

CONSTRUCTION PLANS FOR THE
CITY OF MOUNT PLEASANT
 IN CO-OPERATION WITH THE
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: JANUARY 2015
 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

PROJECT DESCRIPTION

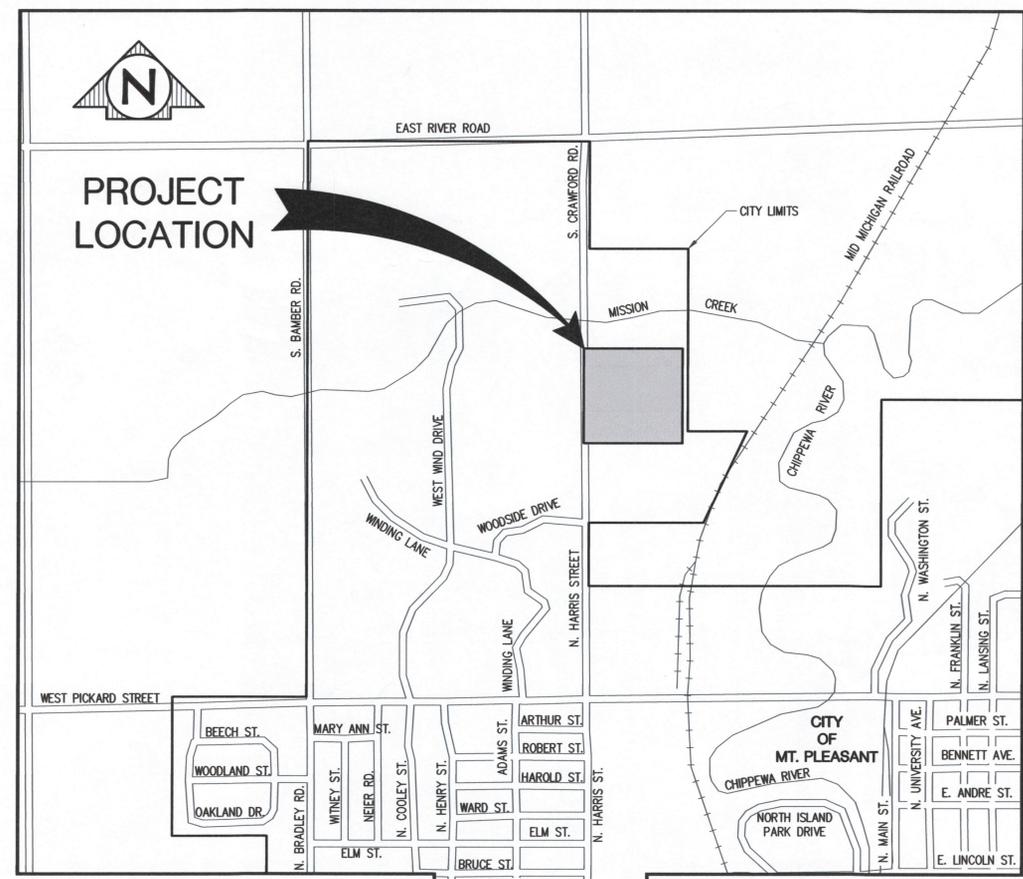
THIS PROJECT INCLUDES THE DEVELOPMENT OF AN OFF-LEASH DOG PARK AT MISSION CREEK PARK LOCATED AT 1458 N. HARRIS STREET IN THE CITY OF MOUNT PLEASANT, MICHIGAN.

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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 MARGIA 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 VANHOUSE	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

OWNER INFORMATION

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



REVISIONS			
NO.	DATE	DESCRIPTION	BY

REV:
 SHT# 1 of 10
 JOB No: 14M0049

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

COVER SHEET

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" CULV --- EXISTING CULVERT
- PROPOSED STORM SEWER
- 12" SAN --- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- 12" WM --- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- SECTION LINE
- 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/H --- EXISTING OVERHEAD UTILITIES
- 1/2 ELEC --- UNDERGROUND ELECTRICAL LINE
- 6" S-HP 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 AGGREGATE SURFACE
- PROPOSED AGGREGATE SURFACE

HATCHING LEGEND

- SALVAGE EXISTING AGGREGATE
- 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-NEW.dwg PLOTDATE: 1/17/2015 7:41 AM

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 STOCKPIILING 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	131 TON
EARTHWORK	1 LS
CONC SPILL CURB	65 FT
4 INCH CONCRETE SIDEWALK	2026 SFT
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	32 EA
FENCE, CHAIN LINK, 72 INCH	2035 FT
FENCE GATE, 10 FOOT, FOR 72 INCH CHAINLINK FENCE	2 EA
FENCE GATE, 5 FOOT, FOR 72 INCH CHAINLINK FENCE	5 EA
FENCE GATE, 6 FOOT, FOR 72 INCH CHAINLINK FENCE	2 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
1 INCH WATER SERVICE, TYPE 'K' COPPER	110 FT
1 INCH TAP, CORPORATION, AND SADDLE	1 EA
1 INCH CURB STOP AND BOX	1 EA
1 INCH WATER METER AND BACKFLOW PREVENTOR	1 LS
24 INCH DRY WELL, ADA COVER, AND STONE	2 EA
6" X 6" X 10' TREATED TIMBER POSTS AND CONCRETE FOUNDATIONS FOR PAVILION	10 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 – PARKING LOT REHABILITATION	
AGGREGATE SURFACE, 6 INCH	585 SYD

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NOTE SHEET



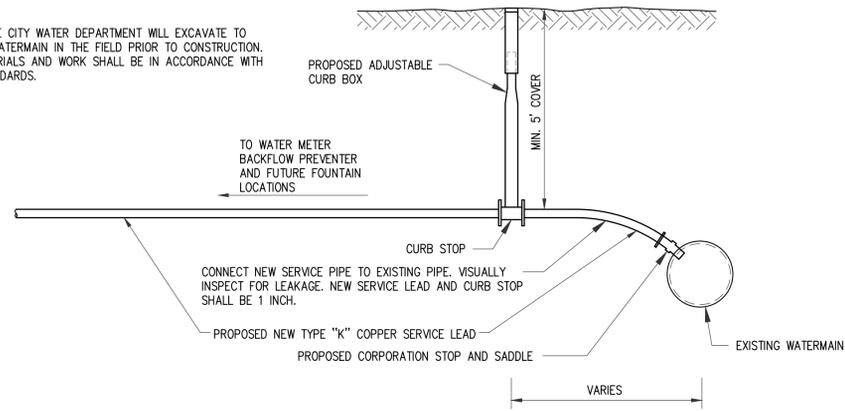
Know what's below.
Call before you dig.

REVISIONS			

REV:

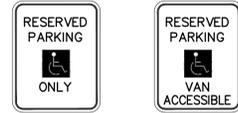
SHT# 3 OF 10
JOB No: 14M0049

NOTE: THE CITY WATER DEPARTMENT WILL EXCAVATE TO LOCATE WATERMAIN IN THE FIELD PRIOR TO CONSTRUCTION. ALL MATERIALS AND WORK SHALL BE IN ACCORDANCE WITH CITY STANDARDS.



WATER SERVICE LEAD DETAIL

NOT TO SCALE



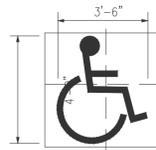
BARRIER FREE
RESERVED PARKING ONLY
MDOT R7-8
NO SCALE

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

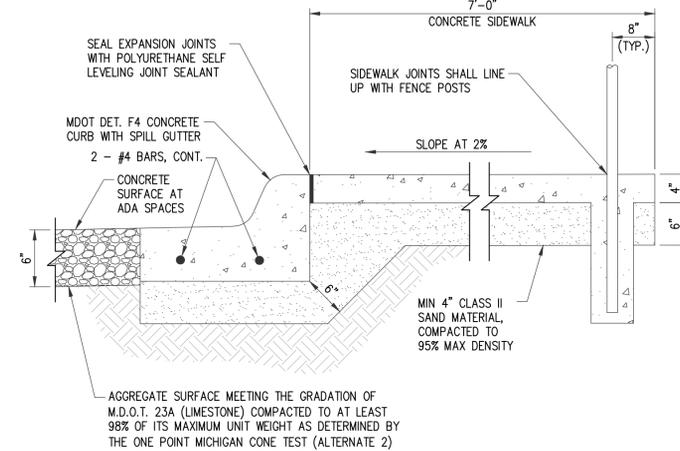
NOT TO SCALE



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.

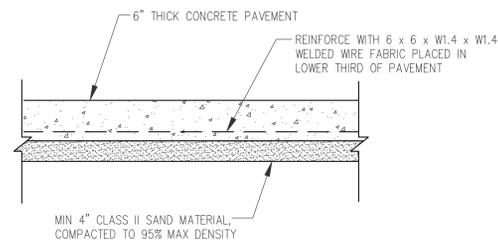
BARRIER FREE PARKING PAINTING

NOT TO SCALE



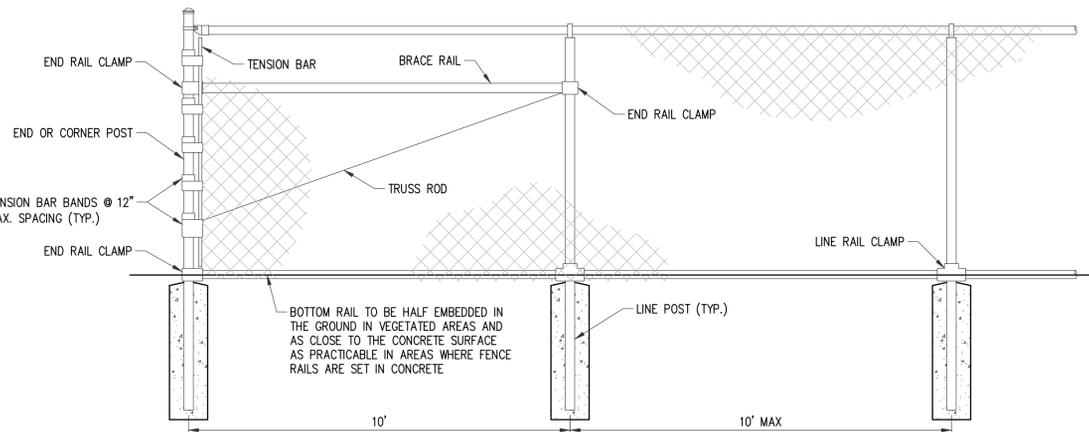
MDOT F4 "SPILL" CURB AND GUTTER/CONCRETE WALK DETAIL

NOT TO SCALE



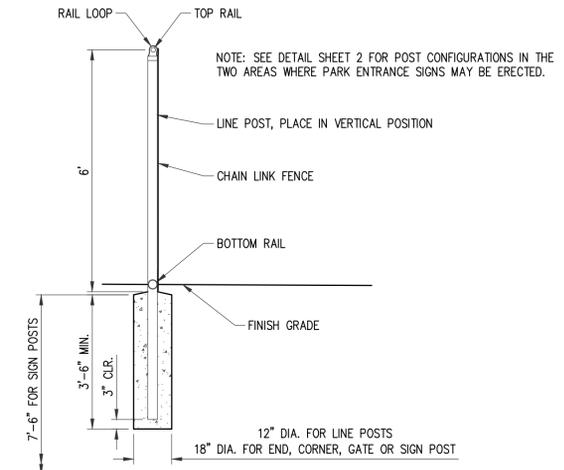
BARRIER FREE CONCRETE PAD DETAIL

NOT TO SCALE



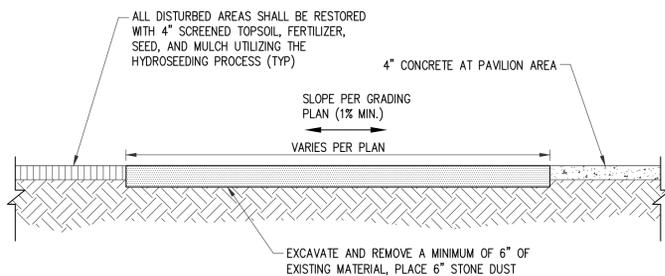
6' HIGH CHAIN LINK FENCE DETAIL

NOT TO SCALE



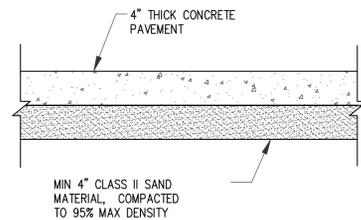
6' HIGH CHAIN LINK FENCE SECTION

NOT TO SCALE



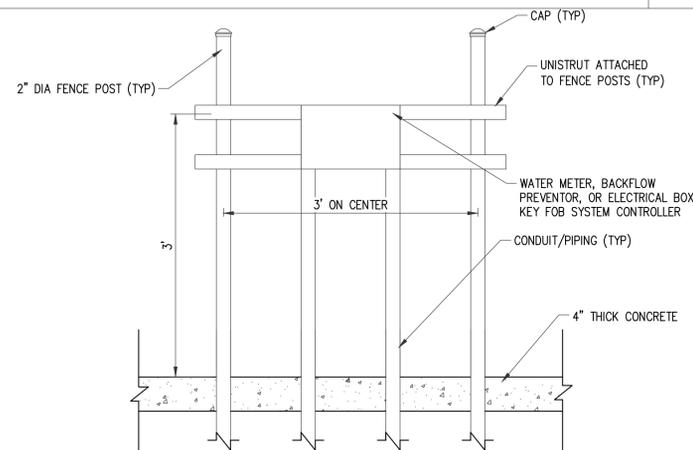
STONE DUST SURFACING DETAIL

NOT TO SCALE



4" CONCRETE SIDEWALK DETAIL

NOT TO SCALE



WATER METER, BACKFLOW PREVENTOR, ELECTRICAL CABINET, KEY FOB CONTROLLER MOUNTING DETAIL

NOT TO SCALE

NOTE: POSTS AND UNISTRUT SHALL BE INSTALLED ON WEST AND EAST SIDE OF PAVILION TO HOUSE WATER METER, BACKFLOW PREVENTOR, AND ELECTRICAL CABINET/KEY FOB SYSTEM CONTROLLER. POSTS AND UNISTRUT SHALL BE INSTALLED SO THAT IF PAVILION IS CONSTRUCTED AT A LATER DATE, ITEMS ARE CONTAINED WITHIN WALLS OF PAVILION, BETWEEN MAIN SUPPORT POSTS.



REVISIONS	

PLAN DATE: JANUARY 2015
PROJECT MGR: S.M.C.
REVIEWER: J.B.M.
SCALE: NO SCALE

ROWE PROFESSIONAL SERVICES COMPANY

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127 S. Main Street
Mt. Pleasant, MI 48858

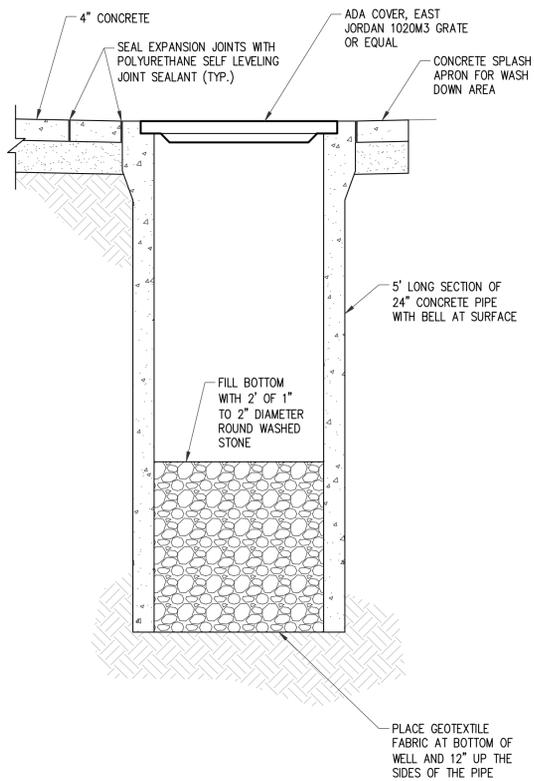
PREPARED FOR
CITY OF MT. PLEASANT
OFF-LEASH DOG PARK

DETAIL SHEET 1

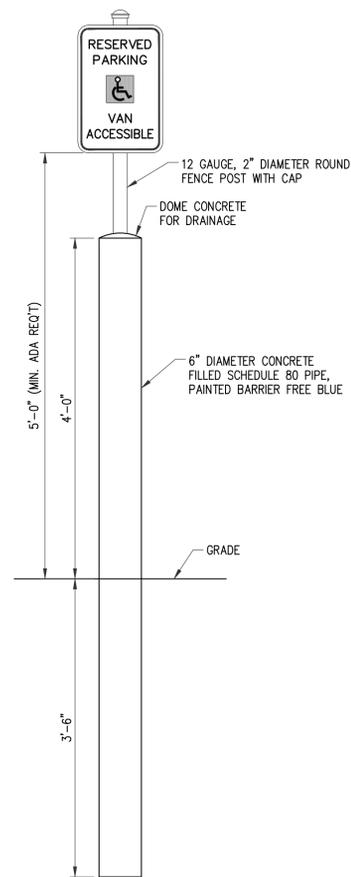
REV:

SHT# 4 OF 10
JOB No: 14M0049

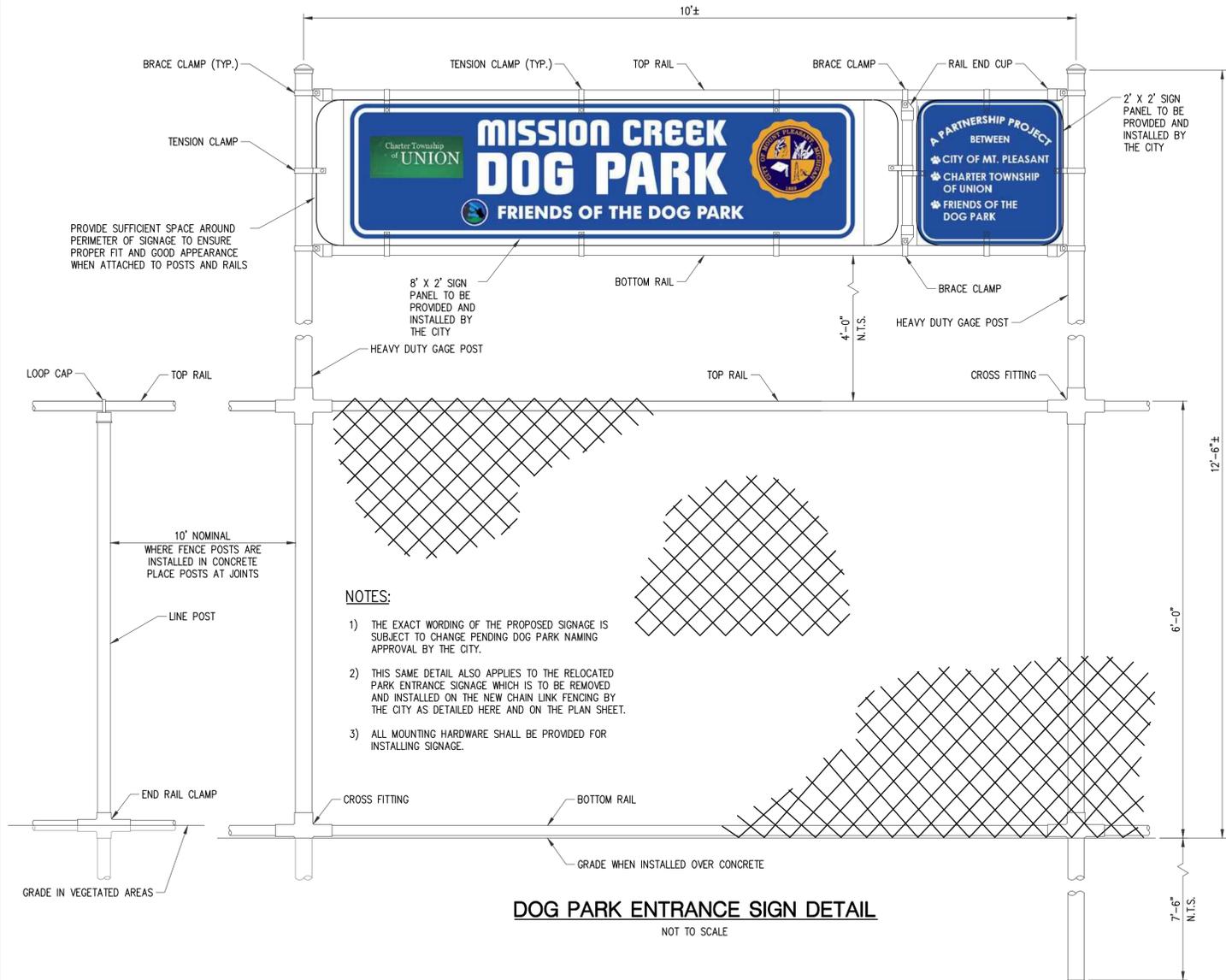
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DRY WELL DETAIL
NOT TO SCALE



BARRIER FREE PARKING SIGN DETAIL
NOT TO SCALE

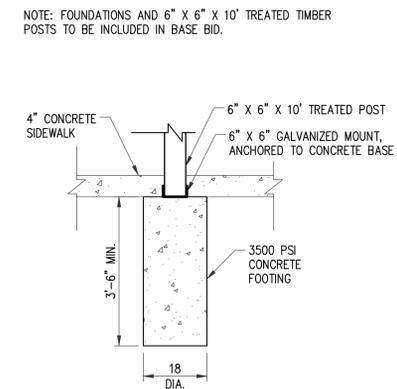


- NOTES:**
- 1) THE EXACT WORDING OF THE PROPOSED SIGNAGE IS SUBJECT TO CHANGE PENDING DOG PARK NAMING APPROVAL BY THE CITY.
 - 2) THIS SAME DETAIL ALSO APPLIES TO THE RELOCATED PARK ENTRANCE SIGNAGE WHICH IS TO BE REMOVED AND INSTALLED ON THE NEW CHAIN LINK FENCING BY THE CITY AS DETAILED HERE AND ON THE PLAN SHEET.
 - 3) ALL MOUNTING HARDWARE SHALL BE PROVIDED FOR INSTALLING SIGNAGE.

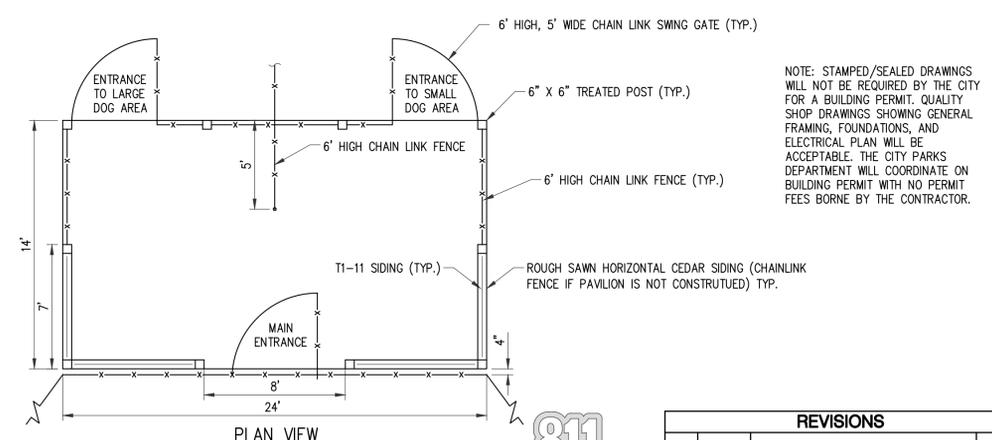
DOG PARK ENTRANCE SIGN DETAIL
NOT TO SCALE



LIKENSNESS OF PROPOSED PAVILION
NOT TO SCALE



FOUNDATION POST DETAIL
NOT TO SCALE



PAVILION DETAIL (ALTERNATE #1)
NOT TO SCALE



REVISIONS	

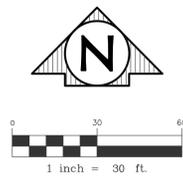
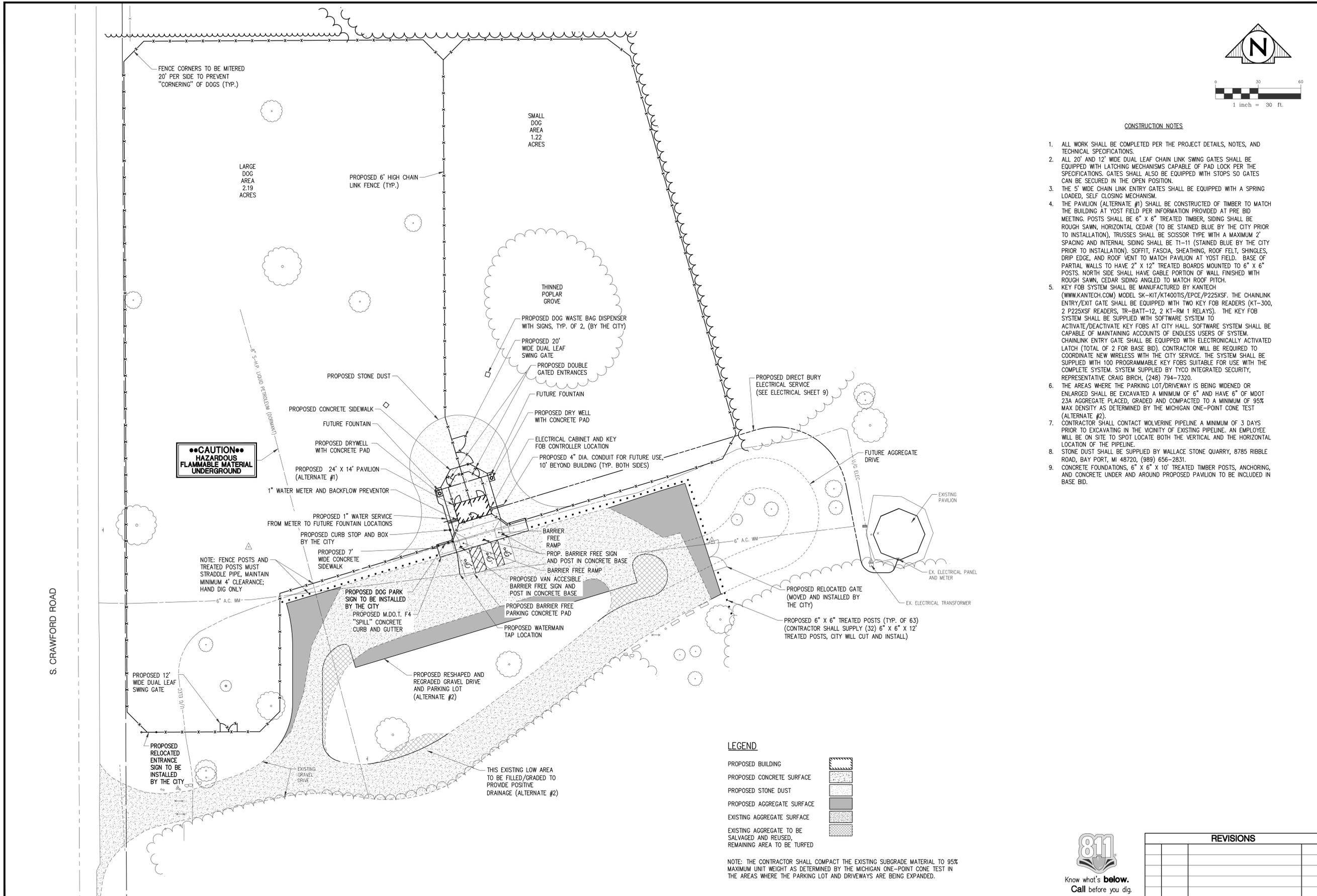
PLAN DATE: JANUARY 2015
PROJECT MGR: S.M.C.
REVIEWER: J.B.M.
SCALE: NO SCALE

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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

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CONSTRUCTION NOTES

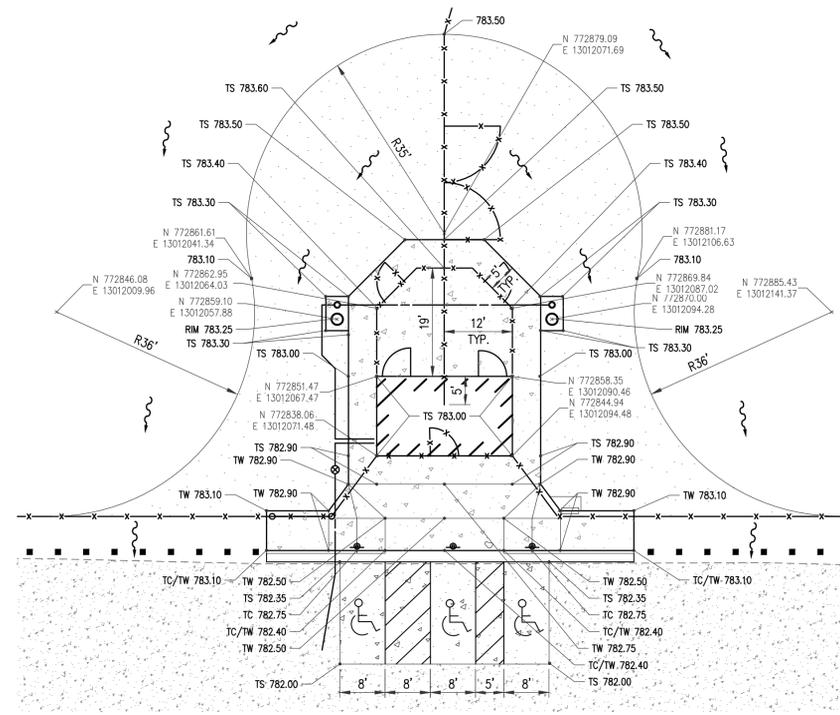
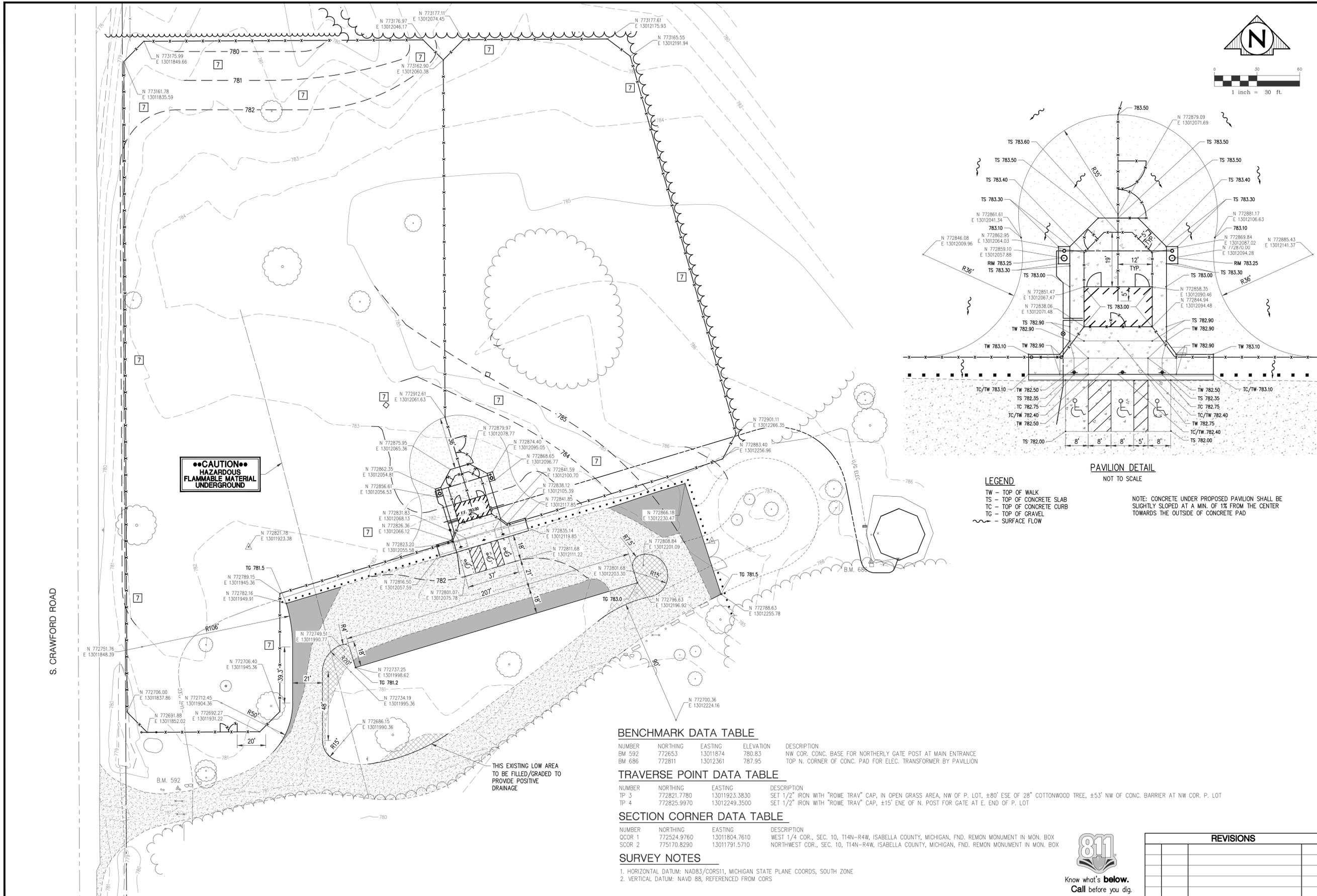
- ALL WORK SHALL BE COMPLETED PER THE PROJECT DETAILS, NOTES, AND TECHNICAL SPECIFICATIONS.
- ALL 20' AND 12' WIDE DUAL LEAF CHAIN LINK SWING GATES SHALL BE EQUIPPED WITH LATCHING MECHANISMS CAPABLE OF PAD LOCK PER THE SPECIFICATIONS. GATES SHALL ALSO BE EQUIPPED WITH STOPS SO GATES CAN BE SECURED IN THE OPEN POSITION.
- THE 5' WIDE CHAIN LINK ENTRY GATES SHALL BE EQUIPPED WITH A SPRING LOADED, SELF CLOSING MECHANISM.
- THE 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" X 6" 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" X 12" TREATED BOARDS MOUNTED TO 6" X 6" 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/KT4001S/EPCE/P225XSF. THE 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 AT CITY HALL. SOFTWARE SYSTEM SHALL BE CAPABLE OF MAINTAINING ACCOUNTS OF ENDLESS USERS OF SYSTEM. CHAINLINK ENTRY GATE SHALL BE EQUIPPED WITH ELECTRONICALLY ACTIVATED LATCH (TOTAL OF 2 FOR BASE BID). CONTRACTOR WILL BE REQUIRED TO COORDINATE NEW WIRELESS WITH THE CITY SERVICE. 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 MDOT 23A AGGREGATE PLACED, GRADED AND COMPACTED TO A MINIMUM OF 95% MAX DENSITY AS DETERMINED BY THE MICHIGAN ONE-POINT CONE TEST (ALTERNATE #2).
- 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.
- CONCRETE FOUNDATIONS, 6" X 6" X 10' TREATED TIMBER POSTS, ANCHORING, AND CONCRETE UNDER AND AROUND PROPOSED PAVILION TO BE INCLUDED IN BASE BID.

PLAN DATE: JANUARY 2015
 PROJECT MGR: S.M.C.
 REVIEWER: J.B.M.
 SCALE: 1" = 30'
ROWE PROFESSIONAL SERVICES COMPANY

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 PREPARED FOR
CITY OF MT. PLEASANT OFF-LEASH DOG PARK
 PLAN SHEET
 REVISIONS
 REV: _____
 SHT# 7 OF 10
 JOB No: 14M0049



NO.	DATE	DESCRIPTION



LEGEND

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

NOTE: CONCRETE UNDER PROPOSED PAVILION SHALL BE SLIGHTLY SLOPED AT A MIN. OF 1% FROM THE CENTER TOWARDS THE OUTSIDE OF CONCRETE PAD

CAUTION
HAZARDOUS
FLAMMABLE MATERIAL
UNDERGROUND

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 NORTHWEST COR., SEC. 10, T14N-R4W, ISABELLA COUNTY, MICHIGAN, FND. REMON MONUMENT IN MON. BOX
OCOR 2	775170.8290	13011791.5710	

SURVEY NOTES

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

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

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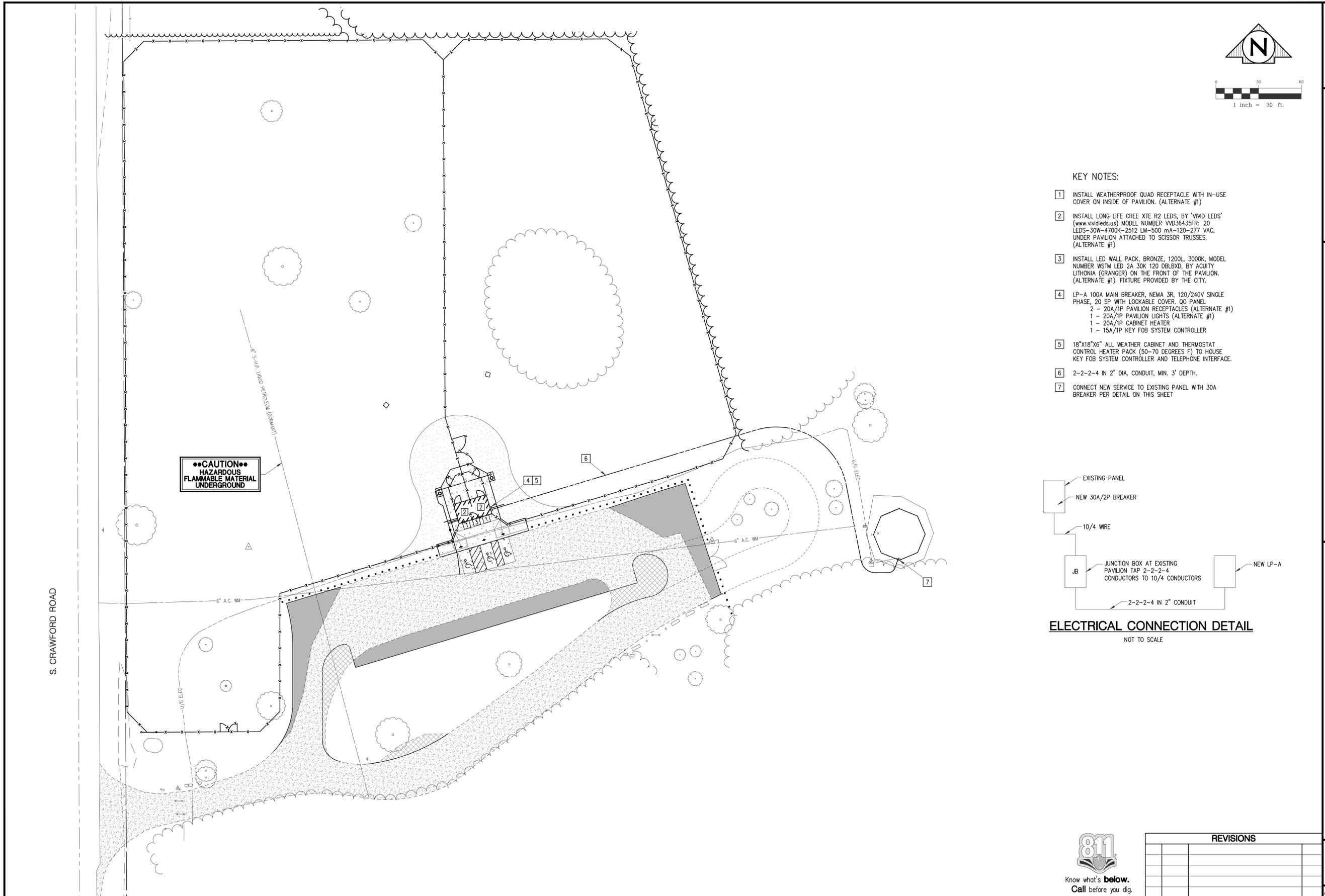
127 S. Main Street
Mt. Pleasant, MI 48858

PREPARED FOR
CITY OF MT. PLEASANT
OFF-LEASH DOG PARK
LAYOUT AND GRADING SHEET



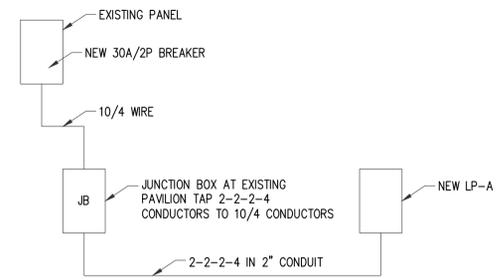
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REV: _____
SHT# 8 OF 10
JOB No: 14M0049

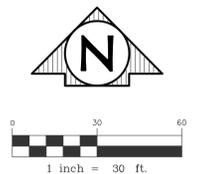


KEY NOTES:

- 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 DBLXD, BY ACUITY LITHONIA (GRANGER) ON THE FRONT OF THE PAVILION. (ALTERNATE #1). FIXTURE PROVIDED BY THE CITY.
- 4 LP-A 100A MAIN BREAKER, NEMA 3R, 120/240V SINGLE PHASE, 20 SP WITH LOCKABLE COVER, QO PANEL
 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 18"x18"x6" ALL WEATHER CABINET AND THERMOSTAT CONTROL HEATER PACK (50-70 DEGREES F) TO HOUSE KEY FOB SYSTEM CONTROLLER AND TELEPHONE INTERFACE.
- 6 2-2-2-4 IN 2" DIA. CONDUIT, MIN. 3' DEPTH.
- 7 CONNECT NEW SERVICE TO EXISTING PANEL WITH 30A BREAKER PER DETAIL ON THIS SHEET



ELECTRICAL CONNECTION DETAIL
NOT TO SCALE



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SITE ELECTRICAL SHET



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 SEEDS.	*						*	*		29	PIPE DROP	REDUCES RUNOFF VELOCITY. REMOVES SEDIMENT AND TURBIDITY. CAN BE DESIGNED TO HANDLE LARGE VOLUMES OF FLOW.				*									
2	SELECTIVE GRADING & SHAPING	WHERE CAN BE DIVERTED TO MINIMIZE EROSION. FLATTER SLOPES CAUSE EROSION PROBLEMS.	*						*	*	*	30	PIPE SPILLWAY	REDUCES SEDIMENT AND TURBIDITY FROM RUNOFF. MAY BE PART OF PERMANENT EROSION CONTROL PLAN.				*									
3	GRUBBING OMITTED	GRADES EDGE OF GRUBBING, PROVIDES NEW SPRIGS, RETAINS EXISTING ROOT MAT SYSTEM, REDUCES WIND FALL AT NEW FOREST EDGE. DISCONTINUES EQUIPMENT ENTRANCE.	*						*	*	*	31	ENERGY DISSIPATOR	SLOWS RUNOFF VELOCITY TO NON-EROSIVE LEVEL. PROMOTES SEDIMENT COLLECTION FROM RUNOFF.	*			*	*	*							
4	VEGETATIVE STABILIZATION	MAY UTILIZE A VARIETY OF PLANT MATERIAL. STABILIZES SOIL. SLOWS RUNOFF VELOCITY. FILTERS SEDIMENT FROM RUNOFF.	*	*	*				*	*	*	32	LEVEL SPREADER	CONVERTS COLLECTED CHANNEL OR PIPE FLOW BACK TO SHEET FLOW. AVOIDS CHANNEL COLLAPSES AND CONSTRUCTION OF PROJECT SITE. SIMPLE TO CONSTRUCT.				*									
5	SEEDING	NEEDS PROPER AND VERY EFFECTIVE STABILIZES SOIL. MUST MINIMIZE EROSION. PROMOTES RUNOFF TO NEARBY SOIL. REDUCING RUNOFF VOLUME SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*				*	*	*	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.				*	*								
6	SEEDING WITH MULCH AND/OR MATING	PROMOTES ESTABLISHMENT OF VEGETATIVE COVER. EFFECTIVE FOR GRADIENTS WITH LOW VELOCITY. PROMOTES RUNOFF TO NEARBY SOIL. EXPERIENCED PERSONNEL SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*				*	*	*	34	SEDIMENT BASIN	TRAPS SEDIMENT. RELEASES RUNOFF AT NON-EROSIVE RATES. CONTROLS RUNOFF AT SYSTEM OUTLETS. CAN BE VISUAL AMENITIES.				*	*	*							
7	HYDRO-SEEDING	EFFECTIVE ON LARGE AREAS. MULCH PROTECTS SEEDS TO PROVIDE IMMEDIATE PROTECTION. SLOWS RUNOFF TO NEARBY SOIL. SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*				*	*	*	35	STORM SEWER	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS. CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF. CONCRETE RUNOFF TO NEARBY SOIL SYSTEM OF STABILIZED OUTLET LOCATION USE. CAN BE DESIGNED TO COLLECT TURBIDITY.							*				*	*	
8	SEEDING	PROVIDES 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.	*		*				*	*	*	36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF. MAY USE FILTER CLOTH OVER INLET.								*			*	*	
9	VEGETATIVE BUFFER STRIP	SLOWS RUNOFF VELOCITY. FILTERS SEDIMENT FROM RUNOFF. REDUCES VOLUME OF RUNOFF ON SLOPES.	*	*					*		*	37	SOIL FILTER	INTERMEDIATE AND EASY TO CONSTRUCT. PROVIDES IMMEDIATE PROTECTION. PROTECTS AREAS AROUND INLETS FROM EROSION.							*						
10	MULCHING	USED ALONE TO PROTECT EXPOSED AREAS FOR SHORT PERIODS. PROTECTS SOIL FROM IMPACT OF FUTURE RAIN. PRESERVES SOIL MOISTURE AND PROTECTS GERMINATING SEED FROM TEMPERATURE EXTREMES.	*		*				*	*		38	STRAW BALE FILTER	INTERMEDIATE AND EASY TO CONSTRUCT. CAN BE LOCATED AS NECESSARY TO PREVENT SEDIMENT. MAY BE USED IN CONSTRUCTION AND SHOW PILES FOR ADDED STABILITY.						*					*	*	
11	ROUGHENED SURFACE	REDUCES VELOCITY AND INCREASES INFILTRATION RATES. COLLECTS SEDIMENT. SHOULD BE USED WITH MULCH AND/OR MATING.	*		*				*			39	ROCK FILTER	CAN UTILIZE MATERIAL FOUND ON SITE. EASY TO CONSTRUCT. FILTERS SEDIMENT FROM RUNOFF.						*					*	*	
12	COMPACTION	HELPS HOLD SOIL IN PLACE, MAKING EXPOSED AREAS LESS VULNERABLE TO EROSION.	*		*				*			40	INLET SEDIMENT TRAP	EASY TO SHAPE. COLLECTS SEDIMENT. MAY BE CLEANED AND EXPANDED AS NEEDED.						*							
13	RIPIRAP, RUBBLE, CAGBONS	USED WHERE VEGETATION IS NOT EASILY ESTABLISHED. EFFECTIVE FOR HIGH VELOCITIES OF HIGH CONCENTRATIONS. PROMOTES RUNOFF TO NEARBY SOIL. DISPERSES ENERGY FLOW AT SYSTEM OUTLETS.	*	*	*				*			41	STONE AND ROCK CROSSING	MAY BE ROCK OR CLEAN RUBBLE. MINIMIZES STREAM TURBIDITY. WEEDPROOF. MAY ALSO SERVE AS OYON CHECK OR SEDIMENT TRAP.						*							
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THIS MINIMIZES EROSION. PROMOTES CONSTRUCTION TRAFFIC IN ADVERSE WEATHER. MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS.	*		*				*			42	TEMPORARY COULVERT	ELIMINATES STREAM TURBULENCE AND TURBIDITY. PROVIDES UNOBSTRUCTED PASSAGE FOR FISH AND OTHER WATER LIFE. CAPACITY FOR NORMAL FLOW CAN BE PROVIDED WITH STORM WATER FLOWING OVER ROADWAY.						*							
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VOLUME AND VELOCITY. IRREGULAR SURFACE WILL HELP SLOW VELOCITY.	*		*				*			43	COULVERT SEDIMENT TRAP	EASY TO INSTALL AT INLET. KEEPS COULVERT CLEAN AND FREE FLOWING. MAY BE CONSTRUCTED OF LUMBER OR LOGS.						*						*	
16	CURB & GUTTER	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE. COLLECTS AND CONVEYS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGEWAY.			*				*	*		44	COULVERT SEDIMENT TRAP	DEFLECTS CURRENTS AWAY FROM STREAMBANK AREAS.						*							
17	BENCHES	REDUCES RUNOFF VELOCITY BY REDUCING EFFECTIVE SLOPE LENGTH. COLLECTS SEDIMENT. PROVIDES ACCESS TO SLOPES FOR SEEDING, MULCHING AND MAINTENANCE.	*		*				*			45	TEMP. STREAM CHANNEL CHANGE	NEW CHANNEL, KEEPS NORMAL FLOW AWAY FROM CONSTRUCTION. REQUIRES STATE PERMIT.						*							
18	DIVERSION BERM	DIVERTS WATER FROM VULNERABLE AREAS. COLLECTS AND DIVERTS WATER TO PREPARED DRAINAGEWAYS. MAY BE PLACED AS PART OF NORMAL CONSTRUCTION OPERATION.	*		*				*	*		46	SHEET PILING	PROTECTS EXPOSED BANK AREAS FROM STREAM CURRENTS. MINIMAL DISRUPTION WHEN REMOVED.						*							
19	DIVERSION DITCH	COLLECTS AND DIVERTS WATER TO REDUCE EROSION POTENTIAL. MAY BE INCORPORATED IN PERMANENT PROJECT DRAINAGE SYSTEMS.	*		*				*	*		47	COFFERDAM	WORK CAN BE CONTINUED DURING MOST ANTICIPATED STREAM CONDITIONS. CLEAN WATER CAN BE PUMPED DIRECTLY BACK INTO STREAM.						*							
20	BERM & DITCH	DIVERTS WATER TO A PREPARED DRAINAGEWAY. MAY BE USED AT INTERVALS ACROSS SLOPE FACE TO REDUCE EFFECTIVE SLOPE LENGTH.	*		*				*	*		48	CONSTRUCTION DAM	PERMITS WORK TO CONTINUE DURING NORMAL STREAM STAGES. CONTROLLED FLOWING DURING PERIODS OF INACTIVITY.						*							
21	FILTER BERM	CONSTRUCTED OF GRAVEL OR STONE. INTERCEPTS AND DIVERTS RUNOFF TO STABILIZED AREAS OR PREPARED DRAINAGE SYSTEMS. SLOWS RUNOFF AND COLLECTS SEDIMENT.	*	*					*			49	CHECK DAMS	REDUCES FLOW VELOCITY. CAUSES SEDIMENT. CAN BE CONSTRUCTED OF LOGS, STRIKE, H&K, ROCK, LUMBER, MASONRY, OR SAND BAGS.						*	*						
22	BRUSH FILTER	USES SLASH AND LOGS FROM CLEARING OPERATIONS. CAN BE COINED AND SEEDED RATHER THAN REMOVED. ULTIMATELY NEED FOR REMOVAL OR REMOVAL OF MATERIAL FROM SITE.	*		*				*			50	WEIR	CONTROLS SEDIMENTATION IN LARGE STREAMS. CAUSES MANUAL TURBIDITY.						*	*						
23	BASE CHANNEL	LEAST EROSION FORM OF DRAINAGEWAY. MAY BE USED ONLY WHERE GRADIENT IS VERY LOW AND WITH SOILS OF MINIMUM EROSION POTENTIAL.			*				*			51	RETAINING WALL	REDUCES GRADIENT WHERE SLOPES ARE EXTREMELY STEEP. PROMOTES RETENTION OF EXISTING VEGETATION, KEEPING SOIL STABLE IN CRITICAL AREAS. MINIMIZES MAINTENANCE.						*						*	
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.			*				*			52	SEEPAGE CONTROL	PREVENTS PIPING AND SOIL SURFACE ON CUT SLOPES.						*					*		
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.	*		*				*			53	WINDBREAK	MINIMIZES WIND EROSION. MAY BE SHOR FENCE.						*							
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.	*		*				*			54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.						*						*	
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.		*	*				*																		

TEMPORARY SEEDING GUIDE

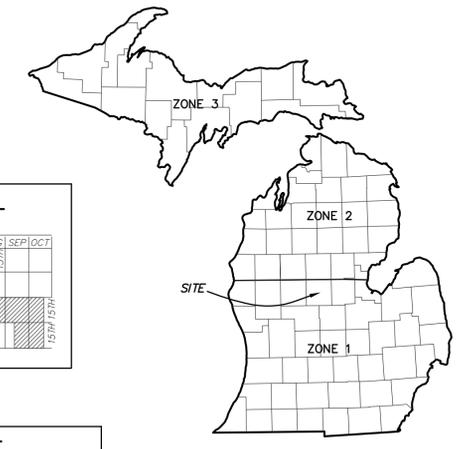
ZONE 1

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

ZONE 1

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



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: JANUARY 2015
PROJECT MGR: S.M.C.
REVIEWER: J.B.M.
SCALE: NO SCALE

ROWE PROFESSIONAL SERVICES COMPANY

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Mt. Pleasant, MI 48858

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

SESC KEY SHEET

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



R: Projects\1400049\Org\Construction Drawings\Plans-NEW.dwg PLOTED: 1/17/2015 7:32 AM