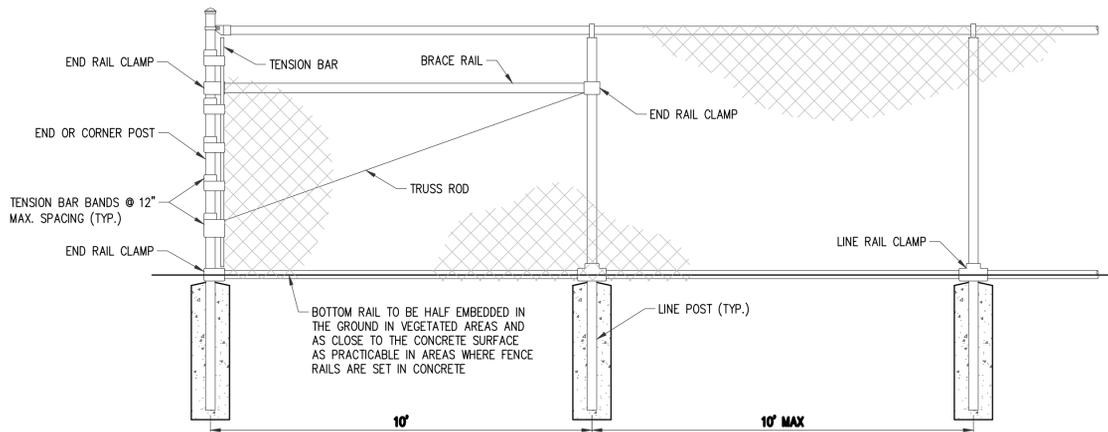
BARRIER FREE PARKING PAINTING
NOT TO SCALE



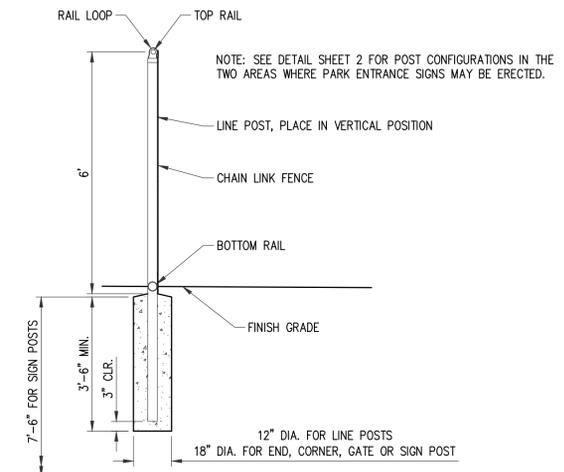
MDOT F4 "SPILL" CURB AND GUTTER/CONCRETE WALK DETAIL
NOT TO SCALE



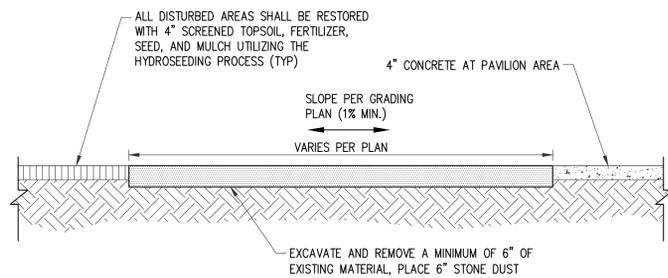
BARRIER FREE CONCRETE PAD DETAIL
NOT TO SCALE



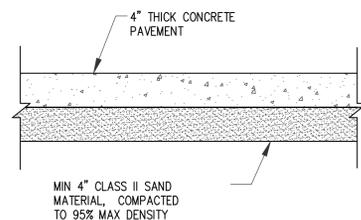
6' HIGH CHAIN LINK FENCE DETAIL
NOT TO SCALE



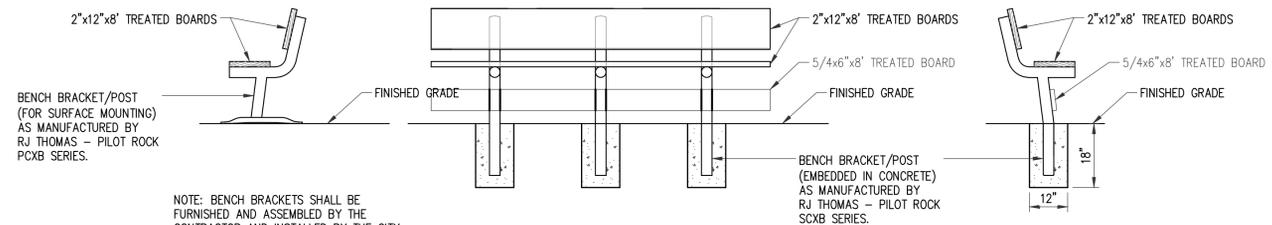
6' HIGH CHAIN LINK FENCE SECTION
NOT TO SCALE



STONE DUST SURFACING DETAIL
NOT TO SCALE



4' CONCRETE SIDEWALK DETAIL
NOT TO SCALE



TREE PROTECTION/BENCH DETAILS (ALTERNATES #3 AND #4)
NOT TO SCALE

PLAN DATE: JULY 2014
PROJECT MGR: S.M.C.
REVIEWER: J.B.M.
SCALE: NO SCALE

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CITY OF MT. PLEASANT
OFF-LEASH DOG PARK

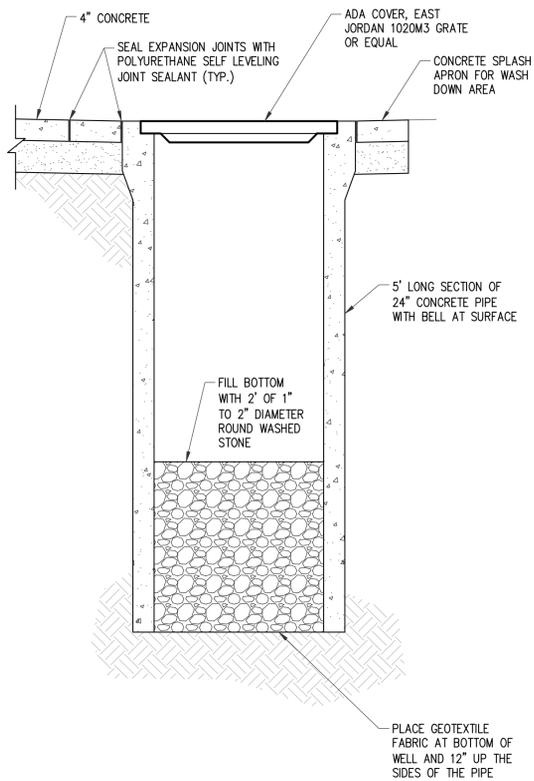
DETAIL SHEET 1



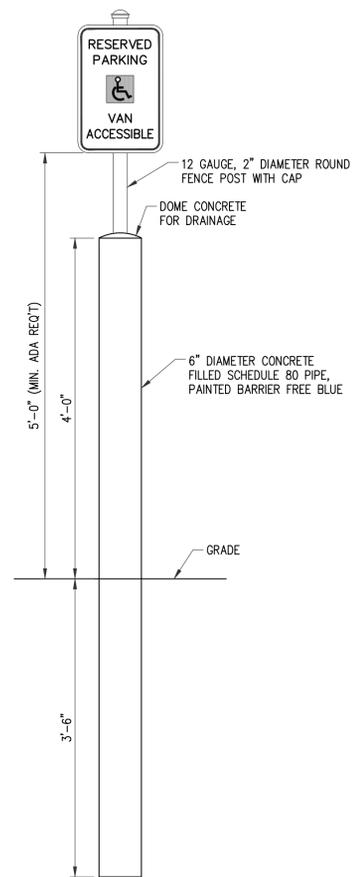
Know what's below.
Call before you dig.

REVISIONS	

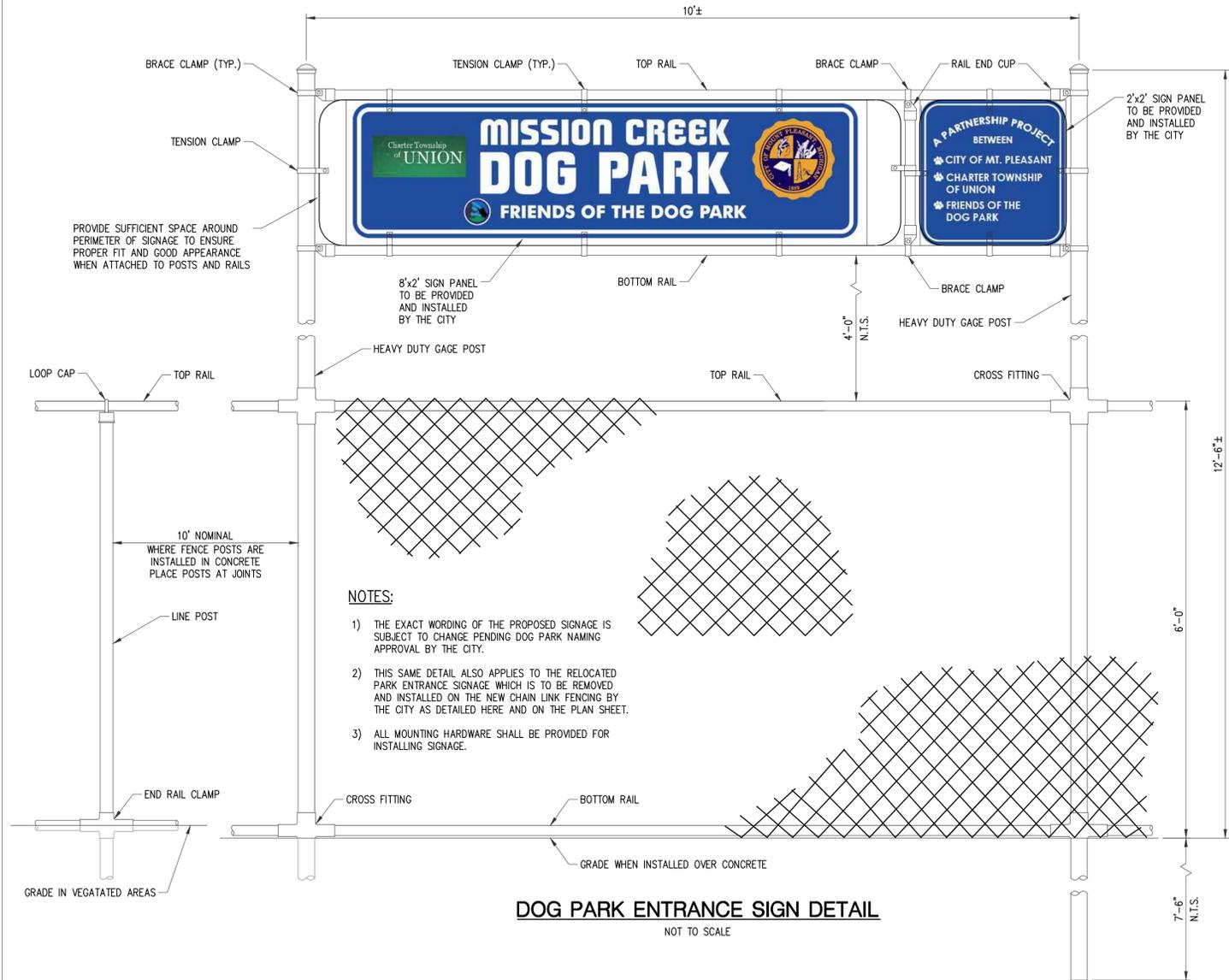
REV:
SHT# 4 OF 10
JOB No: 14M0049



DRY WELL DETAIL (ALTERNATE #2)
NOT TO SCALE



BARRIER FREE PARKING SIGN DETAIL
NOT TO SCALE

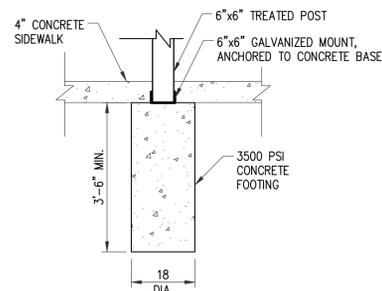


DOG PARK ENTRANCE SIGN DETAIL
NOT TO SCALE

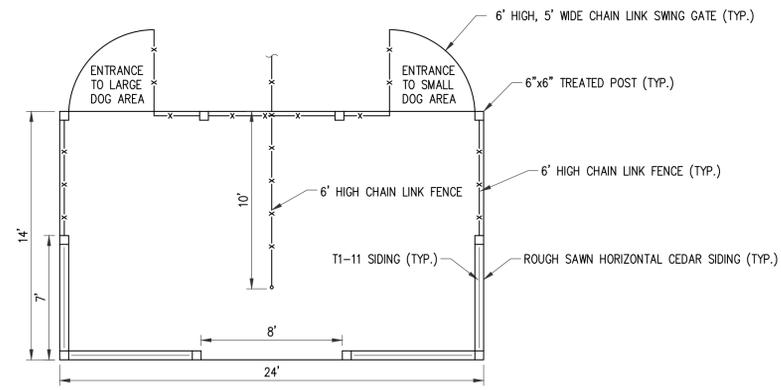


LIKENESS OF PROPOSED PAVILION
NOT TO SCALE

NOTE: THE HORIZONTAL CEDAR SIDING AND T1-11 SIDING SHALL BE STAINED BY THE CITY PRIOR TO INSTALLATION BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE TIME IN THE SCHEDULE FOR COMPLETION OF THE STAINING BY THE CITY. THE CITY WILL PROVIDE THE STAIN FOR THEIR OWN USE.



FOUNDATION POST DETAIL
NOT TO SCALE



PAVILION DETAIL (ALTERNATE #1)
NOT TO SCALE



REVISIONS	

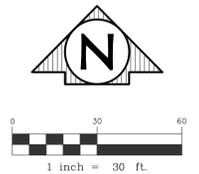
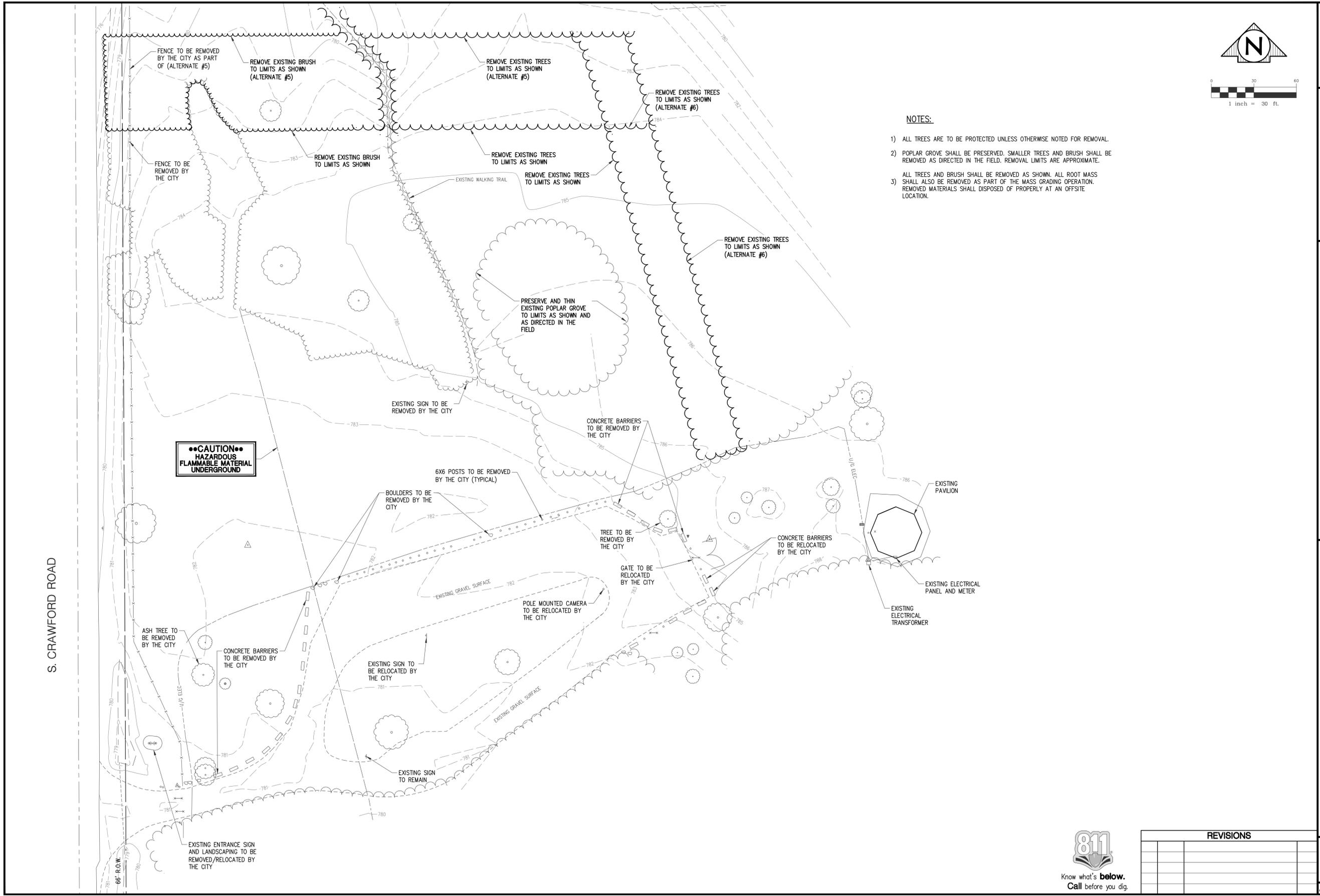
PLAN DATE: JULY 2014
PROJECT MGR: S.M.C.
REVIEWER: J.B.M.
SCALE: NO SCALE

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PREPARED FOR
**CITY OF MT. PLEASANT
OFF-LEASH DOG PARK**

DETAIL SHEET 2

REV:
SHT# 5 OF 10
JOB No: 14M0049



NOTES:

- 1) ALL TREES ARE TO BE PROTECTED UNLESS OTHERWISE NOTED FOR REMOVAL.
- 2) POPLAR GROVE SHALL BE PRESERVED. SMALLER TREES AND BRUSH SHALL BE REMOVED AS DIRECTED IN THE FIELD. REMOVAL LIMITS ARE APPROXIMATE.
- 3) ALL TREES AND BRUSH SHALL BE REMOVED AS SHOWN. ALL ROOT MASS SHALL ALSO BE REMOVED AS PART OF THE MASS GRADING OPERATION. REMOVED MATERIALS SHALL BE DISPOSED OF PROPERLY AT AN OFFSITE LOCATION.

**••CAUTION••
HAZARDOUS
FLAMMABLE MATERIAL
UNDERGROUND**

PLAN DATE: JULY 2014
 PROJECT MGR: S.M.C.
 REVIEWER: J.B.M.
 SCALE: 1" = 30'

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PREPARED FOR
**CITY OF MT. PLEASANT
 OFF-LEASH DOG PARK**

DEMOLITION SHEET



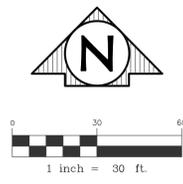
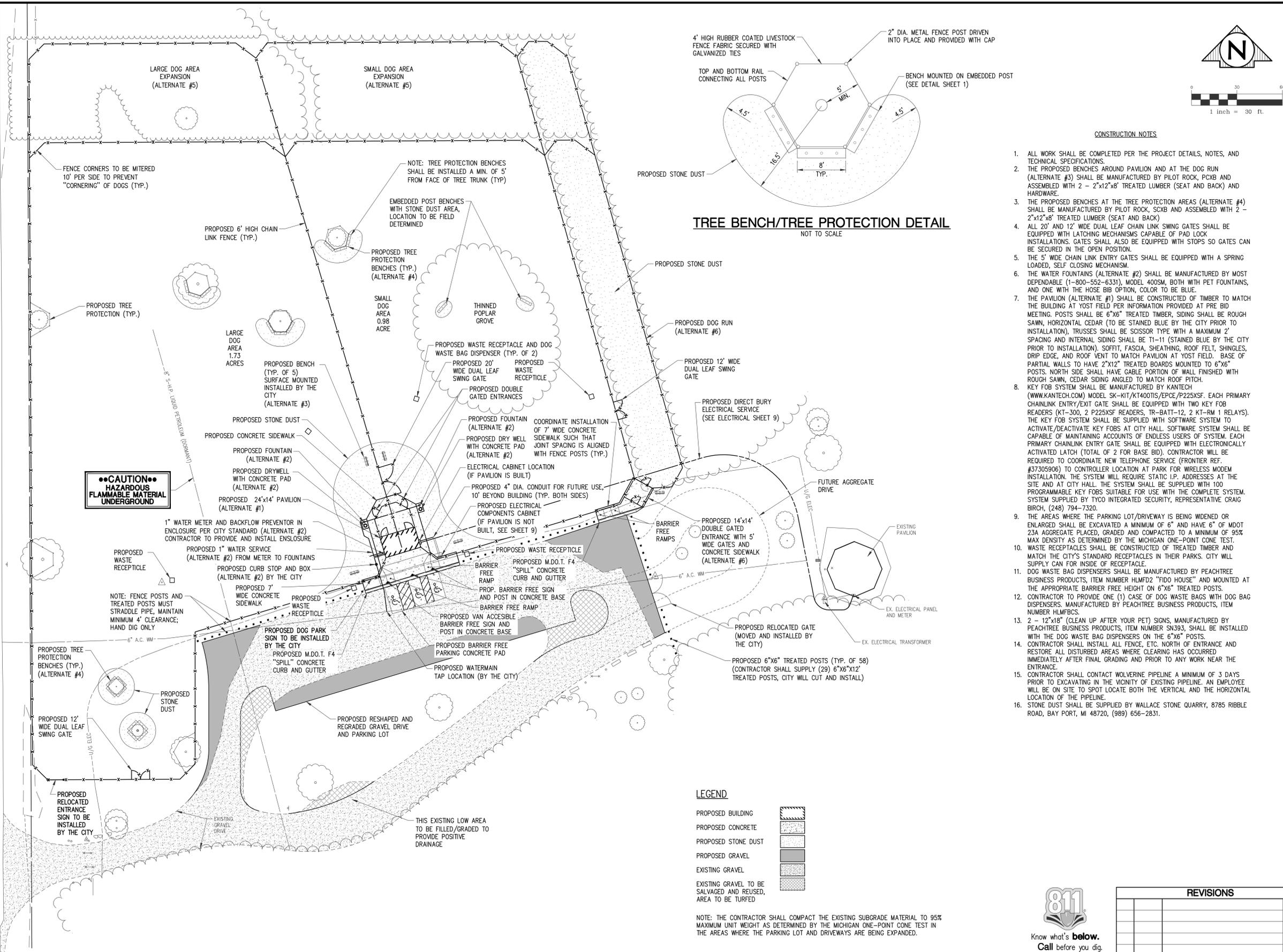
REVISIONS	

REV:

SHT# **6** OF 10
 JOB No: 14M0049

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S. CRAWFORD ROAD



TREE BENCH/TREE PROTECTION DETAIL
NOT TO SCALE

CONSTRUCTION NOTES

- ALL WORK SHALL BE COMPLETED PER THE PROJECT DETAILS, NOTES, AND TECHNICAL SPECIFICATIONS.
- THE PROPOSED BENCHES AROUND PAVILION AND AT THE DOG RUN (ALTERNATE #3) SHALL BE MANUFACTURED BY PILOT ROCK, PCXB AND ASSEMBLED WITH 2 - 2"x12"x8" TREATED LUMBER (SEAT AND BACK) AND HARDWARE.
- THE PROPOSED BENCHES AT THE TREE PROTECTION AREAS (ALTERNATE #4) SHALL BE MANUFACTURED BY PILOT ROCK, SCXB AND ASSEMBLED WITH 2 - 2"x12"x8" TREATED LUMBER (SEAT AND BACK).
- ALL 20" AND 12" WIDE DUAL LEAF CHAIN LINK SWING GATES SHALL BE EQUIPPED WITH LATCHING MECHANISMS CAPABLE OF PAD LOCK INSTALLATIONS. GATES SHALL ALSO BE EQUIPPED WITH STOPS SO GATES CAN BE SECURED IN THE OPEN POSITION.
- THE 5" WIDE CHAIN LINK ENTRY GATES SHALL BE EQUIPPED WITH A SPRING LOADED, SELF CLOSING MECHANISM.
- THE WATER FOUNTAINS (ALTERNATE #2) SHALL BE MANUFACTURED BY MOST DEPENDABLE (1-800-552-6331), MODEL 400SM, BOTH WITH PET FOUNTAINS, AND ONE WITH THE HOSE BIB OPTION, COLOR TO BE BLUE.
- THE PAVILION (ALTERNATE #1) SHALL BE CONSTRUCTED OF TIMBER TO MATCH THE BUILDING AT YOST FIELD PER INFORMATION PROVIDED AT PRE BID MEETING. POSTS SHALL BE 6"x6" TREATED TIMBER, SIDING SHALL BE ROUGH SAWN, HORIZONTAL CEDAR (TO BE STAINED BLUE BY THE CITY PRIOR TO INSTALLATION), TRUSSES SHALL BE SCISSOR TYPE WITH A MAXIMUM 2" SPACING AND INTERNAL SIDING SHALL BE T1-11 (STAINED BLUE BY THE CITY PRIOR TO INSTALLATION). SOFFIT, FASCIA, SHEATHING, ROOF FELT, SHINGLES, DRIP EDGE, AND ROOF VENT TO MATCH PAVILION AT YOST FIELD. BASE OF PARTIAL WALLS TO HAVE 2"x12" TREATED BOARDS MOUNTED TO 6"x6" POSTS. NORTH SIDE SHALL HAVE GABLE PORTION OF WALL FINISHED WITH ROUGH SAWN, CEDAR SIDING ANGLED TO MATCH ROOF PITCH.
- KEY FOB SYSTEM SHALL BE MANUFACTURED BY KANTECH (WWW.KANTECH.COM) MODEL SK-KIT/KT400TIS/EPCE/P225XSF. EACH PRIMARY CHAINLINK ENTRY/EXIT GATE SHALL BE EQUIPPED WITH TWO KEY FOB READERS (KT-300, 2 P225XSF READERS, TR-BATT-12, 2 KT-RM 1 RELAYS). THE KEY FOB SYSTEM SHALL BE SUPPLIED WITH SOFTWARE SYSTEM TO ACTIVATE/DEACTIVATE KEY FOB'S AT CITY HALL. SOFTWARE SYSTEM SHALL BE CAPABLE OF MAINTAINING ACCOUNTS OF ENDLESS USERS OF SYSTEM. EACH PRIMARY CHAINLINK ENTRY GATE SHALL BE EQUIPPED WITH ELECTRONICALLY ACTIVATED LATCH (TOTAL OF 2 FOR BASE BID). CONTRACTOR WILL BE REQUIRED TO COORDINATE NEW TELEPHONE SERVICE (FRONTIER REF. #37305906) TO CONTROLLER LOCATION AT PARK FOR WIRELESS MODEM INSTALLATION. THE SYSTEM WILL REQUIRE STATIC I.P. ADDRESSES AT THE SITE AND AT CITY HALL. THE SYSTEM SHALL BE SUPPLIED WITH 100 PROGRAMMABLE KEY FOB'S SUITABLE FOR USE WITH THE COMPLETE SYSTEM. SYSTEM SUPPLIED BY TYCO INTEGRATED SECURITY, REPRESENTATIVE CRAIG BIRCH, (248) 794-7320.
- THE AREAS WHERE THE PARKING LOT/DRIVEWAY IS BEING WIDENED OR ENLARGED SHALL BE EXCAVATED A MINIMUM OF 6" AND HAVE 6" OF MDT 23A AGGREGATE PLACED, GRADED AND COMPACTED TO A MINIMUM OF 95% MAX DENSITY AS DETERMINED BY THE MICHIGAN ONE-POINT CONE TEST.
- WASTE RECEPTACLES SHALL BE CONSTRUCTED OF TREATED TIMBER AND MATCH THE CITY'S STANDARD RECEPTACLES IN THEIR PARKS. CITY WILL SUPPLY CAN FOR INSIDE OF RECEPTACLE.
- DOG WASTE BAG DISPENSERS SHALL BE MANUFACTURED BY PEACHTREE BUSINESS PRODUCTS, ITEM NUMBER HLMFD2 "FIDO HOUSE" AND MOUNTED AT THE APPROPRIATE BARRIER FREE HEIGHT ON 6"x6" TREATED POSTS.
- CONTRACTOR TO PROVIDE ONE (1) CASE OF DOG WASTE BAGS WITH DOG BAG DISPENSERS. MANUFACTURED BY PEACHTREE BUSINESS PRODUCTS, ITEM NUMBER HLMFBCS.
- 2 - 12"x18" (CLEAN UP AFTER YOUR PET) SIGNS, MANUFACTURED BY PEACHTREE BUSINESS PRODUCTS, ITEM NUMBER SN393, SHALL BE INSTALLED WITH THE DOG WASTE BAG DISPENSERS ON THE 6"x6" POSTS.
- CONTRACTOR SHALL INSTALL ALL FENCE, ETC. NORTH OF ENTRANCE AND RESTORE ALL DISTURBED AREAS WHERE CLEARING HAS OCCURRED IMMEDIATELY AFTER FINAL GRADING AND PRIOR TO ANY WORK NEAR THE ENTRANCE.
- CONTRACTOR SHALL CONTACT WOLVERINE PIPELINE A MINIMUM OF 3 DAYS PRIOR TO EXCAVATING IN THE VICINITY OF EXISTING PIPELINE. AN EMPLOYEE WILL BE ON SITE TO SPOT LOCATE BOTH THE VERTICAL AND THE HORIZONTAL LOCATION OF THE PIPELINE.
- STONE DUST SHALL BE SUPPLIED BY WALLACE STONE QUARRY, 8785 RIBBLE ROAD, BAY PORT, MI 48720, (989) 656-2831.

LEGEND

- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED STONE DUST
- PROPOSED GRAVEL
- EXISTING GRAVEL
- EXISTING GRAVEL TO BE SALVAGED AND REUSED, AREA TO BE TURFED

NOTE: THE CONTRACTOR SHALL COMPACT THE EXISTING SUBGRADE MATERIAL TO 95% MAXIMUM UNIT WEIGHT AS DETERMINED BY THE MICHIGAN ONE-POINT CONE TEST IN THE AREAS WHERE THE PARKING LOT AND DRIVEWAYS ARE BEING EXPANDED.



REVISIONS

NO.	DATE	DESCRIPTION

PLAN DATE: JULY 2014
PROJECT MGR: S.M.C.
REVIEWER: J.B.M.
SCALE: 1" = 30'

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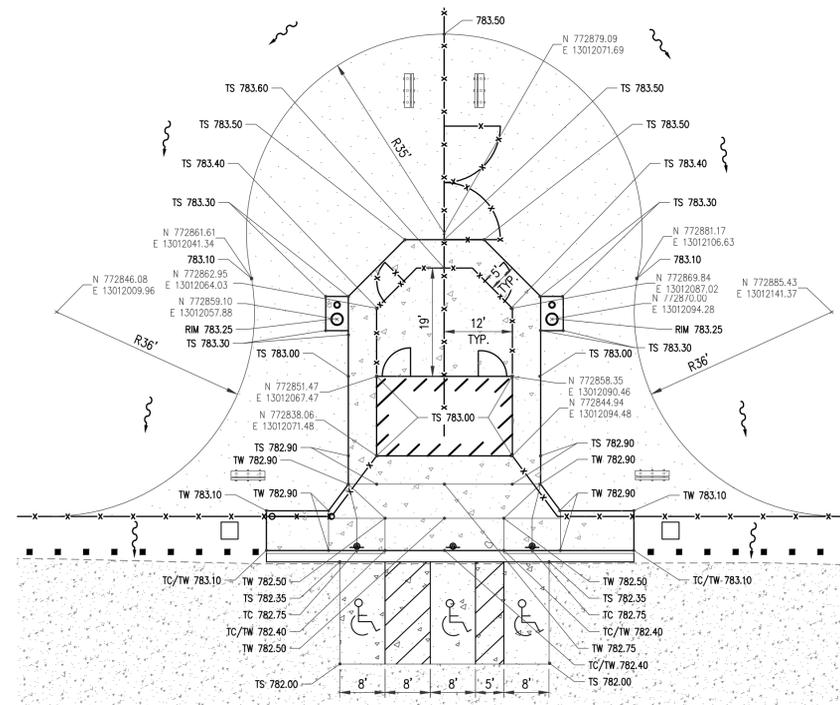
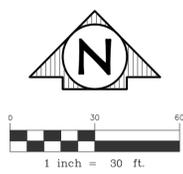
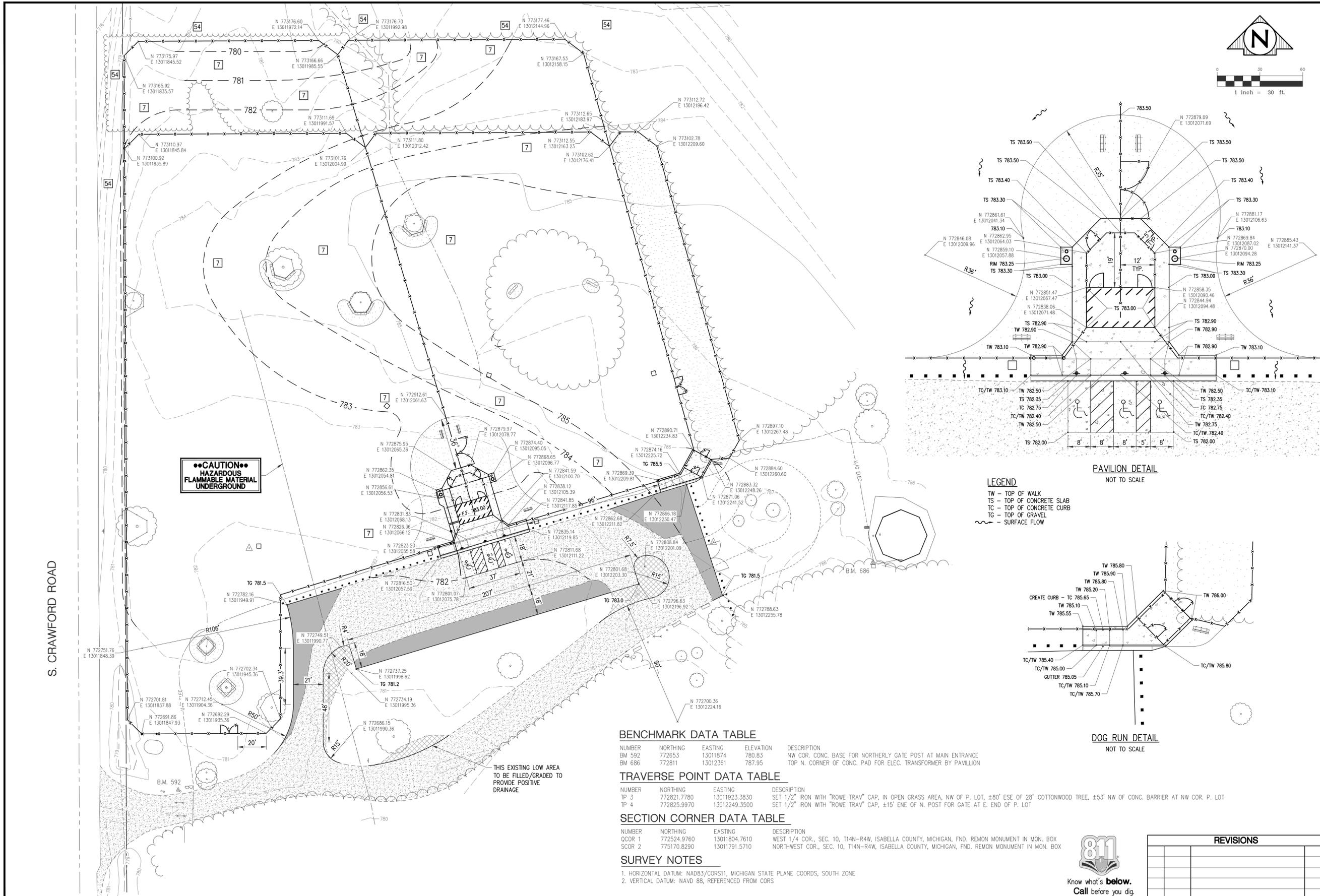


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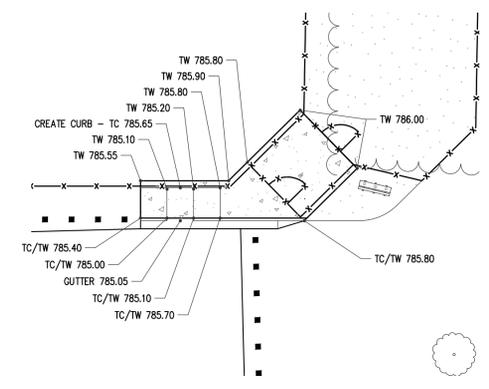
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PLAN SHEET

REV: _____
SHT# 7 OF 10
JOB No: 14M0049



LEGEND
 TW - TOP OF WALK
 TS - TOP OF CONCRETE SLAB
 TC - TOP OF CONCRETE CURB
 TG - TOP OF GRAVEL
 ~ - SURFACE FLOW



CAUTION
 HAZARDOUS
 FLAMMABLE MATERIAL
 UNDERGROUND

THIS EXISTING LOW AREA
 TO BE FILLED/GRADED TO
 PROVIDE POSITIVE
 DRAINAGE

BENCHMARK DATA TABLE

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM 592	772653	13011874	780.83	NW COR. CONC. BASE FOR NORTHERLY GATE POST AT MAIN ENTRANCE
BM 686	772811	13012361	787.95	TOP N. CORNER OF CONC. PAD FOR ELEC. TRANSFORMER BY PAVILION

TRAVERSE POINT DATA TABLE

NUMBER	NORTHING	EASTING	DESCRIPTION
TP 3	772821.7780	13011923.3830	SET 1/2" IRON WITH "ROWE TRAV" CAP, IN OPEN GRASS AREA, NW OF P. LOT, ±80' ESE OF 28" COTTONWOOD TREE, ±53' NW OF CONC. BARRIER AT NW COR. P. LOT
TP 4	772825.9970	13012249.3500	SET 1/2" IRON WITH "ROWE TRAV" CAP, ±15' ENE OF N. POST FOR GATE AT E. END OF P. LOT

SECTION CORNER DATA TABLE

NUMBER	NORTHING	EASTING	DESCRIPTION
OCOR 1	772524.9760	13011804.7610	WEST 1/4 COR., SEC. 10, T14N-R4W, ISABELLA COUNTY, MICHIGAN, FND. REMON MONUMENT IN MON. BOX
SCOR 2	775170.8290	13011791.5710	NORTHWEST COR., SEC. 10, T14N-R4W, ISABELLA COUNTY, MICHIGAN, FND. REMON MONUMENT IN MON. BOX

SURVEY NOTES

- HORIZONTAL DATUM: NAD83/CORS11, MICHIGAN STATE PLANE COORDS, SOUTH ZONE
- VERTICAL DATUM: NAVD 88, REFERENCED FROM CORS

PLAN DATE: JULY 2014
 PROJECT MGR: S.M.C.
 REVIEWER: J.B.M.
 SCALE: 1" = 30'

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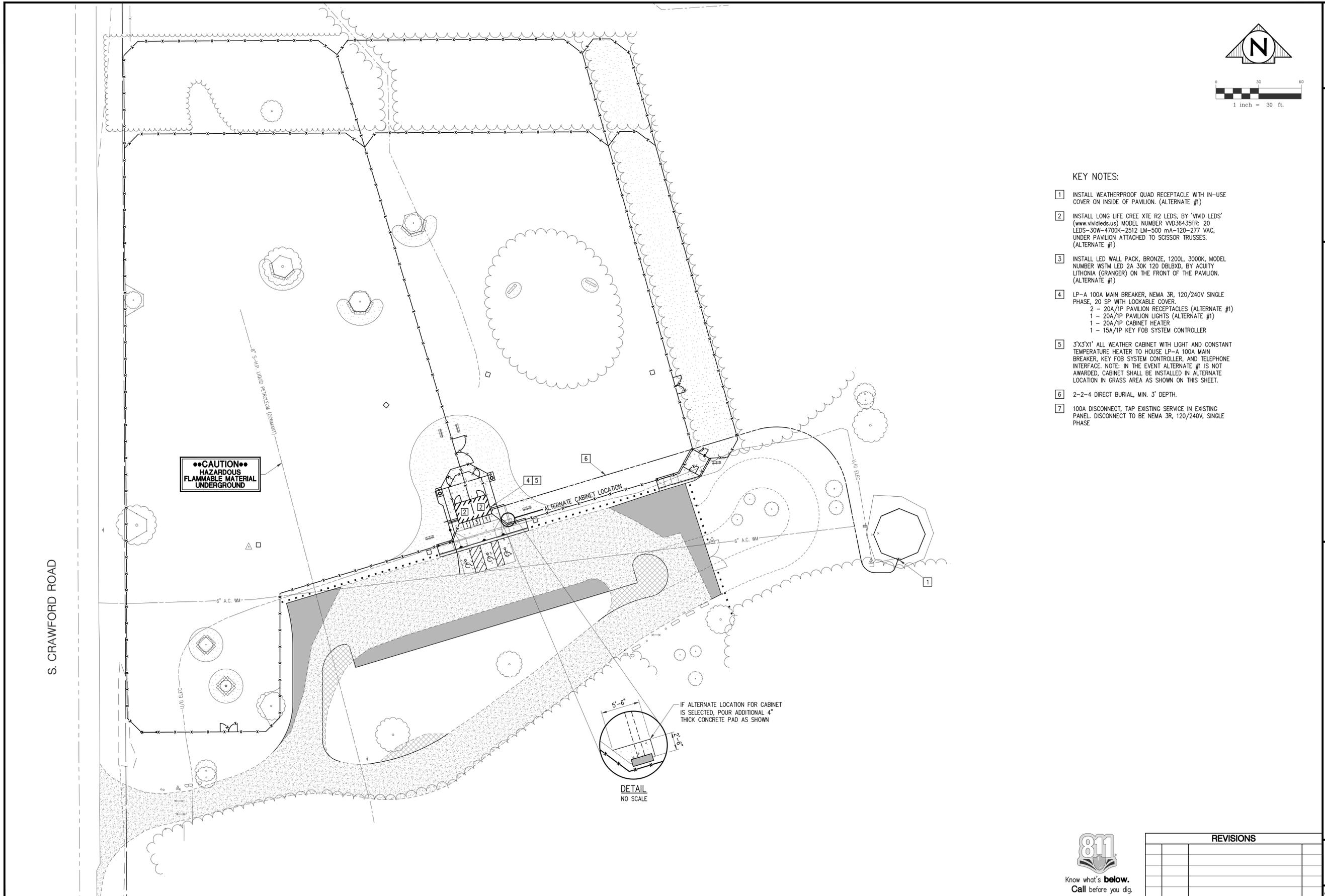
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LAYOUT AND GRADING SHEET



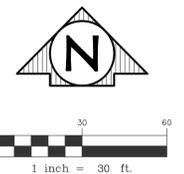
REVISIONS	

REV: _____
 SHT# 8 OF 10
 JOB No: 14M0049

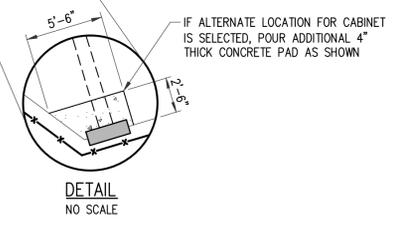


KEY NOTES:

- 1 INSTALL WEATHERPROOF QUAD RECEPTACLE WITH IN-USE COVER ON INSIDE OF PAVILION. (ALTERNATE #1)
- 2 INSTALL LONG LIFE CREE XTE R2 LEDS, BY 'VIVID LEDS' (www.vividleds.us) MODEL NUMBER VVD36435FR: 20 LEDS-30W-4700K-2512 LM-500 mA-120-277 VAC, UNDER PAVILION ATTACHED TO SCISSOR TRUSSES. (ALTERNATE #1)
- 3 INSTALL LED WALL PACK, BRONZE, 1200L, 3000K, MODEL NUMBER WSTM LED 2A 30K 120 DBLBD, BY ACUITY LITHONIA (GRANGER) ON THE FRONT OF THE PAVILION. (ALTERNATE #1)
- 4 LP-A 100A MAIN BREAKER, NEMA 3R, 120/240V SINGLE PHASE, 20 SP WITH LOCKABLE COVER.
 2 - 20A/1P PAVILION RECEPTACLES (ALTERNATE #1)
 1 - 20A/1P PAVILION LIGHTS (ALTERNATE #1)
 1 - 20A/1P CABINET HEATER
 1 - 15A/1P KEY FOB SYSTEM CONTROLLER
- 5 3'X3'X1' ALL WEATHER CABINET WITH LIGHT AND CONSTANT TEMPERATURE HEATER TO HOUSE LP-A 100A MAIN BREAKER, KEY FOB SYSTEM CONTROLLER, AND TELEPHONE INTERFACE. NOTE: IN THE EVENT ALTERNATE #1 IS NOT AWARDED, CABINET SHALL BE INSTALLED IN ALTERNATE LOCATION IN GRASS AREA AS SHOWN ON THIS SHEET.
- 6 2-2-4 DIRECT BURIAL, MIN. 3' DEPTH.
- 7 100A DISCONNECT, TAP EXISTING SERVICE IN EXISTING PANEL. DISCONNECT TO BE NEMA 3R, 120/240V, SINGLE PHASE



**••CAUTION••
HAZARDOUS
FLAMMABLE MATERIAL
UNDERGROUND**



PLAN DATE: JULY 2014
 PROJECT MGR: S.M.C.
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 OFF-LEASH DOG PARK**

SITE ELECTRICAL SHEET



REVISIONS	

REV: _____
 SHT# 9 OF 10
 JOB No: 14M0049

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MICHIGAN UNIFIED KEYING SYSTEM

SOIL EROSION SEDIMENTATION CONTROL MEASURES

* INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

KEY	DETAIL	CHARACTERISTICS	PROBLEM AREAS							KEY	DETAIL	CHARACTERISTICS	PROBLEM AREAS						
			A	B	C	D	E	F	G				A	B	C	D	E	F	G
1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A OVERFLOW STORAGE. SHOULD BE TEMPORARILY SEEDED.	*							*	*								
2	SELECTIVE GRADING & SHAPING	WATER CAN BE DIVERTED TO MINIMIZE EROSION. FLATTER SLOPES CAUSE EROSION PROBLEMS.	*							*	*	*							
3	GRUBBING OMITTED	SHADES EDGE OF GRUBBING, PROMOTES NEW SHRUBS, RETAINS EXISTING ROOT MAT SYSTEM, REDUCES WIND AND FALL AT NEW FOREST EDGE. DISCONTINUES EQUIPMENT ENTRANCE.	*							*	*	*							
4	VEGETATIVE STABILIZATION	MAY UTILIZE A VARIETY OF PLANT MATERIAL. STABILIZES SOIL. SOME RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF.	*	*	*					*	*	*							
5	SEEDING	MEANS FOR AND VERY EFFECTIVE. STABILIZES SOIL, HAS MINOR EROSION. PROMOTES RUNOFF TO SITE. REDUCES RUNOFF VOLUME. SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*					*	*	*							
6	SEEDING WITH MULCH AND/OR MATING	PROMOTES ESTABLISHMENT OF VEGETATIVE COVER. EFFECTIVE FOR DRAINAGEWAYS WITH LOW VELOCITY. PROMOTES RUNOFF TO SITE. REDUCES RUNOFF VOLUME. SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*					*	*	*							
7	HYDRO-SEEDING	EFFECTIVE ON LARGE AREAS. MULCH PROTECTS SEEDS TO PROVIDE IMMEDIATE PROTECTION. SALT, DROPS & PROTECTS. SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*					*	*	*							
8	SEEDING	PROMOTES IMMEDIATE PROTECTION. CAN BE USED ON STEEP SLOPES WHERE SEED MAY BE DIFFICULT TO ESTABLISH. EASY TO PLACE. MAY BE REPAIRED IF DAMAGED. SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*					*	*	*							
9	VEGETATIVE BUFFER STRIP	SLOWS RUNOFF VELOCITY. FILTERS SEDIMENT FROM RUNOFF. REDUCES VOLUME OF RUNOFF ON SLOPES.	*	*						*	*	*							
10	MULCHING	USED ALONE TO PROTECT EXPOSED AREAS FOR SHORT PERIODS. PROTECTS FROM IMPACT OF FUTURE RAIN. PRESERVES SOIL, MOISTURE AND PROTECTS GERMINATING SEED FROM TEMPERATURE EXTREMES.	*							*	*								
11	ROUGHENED SURFACE	REDUCES VELOCITY AND INCREASES INFILTRATION RATES. COLLECTS SEDIMENT. SHOULD BE USED WITH MULCH BETTER THAN SMOOTH SURFACES.	*							*	*								
12	COMPACTION	HELPS HOLD SOIL IN PLACE, MAKING EXPOSED AREAS LESS VULNERABLE TO EROSION.	*							*	*								
13	RIPPRA, RUBBLE, CARBONS	USED WHERE VEGETATION IS NOT EASILY ESTABLISHED. EFFECTIVE FOR HIGH VELOCITIES OF HIGH CONCENTRATIONS. PROMOTES RUNOFF TO SITE. DISPERSES ENERGY FROM AT SYSTEM OUTLETS.	*	*	*					*	*								
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, HAS MINOR EROSION. PROMOTES CONSTRUCTION TRAFFIC IN ADVERSE WEATHER. MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS.	*							*	*								
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED. BUT INCREASES RUNOFF VOLUME AND VELOCITY. IRREGULAR SURFACE WILL HELP SLOW VELOCITY.	*							*	*								
16	CURBS & GUTTERS	HELPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACES. COLLECTS AND CONVEYS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGEWAY.								*	*								
17	BENCHES	REDUCES RUNOFF VELOCITY BY REDUCING EFFECTIVE SLOPE LENGTH. COLLECTS SEDIMENT. PROVIDES ACCESS TO SLOPES FOR SEEDING, MULCHING AND MAINTENANCE.	*							*	*								
18	DIVERSION BERM	DIVERTS WATER FROM VULNERABLE AREAS. COLLECTS AND DIVERTS WATER TO PREPARED DRAINAGEWAY. MAY BE PLACED AS PART OF NORMAL CONSTRUCTION OPERATION.	*							*	*	*							
19	DIVERSION DITCH	COLLECTS AND DIVERTS WATER TO REDUCE EROSION POTENTIAL. MAY BE INCORPORATED IN PERMANENT PROJECT DRAINAGE SYSTEMS.	*							*	*	*							
20	BERM & DITCH	DIVERTS WATER TO A PREPARED DRAINAGEWAY. MAY BE USED AT INTERVALS ACROSS SLOPE FACE TO REDUCE EFFECTIVE SLOPE LENGTH.	*							*	*	*							
21	FILTER BERM	CONSTRUCTED OF GRAVEL OR STONE. INTERCEPTS AND DIVERTS RUNOFF TO STABILIZED AREAS OR PREPARED DRAINAGE SYSTEMS. SLOPE DITCH AND COLLECTS SEDIMENT.	*	*						*	*	*							
22	BRUSH FILTER	USES SLASH AND LOGS FROM CLEARING OPERATIONS. CAN BE COVERED AND SEEDED RATHER THAN REMOVED. CLEARANCE NEED FOR BURNING OR REMOVAL OF MATERIAL FROM SITE.	*							*	*	*							
23	BASE CHANNEL	LEAST EROSION FORM OF DRAINAGEWAY. MAY BE USED ONLY WHERE GRADIENT IS VERY LOW AND WITH SOILS OF MINOR EROSION POTENTIAL.				*						*							
24	GRASSED WATERWAY	MUCH MORE STABLE FORM OF DRAINAGEWAY THAN BASE CHANNEL. GRASS TENDS TO SLOW RUNOFF AND FILTER OUT SEDIMENT. USED WHERE BASE CHANNEL WOULD BE CROSSED.				*						*							
25	SLOPE DRAIN (SURFACE PIPE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA. USUALLY PERMANENT. CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES.	*							*	*								
26	SLOPE DRAIN (PIPE OUTLET)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA. USUALLY PERMANENT. CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES.	*							*	*								
27	SLOPE DRAIN (SUBSURFACE PIPE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA. USUALLY PERMANENT. CAN BE CONSTRUCTED AS GRADING PROGRESSES.	*							*	*								
28	DROP SPILLWAY	SLOWS VELOCITY OF FLOW, REDUCING EROSION CAPACITY.		*	*							*	*						
29	PIPE DROP	REDUCES RUNOFF VELOCITY. REMOVES SEDIMENT AND TURBIDITY. CAN BE DESIGNED TO HANDLE LARGE VOLUMES OF FLOW.										*							
30	PIPE SPILLWAY	REMOVES SEDIMENT AND TURBIDITY FROM RUNOFF. MAY BE PART OF PERMANENT EROSION CONTROL PLAN.										*							
31	ENERGY DISSIPATOR	SLOWS RUNOFF VELOCITY TO NON-EROSIVE LEVEL. PROMOTES SEDIMENT COLLECTION FROM RUNOFF.							*		*	*							
32	LEVEL SPREADER	CONVERTS COLLECTED CHANNEL OR PIPE FLOW BACK TO SHEET FLOW. AVOIDS CHANNEL EXAGGERATION AND CONSTRUCTION OF PROJECT SITE. SIMPLE TO CONSTRUCT.							*		*	*							
33	SEDIMENTATION TRAP	MAY BE CONSTRUCTED OF A VARIETY OF MATERIALS. TRAPS SEDIMENT AND REDUCES VELOCITY OF FLOW. CAN BE CLEANED AND EXPANDED AS NEEDED.								*	*	*							
34	SEDIMENT BASIN	TRAPS SEDIMENT. RELEASES RUNOFF AT NON-EROSIVE RATES. CONVEYS RUNOFF AT STEEPER SLOPES. CAN BE VISUAL AMENITIES.								*	*	*							
35	STORM SINK	STORM SINKS COLLECT RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS. CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF. CONVEYS RUNOFF TO MANHOLE, SUMP, SYSTEM OF STABILIZED OUTLET. LOCATION USE, GROUND BEING TO COLLECT SEDIMENT.										*	*						
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF. MAY USE FILTER CLOTH OVER INLET.										*	*						
37	SOIL FILTER	NONPERMANENT AND EASY TO CONSTRUCT. PROMOTES IMMEDIATE PROTECTION. PROTECTS AREAS AROUND INLETS FROM EROSION.										*	*						
38	STRAW BALE FILTER	NONPERMANENT AND EASY TO CONSTRUCT. CAN BE LOCATED AS NECESSARY TO COLLECT SEDIMENT. MAY BE USED IN CONSTRUCTION WITH SHOW FENCES FOR ADDED STABILITY.										*	*						
39	ROCK FILTER	CAN UTILIZE MATERIAL FOUND ON SITE. EASY TO CONSTRUCT. FILTERS SEDIMENT FROM RUNOFF.										*	*						
40	INLET SEDIMENT TRAP	EASY TO SHAPE. COLLECTS SEDIMENT. MAY BE CLEANED AND EXPANDED AS NEEDED.										*	*						
41	STONE AND ROCK CROSSING	MAY BE ROCK OR CLEAN RUBBLE. MINIMIZES STREAM TURBIDITY. NONPERMANENT. MAY ALSO SERVE AS OYON CHECK OR SEDIMENT TRAP.									*	*							
42	TEMPORARY COLEVERT	ELIMINATES STREAM TURBIDENCE AND TURBIDITY. PROMOTES UNOBSTRUCTED PASSAGE FOR FISH AND OTHER WATER LIFE. CAPACITY FOR NORMAL FLOW CAN BE PROVIDED WITH STORM WATER FLOWING OVER ROADWAY.									*	*							
43	COLEVERT SEDIMENT TRAP	EASY TO INSTALL AT INLET. KEEPS COLEVERT CLEAN AND FREE FLOWING. MAY BE CONSTRUCTED OF LUMBER OR LOGS.									*	*							
44	COLEVERT SEDIMENT TRAP	DEFLECTS CURRENTS AWAY FROM STREAMBANK AREAS.									*	*							
45	TEMP. STREAM CHANNEL CHANGE	NEW CHANNEL, KEEPS NORMAL FLOWS AWAY FROM CONSTRUCTION. REQUIRES STATE PERMIT.									*	*							
46	SHEET PILING	PROTECTS EXPOSED BANK AREAS FROM STREAM CURRENTS. MINIMAL DISRUPTION WHEN REMOVED.									*	*							
47	COFFERDAM	WORK CAN BE CONTINUED DURING MOST UNFAVORABLE STREAM CONDITIONS. CLEAN WATER CAN BE PUMPED DIRECTLY BACK INTO STREAM.									*	*							
48	CONSTRUCTION DAM	PERMITS WORK TO CONTINUE DURING NORMAL STREAM STAGES. CONTROLLED FLOWING CAN BE ACCOMPLISHED DURING PERIODS OF INACTIVITY.									*	*							
49	CHECK DAMS	REDUCES FLOW VELOCITY. CAUSES SEDIMENT. CAN BE CONSTRUCTED OF LOGS, STRAW, HAY, LUMBER, MASONRY, OR SAND BAGS.									*	*							
50	WEIR	CONTROLS SEDIMENTATION IN LARGE STREAMS. CAUSES MANUAL TURBIDITY.									*	*							
51	RETAINING WALL	REDUCES GRADIENT WHERE SLOPES ARE EXTREMELY STEEP. PERMITS RETENTION OF EXISTING VEGETATION, KEEPING SOIL STABLE IN CRITICAL AREAS. MINIMIZES MAINTENANCE.									*	*							
52	SEEPAGE CONTROL	PREVENTS PIPING AND SOIL SURFACE ON CUT SLOPES.									*	*							
53	WINDBREAK	MINIMIZES WIND EROSION. MAY BE SHOW FENCE.									*	*							
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.									*	*							

TEMPORARY SEEDING GUIDE

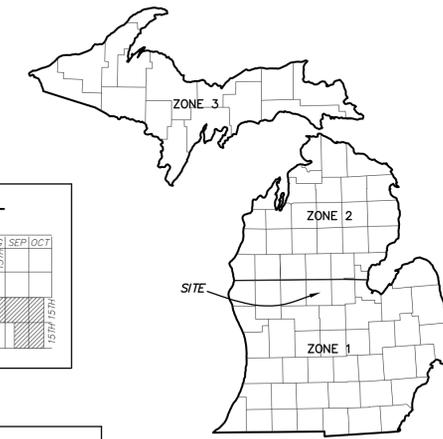
ZONE 1

TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS							
SUDANGRASS							
RYE OR PERENNIAL RYE							
WHEAT							

PERMANENT SEEDING GUIDE

IRRIGATED AND/OR MULCH WITHOUT IRRIGATION OR MULCH	APR	MAY	JUN	JUL	AUG	SEP	OCT

ZONE 1

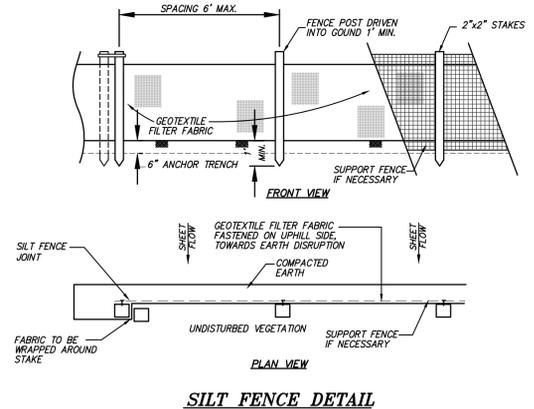


SOIL EROSION & SEDIMENTATION CONTROL

1. THE CITY WILL SUBMIT A DETAILED EROSION CONTROL PLAN AND OBTAIN A SOIL EROSION & SEDIMENTATION CONTROL PERMIT PRIOR TO ANY EARTH CHANGES.
2. CONSTRUCTION OPERATION SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.
3. BORROW AND FILL DISPOSAL AREAS WILL BE SELECTED AND APPROVED AT TIME OF PLAN REVIEW.
4. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
5. CLEANUP WILL BE DONE IN A MANNER TO INSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
6. THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENT CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE DEVELOPER WITHIN 24 HOURS.
7. TEMPORARY EROSION CONTROL MEASURES SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR UPON ESTABLISHMENT OF PERMANENT CONTROL MEASURES.
8. ALL TEMPORARY SOIL EROSION CONTROL MEASURES MUST BE REMOVED PRIOR TO ACCEPTANCE OF PROJECT.
9. VEGETATION MUST BE ACCEPTABLY ESTABLISHED PRIOR TO FINAL RELEASE OF RETAINAGE.

CONSTRUCTION SEQUENCE

1. IMPLEMENTATION OF TEMPORARY EROSION CONTROL MEASURES.
2. EXCAVATION AND STOCKPILING OF SOIL.
3. PERMANENT SEEDING OF DISTURBED AREAS ONCE CLEARING HAS OCCURRED.
4. PERIODIC MAINTENANCE OF AFFECTED EROSION CONTROL MEASURES.
5. PERMANENT MEASURES; FINAL GRADING, SEEDING AND MULCHING OF REMAINING AREAS.



PLAN DATE: JULY 2014
PROJECT MGR: S.M.C.
REVIEWER: J.B.M.
SCALE: NO SCALE

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PREPARED FOR
**CITY OF MT. PLEASANT
OFF-LEASH DOG PARK**

SESS KEY SHEET

REV: _____

SHT# 10 OF 10
JOB No: 14M0049

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