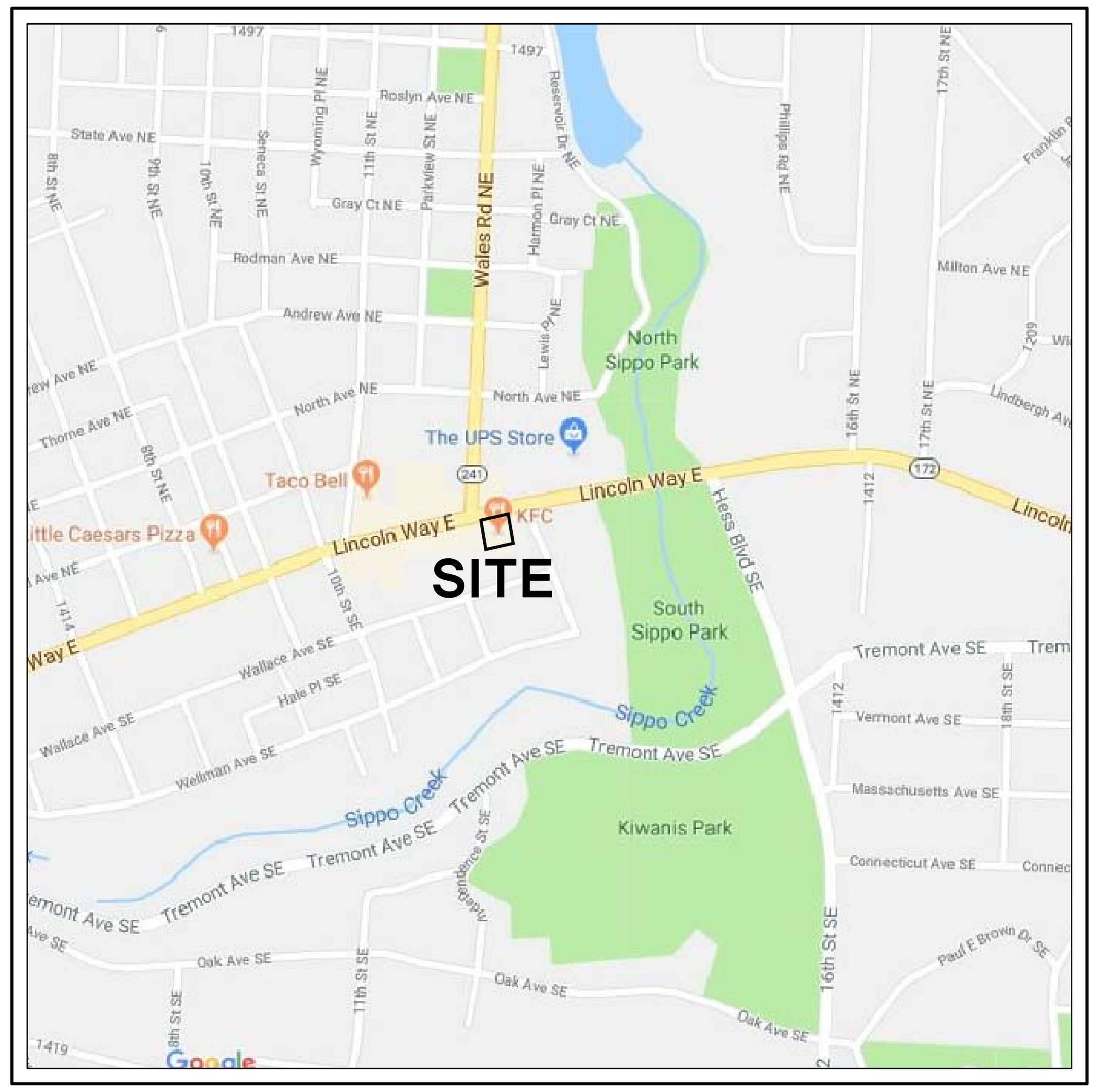
DRAWN BY:	MRD	2018-03-14
CHECKED BY:	CMS	2018-03-14

TGC Engineering, LLC
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

IMPROVEMENT PLANS FOR

KFC MASSILLON

CITY OF MASSILLON, COUNTY OF STARK AND STATE OF OHIO



LOCATION MAP
(N.T.S.)
LATITUDE: N 040°47'58.9"
LONGITUDE: W 081°30'33.0"

N

Utility Symbol Legend		
Existing	**Proposed**	**Description**
CB [CB]	CB [CB]	Catch Basin
		Fire Hydrant
		Inlets
		Light Pole
MB	MB	Mailbox
		Power Pole
		Sanitary Manhole
⊣ H	⊣ H	Signs
		Storm Manhole
W	W	Water Gate Valve
WS	WS	Water Service Stop

Utility Line Legend	
Existing	**Proposed**
OHE	OHE OHE
E	E E E
G	G
S	S S
SAN FM	SAN FM
W	W W W
Ex R/W	R/W R/W
	U U U

SHEET INDEX

Sheet Number	Sheet Title
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5	GRADING PLAN
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9	DETAILS & SPECIFICATIONS
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CHRISTOPHER M. SCHMIDT, P.E. 80749   DATE

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED
PROFESSIONAL ENGINEER

APPROVALS

APPROVED BY MASSILLON CITY ENGINEER THIS ______ DAY OF________, 20___.

JASON M. POPIEL, P.E.

ONLY APPROVED SIGNED PLANS BY THE CITY ENGINEER ARE TO BE USED FOR CONSTRUCTION.

OWNER

KENDALL HOUSE, INC.
1207 LINCOLN WAY EAST
MASSILLON, OHIO 44646
330-837-5041 X 721

CONTACT: MARK LAMBOS

DESIGN ENGINEER

TGC ENGINEERING, LLC
1310 SHARON COPLEY ROAD
SHARON CENTER, OHIO 44274

CONTACT: CHRIS SCHMIDT, P.E.
330-590-8004

CONTRACTOR

HAMMOND CONSTRUCTION, INC.
1278 PARK AVENUE SW
CANTON, OHIO 44706

CONTACT: STEVE McDONALD
330-316-8615

OGPUPS
Ohio Oil & Gas Producers Underground Protection Service
800-925-0988 or 8-1-1
www.ogpups.org

SUBMITTAL INDEX

SUBMITTAL	DATE
1 (CITY OF MASSILLON)	4/16/2018
2 (CITY OF MASSILLON, REV-1)	5/8/2018
3 (CONSTRUCTION SET)	5/23/2018

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)

KFC MASSILLON
TITLE SHEET

PROJECT NUMBER
1712
DATE
2018-05-23

GENERAL NOTES

1. THIS PLAN HAS BEEN BASED UPON DIGITAL COUNTY ORTHOPHOTO INFORMATION AND TOPOGRAPHIC AND BOUNDARY SURVEY WORK PERFORMED BY TGC ENGINEERING, LLC.

2. THE CONTRACTOR SHALL KEEP ALL EXISTING STREETS CLEAN OF ALL SOIL, DIRT, MUD, AND DEBRIS. THE CONTRACTOR SHALL EXERCISE DILIGENT CARE TO PROTECT ALL TREES, SHRUBS, AND PLANTS NOT DESIGNATED FOR REMOVAL. CONTRACTOR SHALL REPLACE, TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE OWNER, ANY TREES, SHRUBS, PLANTS, AND OTHER OBJECTS REMOVED, DESTROYED, DISFIGURED, OR DAMAGED DUE TO CONTRACTOR'S NEGLIGENCE.

3. CONSTRUCTION WORK SHALL NOT COMMENCE UNTIL A PRECONSTRUCTION CONFERENCE HAS BEEN HELD AT THE DIRECTION OF THE CITY OF MASSILLON ENGINEER.

4. MATERIAL AND METHODS OF CONSTRUCTION AND MACHINERY USED SHALL BE AS INDICATED IN THESE CONSTRUCTION PLANS AND IN ACCORDANCE WITH THE CITY OF MASSILLON ENGINEER. ALL OTHER MATERIALS AND METHODS OF CONSTRUCTION AND MACHINERY USED SHALL MEET THE REQUIREMENTS OF THE 2010 EDITION OF THE ODOT "CONSTRUCTION AND MATERIAL SPECIFICATIONS."

5. ALL WORK PERFORMED WITHIN THE RIGHT-OF-WAY MUST BE INSPECTED AND APPROVED BY THE CITY OF MASSILLON ENGINEER OR HIS DULY APPOINTED AGENTS.

6. ALL TESTING AND INSPECTION FEES ARE THE RESPONSIBILITY OF THE DEVELOPER (OWNER).

7. TRENCHES UNDER AND/OR WITHIN THREE FEET OF EXISTING OR PROPOSED PAVEMENT AREAS SHALL BE BACKFILLED WITH NO. 57 LIMESTONE TO WITHIN 12 INCHES OF EXISTING GRADE AND TOPPED WITH 12 INCHES OF NO. 304 LIMESTONE.

8. NO. 304 LIMESTONE BACKFILL SHALL BE USED WHEREVER SANITARY, STORM AND WATER LINES INTERSECT.

9. WARNING DEVICES (SIGNS, FLASHERS, BARRICADES, ETC.) SHALL BE PROVIDED (AT THE DEVELOPER'S EXPENSE) AT THE INTERSECTION(S) OF EXISTING ROADS AND THE ROAD(S) UNDER CONSTRUCTION.

10. EXISTING DRIVES, UTILITIES, AND APPURTENANCES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE DEVELOPER/CONTRACTOR'S EXPENSE AS DIRECTED BY THE CITY OF MASSILLON ENGINEER.

11. THE DEVELOPER AND/OR CONTRACTOR SHALL OBTAIN ALL NECESSARY COUNTY, STATE, AND FEDERAL PERMITS, INCLUDING BUT NOT LIMITED TO HIGHWAY USE, STORMWATER MANAGEMENT, HAULING, ROAD OPENING, RIGHT-OF-WAY, ETC.

12. THE CONTRACTOR SHALL CONTACT THE GOVERNING AUTHORITY FOR REQUIRED INSPECTIONS.

13. UPON COMPLETION OF THE IMPROVEMENTS, THE SUBDIVIDER SHALL REQUEST, IN WRITING, A FINAL INSPECTION BY THE CITY OF MASSILLON ENGINEERS OFFICE, AS REQUIRED UNDER SECTION 711-091 OF THE OHIO REVISED CODE.

14. VISIBLE ABOVE-GROUND UTILITIES ON SITE HAVE BEEN SHOWN ON THE PLANS. THE CONTRACTOR IS TO FIELD-VERIFY ELEVATIONS, QUANTITIES AND LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

15. THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOW ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

16. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL RUBBISH, TRASH, DEBRIS, AND ORGANIC MATERIAL IN A LAWFUL MANNER.

17. ALL UNDERGROUND LINES ENCOUNTERED BY CONSTRUCTION ARE TO BE COMPLETELY RESTORED AT THE EXPENSE OF THE CONTRACTOR.

18. COST OF ANY SHEETING, DE-WATERING OR FOUNDATIONS NECESSARY FOR INSTALLATION SHALL BE INCLUDED IN PRICE BID PER LINEAR FOOT OF RESPECTIVE ITEMS.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, AND MATERIALS OF CONSTRUCTION TO COMPLETE PROPOSED CONSTRUCTION.

20. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS (INCLUDING BUT NOT LIMITED TO CLEARING/GRUBBING, EARTHWORK, BUILDING CONSTRUCTION, STREET OPENINGS AND UTILITY CONNECTIONS) REQUIRED BY LOCAL AND STATE AGENCIES PRIOR TO CONSTRUCTION.

21. ANY APPARENT DISCREPANCIES OR QUESTIONS IN CONTRACT DOCUMENTS ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVES IMMEDIATELY.

22. REFER TO "DETAILS & SPECIFICATIONS" PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.

23. TRAFFIC SHALL BE MAINTAINED ON ALL ADJOINING STREETS AT ALL TIMES. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

24. THE DESIGN ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, PROCEDURES, TECHNIQUES OR SEQUENCES OF CONSTRUCTION NOT SPECIFIED HEREIN, NOR FOR THE SAFETY ON THE JOB SITE, NOR SHALL THE DESIGN ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

25. A SUBSURFACE DRAINAGE SYSTEM MAY EXISTING ON THIS SITE. THE SYSTEM AND/OR OUTLET IF LOCATED ON THIS PROPERTY MUST BE MAINTAINED AT ALL TIMES.

26. ANY MODIFICATIONS TO THE WORK SHOWN ON THE PLANS MUST HAVE PRIOR WRITTEN APPROVAL FROM THE OWNER AND REVIEW AGENCIES.

27. REFER TO CITY OF MASSILLON STANDARDS FOR STANDARD DETAILS AND SPECIFICATIONS.

GENERAL NOTES: SITE PREPARATION

1. WITHIN THE SUBJECT PROPERTY, THE INTENT IS TO HAVE A CLEAN, CLEAR SITE, FREE OF ALL EXISTING ITEMS NOTED TO BE REMOVED IN ORDER TO PERMIT THE CONSTRUCTION OF THE NEW PROJECT.

2. WHERE EXISTING ITEMS ARE SHOWN TO REMAIN, CARE SHOULD BE TAKEN TO INSURE PROTECTION OF THAT ITEM FROM DAMAGE. ANY ITEM DISTURBED BY CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN EXISTING AND TO THE SATISFACTION OF THE OWNER OF THE ITEM.

3. UTILITIES, SIDEWALKS, DRIVE APRONS, ETC WITHIN THE RIGHT-OF-WAY ARE TO REMAIN UNLESS NOTED OTHERWISE.

4. REMOVE SOILS AS NECESSARY TO COMPLETE PROPOSED CONSTRUCTION.

GENERAL NOTES: EARTHWORK

1. THE CONTRACTOR SHALL INSTALL ALL SEDIMENTATION CONTROLS TO MINIMIZE SOIL EROSION AND OFF-SITE SILTATION BEFORE ANY CLEARING, GRUBBING OR EARTHWORK HAS BEGUN. REFERENCE STORM WATER POLLUTION PREVENTION PLAN FOR EROSION CONTROL STRUCTURES AND SPECIFICATIONS.

2. ALL TIMBER, LOGS, BRUSH, RUBBISH, AND VEGETATIVE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR AFFECT THE PLANNED STABILITY OF FILL AREAS SHALL BE REMOVED FROM THE ROAD CONSTRUCTION AREAS.

3. ANY UNSUITABLE SOILS ENCOUNTERED IN PROPOSED PAVEMENT AREAS SHALL BE REMOVED AND REPLACED WITH COMPACTED MATERIAL APPROVED BY THE ENGINEER.

4. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES AND SHALL BACKFILL AND GRADE EXCAVATED AREAS SO AS TO ELIMINATE PONDING ON THE SITE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPORTATION OF ANY BORROW MATERIAL NECESSARY TO COMPLETE THE JOB.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE OFF-SITE DISPOSAL OF ANY AND ALL EXCESS OR UNSUITABLE MATERIAL NOT USED ON THE JOB SITE.

7. PROPOSED PAVEMENT AND BUILDING AREAS ARE TO BE PROOF-ROLLED PER SPECIFICATIONS PRIOR TO CONSTRUCTION. ANY AREAS FOUND TO BE "SOFT" OR "SPONGY" ARE TO BE OVER-EXCAVATED TO FIRM EARTH AND BACKFILLED PER SPECIFICATIONS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE SERVICES OF A GEOTECH.

8. PROPOSED ELEVATIONS SHOWN SHALL NOT BE CHANGED WITHOUT APPROVAL OF THE ENGINEER.

9. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING AND IN AREAS SELECTED BY OWNER.

10. UNLESS OTHERWISE INDICATED AT A SPECIFIC LOCATION, ALL FINISHED GRADES AT THE LIMITS OF NEW WORK ARE TO CONFORM TO AND MATCH EXISTING GRADES.

11. SITE GRADING SHALL PROVIDE POSITIVE DRAINAGE TO CATCH BASINS OR SHEET FLOW OFF OF AREAS, THUS PREVENTING THE PONDING OF WATER ON SITE.

12. PRIOR TO PLACEMENT OF ANY COMPACTED FILLS, PROCTOR CURVES SHALL BE ESTABLISHED FROM PROPOSED BORROW MATERIAL SAMPLES.

13. PRIOR TO PAVING, THE SUBGRADE SHALL BE TESTED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK FURNISHED BY THE CONTRACTOR IN THE PRESENCE OF A CITY OF MASSILLON REPRESENTATIVE. ANY YIELDING AREAS IN THE SUBGRADE SHALL BE REMOVED AND/ OR REPLACED PER CITY OF MASSILLON SPECIFICATIONS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE SERVICES OF A GEOTECH.

14. ALL COMPACTED FILLS RELATED TO THE CONSTRUCTION OF THE PROPOSED ROAD SHALL BE PLACED IN ACCORDANCE WITH ODOT ITEM 203. DURING CONSTRUCTION, THESE COMPACTED FILLS SHALL BE TESTED USING THE NUCLEAR DENSOMETER METHOD. COMPACTION REQUIREMENTS SHALL BE AS FOLLOWS:

MAX LABORATORY DRY WEIGHT #/CF	MIN COMPACTION REQUIREMENTS PERCENT LABORATORY MAX
104.9 & UNDER	UNACCEPTABLE
105-119.9	98
120 & OVER	95

GENERAL NOTES: UTILITIES

1. THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 OF THE OHIO REVISED CODE.

2. THE OHIO UTILITIES PROTECTION SERVICE (OUPS, 1-800-362-2764) SHALL BE CONTACTED BY THE DEVELOPER/CONTRACTOR AT LEAST TWO WORKING DAYS IN ADVANCE OF WORK TO BE DONE NEAR ANY EXISTING UTILITY.

3. EXISTING UTILITIES, INCLUDING PRIVATE OIL/GAS LINES, ENCOUNTERED DURING CONSTRUCTION SHALL BE LOWERED AS NECESSARY TO A MINIMUM OF THREE FEET BELOW FINISHED GRADE.

4. EXCAVATIONS SHALL BE SHORED OR SLOPED AS NECESSARY TO PROVIDE SAFE WORKING CONDITIONS DURING CONSTRUCTION. IN DEEP TRENCHES OR WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, A TRENCH BOX OR OTHER METHOD OF EMBANKMENT STABILIZATION WILL BE REQUIRED.

5. UNDERGROUND UTILITY CONSTRUCTION PRACTICES ARE TO CONFORM TO THE SAFETY REQUIREMENTS OF OSHA.

6. THE CONTRACTOR SHALL SHOW ALL MODIFIED PIPING, CONDUIT RUNS, UTILITIES AND ANY MODIFICATIONS MADE TO THE ORIGINAL DRAWINGS ON AS-BUILT PRINTS AND TURN OVER TO OWNERS REPRESENTATIVE UPON COMPLETION OF THE JOB.

7. ALL SEWER RUN DISTANCE GIVEN ARE FROM CENTERLINE TO CENTERLINE OF MANHOLES. ALL PIPE INVERT ELEVATIONS GIVEN AT MANHOLES ARE AT CENTERLINE OF MANHOLE. SEWER GRADES ARE ESTABLISHED FROM CENTERLINE OF MANHOLE AND CARRIED THROUGH MANHOLE INVERT TO ASSURE FLOW THROUGH MANHOLE.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES AND STRUCTURES DESIGNATED TO REMAIN UNTIL ALL CONSTRUCTION IS COMPLETE. ANY ITEM DISTURBED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.

9. EXISTING UTILITY SERVICES NOT BEING SAVED SHALL BE CUT AND CAPPED AT THE PROPERTY LIMITS. ALL ON-SITE PIPING SHALL BE REMOVED AND BE PROPERLY BACKFILLED. THE DEMOLITION CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR TERMINATION OF SERVICE PRIOR TO DEMOLITION.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE, PROTECTION, AND CONTINUATION OF SERVICE FOR ALL UTILITIES SERVICING ADJOINING AREAS.

11. PROPOSED MANHOLE RIMS AND CATCH BASIN GRATES SHALL BE SET TO ELEVATIONS SHOWN. SET ALL EXISTING MANHOLE FRAMES AND COVERS, CATCH BASIN GRATES, VALVE BOXES, ETC., TO BE RAISED OR LOWERED AS NECESSARY, TO PROPOSED FINISHED GRADE, FLUSH WITH THE ADJACENT GRADE.

12. UTILITIES PROPOSED UNDER NEW PAVEMENT SHALL EITHER BE BORED OR INSTALLED IN CONDUITS PLACED PRIOR TO PAVEMENT INSTALLATION. OPEN CUTTING FOR UTILITY CROSSINGS WILL NOT BE PERMITTED ONCE PAVEMENT CONSTRUCTION IN UNDERWAY.

13. ALL TRENCHES AND/ OR HOLES 2' OR DEEPER SHALL BE BACKFILLED OR PLATED EVERY DAY.

GENERAL NOTES: PAVEMENT

1. THE PAVEMENT AND BASE COURSE SHALL BE CONSTRUCTED AS SHOWN ON THE TYPICAL PAVEMENT SECTION CONTAINED IN THESE PLANS AND IN ACCORDANCE WITH THE 2010 EDITION OF THE ODOT "CONSTRUCTION AND MATERIAL SPECIFICATIONS." THE ROAD(S) SHALL BE CONSTRUCTED TO THE LINE AND GRADE SHOWN ON THE ENCLOSED PLANS AND PROFILES.

2. UPON COMPLETION, ALL PAVEMENT WITHIN THE RIGHT-OF-WAY SHALL BE INSPECTED AND APPROVED BY THE CITY OF MASSILLON ENGINEER BEFORE THE ROAD IS OPENED TO ANY TRAFFIC. TO RESTRICT ACCESS TO NEW PAVEMENT PRIOR TO OPENING, THE PAVING CONTRACTOR SHALL PROVIDE ADEQUATE BARRICADES WITH FLASHERS AS DIRECTED BY THE CITY OF MASSILLON ENGINEER.

3. ANY AREA IN WHICH THE PAVEMENT IS IN A FILL SITUATION, THE TOP SOIL OR ANY UNSUITABLE SOIL SHALL BE STRIPPED AND A SUITABLE BACKFILL MATERIAL IS TO BE COMPACTED TO MEET CITY OF MASSILLON SPECIFICATIONS.

4. ALL TESTING AND INSPECTION FEES ARE THE RESPONSIBILITY OF THE DEVELOPER (OWNER).

5. NO TRAFFIC SHALL BE PERMITTED ON THE CONCRETE PAVEMENT FOR A PERIOD OF 7 DAYS UNLESS TESTING INDICATES A MINIMUM FLEXURAL STRENGTH OF 600 PSI HAS BEEN OBTAINED.

UTILITY CONTACTS

LISTED BELOW ARE ALL THE KNOWN UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS, TOGETHER WITH THEIR RESPECTIVE OWNERS:

WATER LINES:
AQUA OHIO

SANITARY LINES:
CITY OF MASSILLON
(330) 830-1704

ELECTRIC:
FIRST ENERGY
(800) 362-2764

TELEPHONE LINES:
MCTV
(330) 833-4134

GAS LINES:
DOMINION EAST OHIO
(800) 362-7557

CABLE TV:
MCTV
(330) 833-4134

CITY OF MASSILLON ENGINEER
(330) 830-1722

REGISTERED UNDERGROUND UTILITIES PROTECTION SERVICE (OUPS):
(800) 362-2764

TGC Engineering, LLC
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

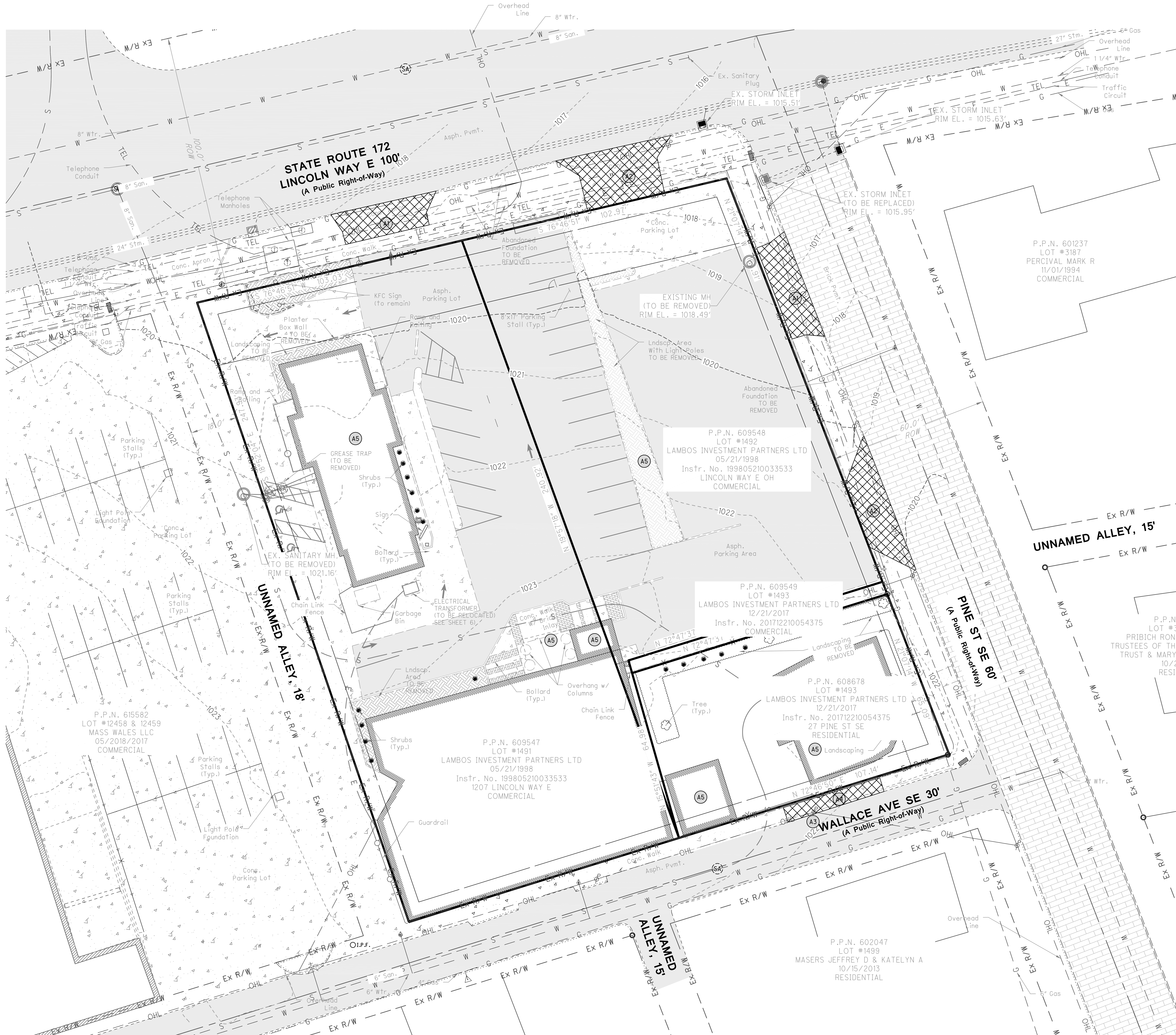
STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED
PROFESSIONAL ENGINEER

KFC MASSILLON

GENERAL NOTES

PROJECT NUMBER: 1712

DATE: 2018-05-23



A. GENERAL SITE PREPARATION AND DEMOLITION NOTES:

1. REFERENCE TITLE SHEET & SITE PLAN FOR ADDITIONAL GENERAL NOTES.

(A) **KEYED NOTES:**

(A1) REMOVE EXISTING APPROACH PAVEMENT, SIDEWALK AND CURB. REPLACE SIDEWALK AND CURB WHERE NECESSARY.

(A2) REMOVE AND REPLACE EXISTING APPROACH, SIDEWALK, AND CURB WITHIN THE LIMITS OF THE NEW APPROACH.

(A3) REMOVE EXISTING LIGHT POLE (TO BE RELOCATED).

(A4) CONSTRUCT CURB CUT AND REMOVE EXISTING MATERIALS WITHIN THE LIMITS OF THE NEW APPROACH.

(A5) EXITING BUILDING/STRUCTURE TO BE REMOVED.

TGC Engineering, LLC
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

SCALE (IN FEET)
1 inch = 20 ft.

N

KFC MASSILLON
EXISTING CONDITIONS

PROJECT NUMBER	1712
DATE	2018-05-23

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED PROFESSIONAL ENGINEER

GENERAL CONSTRUCTION NOTES:

1. THIS PLAN HAS BEEN BASED UPON DIGITAL COUNTY ORTHOPHOTO INFORMATION AND TOPOGRAPHIC AND BOUNDARY SURVEY WORK PERFORMED BY TGC ENGINEERING, LLC.
2. ALL WORK IS TO CONFORM TO THE REQUIREMENTS OF THE OHIO BUILDING CODE, THE LOCAL GOVERNING AGENCIES AND OWNERS STANDARDS AND SPECIFICATIONS, LATEST REVISIONS. STRICTER REQUIREMENTS SHALL TAKE PRECEDENCE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, AND MATERIALS OF CONSTRUCTION TO COMPLETE PROPOSED CONSTRUCTION.
4. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS (INCLUDING BUT NOT LIMITED TO CLEARING/GRUBBING, EARTHWORK, BUILDING CONSTRUCTION, STREET OPENINGS AND UTILITY CONNECTIONS) REQUIRED BY LOCAL AND STATE AGENCIES PRIOR TO CONSTRUCTION.
5. ANY APPARENT DISCREPANCIES OR QUESTIONS IN CONTRACT DOCUMENTS ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVES IMMEDIATELY.
6. REFER TO "DETAILS & SPECIFICATIONS" PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR SHALL ALERT THE UTILITIES PROTECTION SERVICES AT 1-800-362-2764, 48 HOURS BEFORE ANY EXCAVATING IS INITIATED. CONTRACTOR MUST CONTACT UTILITY COMPANIES FOR EXACT LOCATIONS OF UTILITIES 2 WORKING DAYS BEFORE DIGGING.
8. THE CONTRACTOR SHALL KEEP ALL EXISTING STREETS CLEAN OF ALL SOIL, DIRT, MUD, AND DEBRIS. THE CONTRACTOR SHALL EXERCISE DILIGENT CARE TO PROTECT ALL TREES, SHRUBS, AND PLANTS NOT DESIGNATED FOR REMOVAL. THE CONTRACTOR SHALL REPLACE, TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE OWNER, ANY TREES, SHRUBS, PLANTS, AND OTHER OBJECTS REMOVED, DESTROYED, DISFIGURED, OR DAMAGED DUE TO CONTRACTOR'S NEGLIGENCE.
9. TRAFFIC SHALL BE MAINTAINED ON ALL ADJOINING STREETS AT ALL TIMES. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
10. PAVEMENT, CURBS, SIDEWALKS, AND OTHER EXISTING IMPROVEMENTS WHICH ARE TO REMAIN AND ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SPECIFICATIONS OF THE OWNER OF THE IMPROVEMENT.
11. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES AND SHALL BACKFILL AND GRADE EXCAVATED AREAS SO AS TO ELIMINATE PONDING ON THE SITE.
12. UPON COMPLETION OF CONSTRUCTION, POWER WASH ALL PAVING TO OWNER'S SATISFACTION.
13. THE DESIGN ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, PROCEDURES, TECHNIQUES OR SEQUENCES OF CONSTRUCTION NOT SPECIFIED HEREIN, NOR FOR THE SAFETY ON THE JOB SITE, NOR SHALL THE DESIGN ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
14. ANY MODIFICATIONS TO THE WORK SHOWN ON THE PLANS MUST HAVE PRIOR WRITTEN APPROVAL FROM THE OWNER AND REVIEW AGENCIES.
15. CONSULT THE OWNER'S REPRESENTATIVE FOR ITEMS TO BE SUPPLIED BY THE OWNER. ITEMS NOT SUPPLIED BY THE OWNER SHALL BE SUPPLIED BY THE CONTRACTOR.
16. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL RUBBISH, TRASH, DEBRIS, AND ORGANIC MATERIAL IN A LAWFUL MANNER.

YARD AREA GENERAL NOTES:

REFER TO "DETAILS AND SPECIFICATIONS" DRAWINGS FOR YARD AREA DETAILS AND SPECIFICATIONS.

(A) **KEYED NOTES:**

- (A1) INSTALL ASPHALT PAVING. REFERENCE "FLEXIBLE PARKING LOT PAVEMENT DETAIL", SHEET 9.
- (A2) ALL UNPAVED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE FERTILIZED, SEEDED AND MULCHED BY THE CONTRACTOR IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS. REFERENCE LANDSCAPE PLANS. 4" OF TOPSOIL SHALL BE IMPORTED FOR ALL LAWN AND LANDSCAPE AREAS.
- (A3) INSTALL LANDSCAPING. REFERENCE LANDSCAPE PLANS.
- (A4) INSTALL CONCRETE WALK. REFERENCE "SIDEWALK DETAIL", SHEET 9.
- (A5) INSTALL HANDICAP PARKING SIGN. REFERENCE "HANDICAP PARKING SIGN DETAIL", SHEET 9.
- (A6) INSTALL "VAN ACCESSIBLE" HANDICAP PARKING SIGN. REFERENCE "HANDICAP PARKING SIGN DETAIL", SHEET 9.
- (A7) INSTALL CONCRETE PAVEMENT. REFERENCE "RIGID PAVEMENT DETAIL", SHEET 9.
- (A8) INSTALL CONCRETE CURB. TAPER ENDPOINT TRANSITIONS TO GRADE WITHIN 12" OF CURB END. REFERENCE "CONCRETE CURB DETAIL", SHEET 9.
- (A9) APPLY PAVEMENT MARKINGS. REFERENCE "PAVEMENT MARKING DETAIL", SHEET 9.
- (A10) INSTALL TYPE 6 CURB TO MATCH EXISTING ADJACENT CONDITIONS PER CITY REQUIREMENTS. REFERENCE "CONCRETE CURB DETAIL", SHEET 9.
- (A11) DUMPSTER ENCLOSURE FENCING AND GATE TO BE INSTALLED BY FENCE CONTRACTOR. REFERENCE ARCH PLANS.
- (A12) INSTALL CLEARANCE BAR ON CONCRETE FOUNDATION. REFERENCE "CLEARANCE BAR DETAIL", SHEET 12.
- (A13) INSTALL PREVIEW BOARD ON CONCRETE FOUNDATION. REFERENCE DETAILS, SHEET 12.
- (A14) INSTALL ORDER POINT CANOPY ON CONCRETE FOUNDATION. REFERENCE DETAILS, SHEET 10.
- (A15) INSTALL MENU BOARD ON CONCRETE FOUNDATION. REFERENCE DETAILS, SHEET 12.
- (A16) NOT USED
- (A17) INSTALL YARDS LIGHTS ON CONCRETE FOUNDATION. REFERENCE "SITE LIGHT POST DETAIL", SHEET 13 AND BUILDING PLANS, SITE ELECTRICAL PLAN, SHEET E1.0.
- (A18) INSTALL COMBINED CURB AND SIDEWALK WITH SLOPE PER CITY REQUIREMENTS. REFERENCE DETAIL, SHEET 9.
- (A19) INSTALL SIDEWALK WITH SLOPE PER CITY REQUIREMENTS. REFERENCE DETAIL, SHEET 9.
- (A20) INSTALL CURB RAMP. REFERENCE DETAILS, SHEET 11.
- (A21) INSTALL BOLLARD. REFERENCE "BOLLARD DETAIL", SHEET 9.

LEGEND:

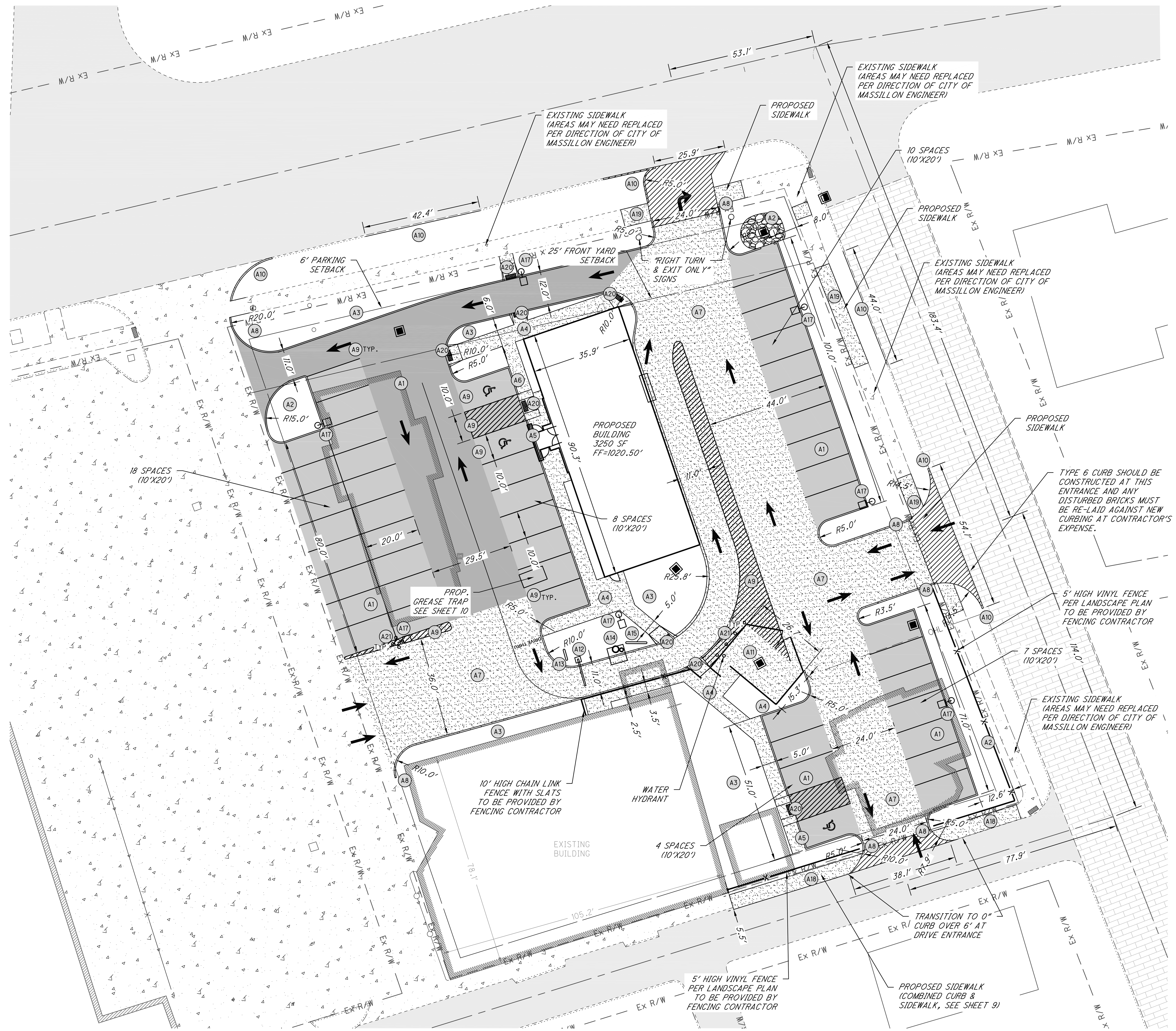
- HEAVY DUTY ASPHALT PAVING
- LIGHT DUTY ASPHALT PAVING
- CONCRETE PAVING
- CITY OF MASSILLON DRIVEWAY APPROACH (SEE DETAILS ON SHEET 9)

SITE DATA

ZONING: B-1 LOCAL BUSINESS

- MIN. REQUIRED FRONT YARD: 25'
- 25' FRONT YARD SHOWN
- MIN. REQUIRED SIDE YARD: 0'
- 10' SIDE YARD SHOWN
- MIN. REQUIRED REAR YARD: 20'
- 20' REAR YARD SHOWN
- MAX. BUILDING HEIGHT: 25'
- PARKING:
  - RESTAURANT: ONE SPACE REQUIRED FOR EVERY 150 SF OF GROSS FLOOR AREA
  - 3250 SF PROPOSED RESTAURANT, 22 SPACES REQUIRED
    - 36 PROPOSED SPACES SHOWN
  - BUSINESS OFFICES: ONE SPACE FOR EVERY 200 SF OF GROSS FLOOR AREA
  - 3168 SF EXISTING OFFICE BUILDING, 16 SPACES REQUIRED
  - 6 PROPOSED SPACES SHOWN
  - WAREHOUSES: 5 PLUS ONE FOR EVERY EMPLOYEE IN THE LARGEST WORK SHIFT
  - 5 PROPOSED SPACES SHOWN
  - PARKING PERMITTED IN SIDE YARD
  - 6' PARKING SETBACK SHOWN
  - MIN. SPACE: 9'x20'
  - TYP. SPACE SHOWN: 10'x20'

TOTAL STRUCTURE AREA: 11,170 SF
TOTAL PAVEMENT AREA: 30,486 SF
TOTAL LANDSCAPE AREA: 8,770 SF



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SCALE (IN FEET)
1 inch = 20 ft.

N

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED
PROFESSIONAL ENGINEER

KFC MASSILLON

SITE PLAN

PROJECT NUMBER	1712
DATE	2018-05-23

GENERAL GRADING NOTES:

1. REFERENCE SITE PLAN FOR ADDITIONAL GENERAL NOTES.
2. COMPACTION TESTING OF FILL MATERIAL UNDER PROPOSED PAVEMENT AREAS SHALL BE PERFORMED BY OWNERS REPRESENTATIVE AND AS DIRECTED BY OWNERS REPRESENTATIVE. FILL WHICH FAILS TO MEET THE APPLICABLE COMPACTION REQUIREMENTS SHALL BE CORRECTED BEFORE PAVING WILL BE PERMITTED. CONTRACTOR TO PROVIDE OWNERS WITH 48-HOUR ADVANCE NOTICE OF FILL PLACEMENT ACTIVITIES.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES, INCLUDING SERVICES, PRIOR TO CONSTRUCTION.
4. UNDERDRAINS MAY BE ADDED, IF DETERMINED NECESSARY BY THE ENGINEER OR CONSTRUCTION REPRESENTATIVE, AFTER SUBGRADE IS ROUGH GRADED.
5. UNLESS OTHERWISE INDICATED AT A SPECIFIC LOCATION, ALL FINISHED GRADES AT THE LIMITS OF NEW WORK ARE TO CONFORM TO AND MATCH EXISTING GRADES.
6. THE CONTRACTOR SHALL RESTORE ANY STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS, ETC. DISTURBED DURING CONSTRUCTION TO THE ORIGINAL CONDITION OR BETTER.
7. ALL DISTURBANCE INCURRED TO CITY OR PERSONAL PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE LOCAL AGENCY.

(A) **KEYED NOTES:**

(A1) INSTALL CURB RAMP. REFERENCE DETAILS, SHEET 11.

(A2) TAPER CURB ENDPOINT TRANSITIONS TO GRADE WITHIN 12" OF CURB END.

(A3) LANDSCAPE WALL.

LEGEND:

BC: TOP OF BACK OF CURB ELEVATION
FC: PAVEMENT ELEVATION AT FACE OF CURB
PAV: FINISHED GRADE AT PAVEMENT SURFACE
BW: BOTTOM OF LANDSCAPE WALL

ACCESSIBLE PARKING SPACE SLOPE REQUIREMENTS

2% MAXIMUM IN ANY DIRECTION

ACCESSIBLE ROUTE

— >— >— >—

SLOPE REQUIREMENTS

RUNNING SLOPE:
NOT STEEPER THAN 1:20

CROSS SLOPE:
NOT STEEPER THAN 1:48

FEMA FLOOD MAP - 39151C0192E

BENCHMARKS

BENCHMARK #1: EX. SANITARY MANHOLE, LOCATED ON SOUTH SIDE OFLINCOLN WAY.
ELEV=1019.48
BENCHMARK #2: EX. SANITARY MANHOLE, LOCATED ON SOUTH SIDE OF LINCOLN WAY.
ELEV=1017.55

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0 10 20 40

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KFC MASSILLON
GRADING PLAN

PROJECT NUMBER
1712

DATE
2018-05-23

5
18

GENERAL UTILITY NOTES:

1. REFERENCE GENERAL NOTES & SITE PLAN FOR ADDITIONAL GENERAL NOTES.
2. ALL SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF MASSILLON AND THE STATE OF OHIO.
3. THE CONTRACTOR SHALL PROVIDE ALL BENDS, FITTINGS, ADAPTERS, ETC. AS REQUIRED FOR PIPE CONNECTIONS TO BUILDING STUB-OUTS, INCLUDING ROOF/FOOTING DRAIN CONNECTIONS TO ROOF LEADERS AND TO STORM DRAINAGE SYSTEM.
4. ALL SEWERS, WATER LINES AND APPURTENANCES THERETO SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS ESTABLISHED BY THE UTILITY OWNER AND UNDER ITS INSPECTION.
5. PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANIES SHALL BE PERFORMED BY THE CONTRACTOR TO INSURE THAT ALL UTILITY COMPANY AND LOCAL GOVERNING AGENCIES STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET.
6. REFER TO "DETAILS AND SPECIFICATIONS" PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR SHALL COORDINATE SITE UTILITY INSTALLATION WITH ELECTRICAL AND TELEPHONE INSTALLATION, ETC. AND UTILITY COMPANIES.
8. THE CONTRACTOR SHALL COMPACT PIPE BACKFILL ACCORDING TO THE "TYPICAL FLEXIBLE PIPE TRENCH SECTION" DETAIL, SHEET 8. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED IN AREAS OF ROCK EXCAVATION.

A. GENERAL SANITARY SEWERS NOTES:

1. SANITARY LATERAL CONNECTIONS TO THE MAIN LINE SEWER SHALL BE MADE WITH STANDARD WYES COMPATIBLE WITH THE MATERIAL OF THE SEWER MAIN.
2. ALL SANITARY LATERALS MUST MAINTAIN A MINIMUM GRADE OF 1%.
3. ALL SEWER SERVICE LATERALS SHALL BE PVC, ASTM D-3034, SDR 35, WITH RUBBER GASKET JOINTS IN ACCORDANCE WITH ASTM D3212. WHERE A DIFFERENT TYPE OF MATERIAL IS USED FOR THE SEWER MAIN, AN ACCEPTABLE ADAPTER TO THE PVC LATERAL MUST BE PROVIDED.
4. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
5. JOINT SEAL BETWEEN MANHOLE AND SANITARY SEWER SHALL BE RESILIENT AND FLEXIBLE GASKET JOINT PER ASTM443.
6. ALL SANITARY SEWER WORK COMPLETED MUST BE IN ACCORDANCE WITH THE CURRENT REGULATIONS AND RULES OF THE CITY OF MASSILLON.
7. CLEANOUTS FOR SANITARY SEWER ARE TO BE LOCATED WITHIN 10'-0" OF THE BUILDING. PROVIDE CLEANOUTS AT EACH 45° AND 90° BEND.
8. ALL SANITARY SEWERS MUST HAVE PREMIUM JOINTS.

(A) **KEYED NOTES:**

- (A1) INSTALL CLEANOUT. REFERENCE "SANITARY CLEANOUT DETAIL", SHEET 10.
- (A2) TIE INTO EXISTING SANITARY LINE.
- (A3) INSTALL NEW SANITARY SEWER AND MANHOLES FROM MAIN.
- (A4) ROUTE SANITARY LATERAL FROM MANHOLE TO GREASE INTERCEPTOR NEAR BUILDING. REFERENCE BUILDING DRAWINGS FOR TIE-IN POINT.
- (A5) INSTALL 1500 GALLON GREASE INTERCEPTOR. REFERENCE DETAILS, SHEET 12.
- (A6) SANITARY LATERALS NOT INCLUDED IN THIS SCOPE OF WORK.

B. GENERAL STORM SEWERS NOTES:

1. STORM SEWERS DESIGNATED "PVC" SHALL BE SDR 35, WITH RUBBER GASKET JOINTS.
2. STORM SEWERS DESIGNATED "HDPE" SHALL BE HIGH DENSITY POLYETHYLENE, SMOOTH INTERIOR, CORRUGATED EXTERIOR, AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS, INC, OR EQUAL. PIPE SHALL CONFORM TO AASHTO M 294, AND ASTM D 2321 WITH JOINTS CONFORMING TO ASTM D 3212.
3. PROVIDE CLEANOUTS FOR STORM SEWERS AS INDICATED ON PLANS.
4. ALL CATCH BASINS LOCATED IN PAVEMENT ARE TO BE LOOPED WITH 4" PERFORATED PVC DRAIN PIPE BY JOINING THE ENDS TOGETHER WITH A TEE AND RUNNING THE TEE INTO A HOLE CUT INTO THE BOTTOM OF THE CATCH BASIN. THE PIPE SHALL BE WRAPPED WITH FILTER FABRIC AND PLACED WITHIN THE PREMIUM FILL AROUND THE CATCH BASIN.

(B) **KEYED NOTES:**

- (B1) INSTALL 2-2B CATCH BASIN. REFERENCE DETAILS, SHEET 11.
- (B2) INSTALL STORM 6" PVC WITH A MINIMUM SLOPE OF 1% FOR ROOF DRAINS.
- (B3) REPLACE EXISTING INLET BASIN WITH A NEW INLET BASIN PER CITY OF MASSILLON REGULATIONS.

C. GENERAL WATERLINE NOTES:

1. REFERENCE DETAILS AND SPECIFICATIONS SHEETS.
2. REFERENCE BUILDING DRAWINGS FOR TIE-IN POINT AND REQUIREMENTS.

(C) **KEYED NOTES:**

- (C1) INSTALL NEW WATER TAP. THE CONTRACTOR SHALL COORDINATE THE COSTS AND INSPECTION, AND INSPECTION AND MATERIALS REQUIREMENTS FOR THE WATER SERVICE (INCLUDING THE TAP AND SERVICE LINE TO THE CORPORATION STOP) WITH THE WATER DEPARTMENT.
- (C2) THE EXCAVATION CONTRACTOR IS RESPONSIBLE TO INSTALL 1.25" TYPE "K" COPPER WATER SERVICE LINE FROM THE CORPORATION STOP TO WITHIN 5' OF THE BUILDING. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR INSTALLATION BEYOND THIS POINT THROUGH THE BUILDING.
- (C3) INSTALL 1" TYPE "K" COPPER WATER LINE FROM BUILDING TO NEW YARD HYDRANT. REFERENCE DETAILS, SHEET 8.

D. GENERAL TELEPHONE AND CABLE NOTES:

1. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF UNDERGROUND TELEPHONE AND CABLE SERVICES WITH THE TELEPHONE AND CABLE COMPANIES. THE CONTRACTOR SHALL DETERMINE THE RESPONSIBILITY FOR INSTALLING THE LINES.
2. REFERENCE CERTIFIED BUILDING PLANS FOR ADDITIONAL TELEPHONE AND CABLE REQUIREMENTS.
3. THE CONTRACTOR IS TO USE THE SAME TRENCH FOR BOTH UTILITIES WHERE POSSIBLE.

(D) **KEYED NOTES:**

- (D1) INSTALL UNDERGROUND TELEPHONE AND CABLE SERVICE. COORDINATE CONNECTIONS WITH THE BUILDING PLANS AND UTILITIES.

E. GENERAL ELECTRIC NOTES:

1. THE SITE ELECTRICAL WILL BE UNDERGROUND SERVICE TO A POLE LOCATED IN THE ALLEY.
2. THE CITY WILL FURNISH AND INSTALL THE TRANSFORMER AND SECONDARY POWER CABLE TO CONTRACTOR PROVIDED CONDUIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OPEN CUTTING THE ALLEY PAVEMENT, TRENCHING, BEDDING AND BACKFILLING ACTIVITIES, INSTALLATION OF ALL CONDUIT, THE PLACEMENT OF PULL WIRES, GROUNDING AND PAVEMENT RESTORATION.
3. THE CONTRACTOR SHALL COORDINATE AND VERIFY THE COSTS, SCHEDULING AND RESPONSIBILITIES FOR THE INSTALLATION, INSPECTION AND MATERIALS REQUIREMENTS FOR THE ELECTRIC SERVICE WITH THE CITY ELECTRIC DEPARTMENT.
4. REFERENCE BUILDING CONSTRUCTION PLANS FOR THE EXACT LOCATION AND NUMBER OF PRIMARY AND SECONDARY SERVICE CONNECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK AND SHALL INFORM THE OWNER OF ANY CONFLICTS OR DISCREPANCIES.
5. ALL CONDUIT SHALL BE INSTALLED USING A MINIMUM OF 3.0 FEET OF COVER AND SHALL INSTALL EARLY WARNING DETECTION TAPE ABOVE ALL ELECTRIC SERVICE LINES.
6. CONTACT THE POWER COMPANY FOR REQUIRED INSPECTIONS.
7. ALL EQUIPMENT AND WORK SHALL CONFORM WITH THE NATIONAL ELECTRIC CODE, APPLICABLE UNDERWRITER'S CODES, GOVENERMENTAL BUILDING CODES AND POWER COMPANY REQUIREMENTS.
8. COORDINATE THE SCOPE, INSTALLATION REQUIREMENTS AND RESPONSIBILITIES FOR ALL WORK WITH POWER COMPANY PRIOR TO BIDDING PROJECT.

(E) **KEYED NOTES:**

- (E1) INSTALL UNDERGROUND ELECTRIC SERVICE. COORDINATE CONNECTIONS WITH THE BUILDING PLANS AND UTILITIES. REFERENCE BUILDING PLANS, SITE ELECTRICAL PLAN, SHEET E1.0.
- (E2) INSTALL ELECTRICAL CONDUIT FOR PROPOSED KFC SITE ELEMENTS.
- (E3) INSTALL ELECTRICAL CONDUIT FOR SITE LIGHTING. REFER TO E1.0.

F. GENERAL GAS NOTES:

1. THE CONTRACTOR TO COORDINATE THE INSTALLATION OF GAS SERVICE WITH THE GAS COMPANY.
2. REFERENCE CERTIFIED BUILDING PLANS FOR SITE GAS REQUIREMENTS.

(F) **KEYED NOTES:**

- (F1) INSTALL NATURAL GAS SERVICE LINE FROM SERVICE MAIN TO PROPOSED BUILDING. REFERENCE BUILDING DRAWINGS FOR TIE-IN POINT AND SERVICE REQUIREMENTS. CONSULT GAS COMPANY FOR SIZE, LOCATION AND TYPE OF SERVICE LINE.

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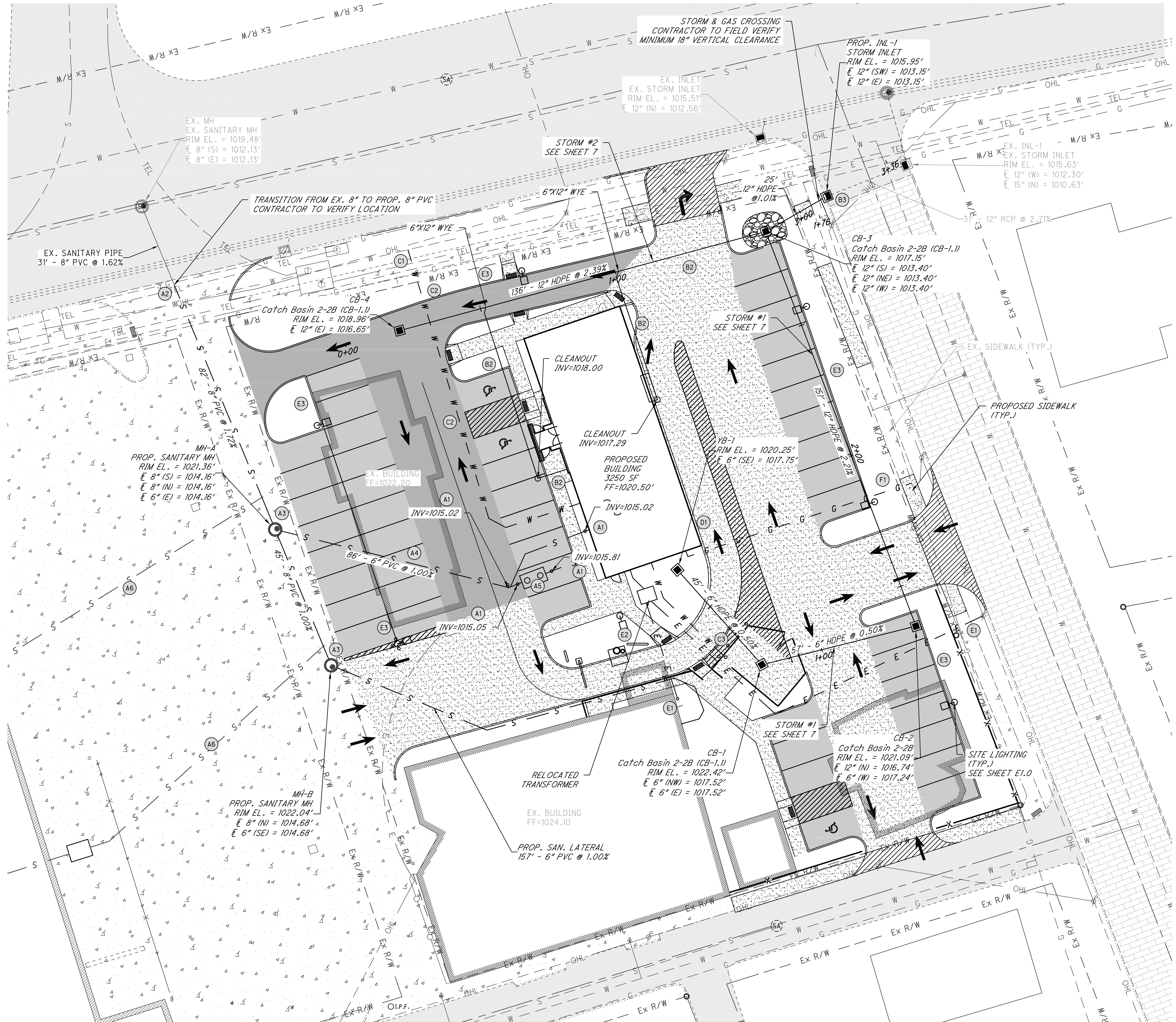

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SCALE (IN FEET)
0 10 20 40
1 inch = 20 ft.

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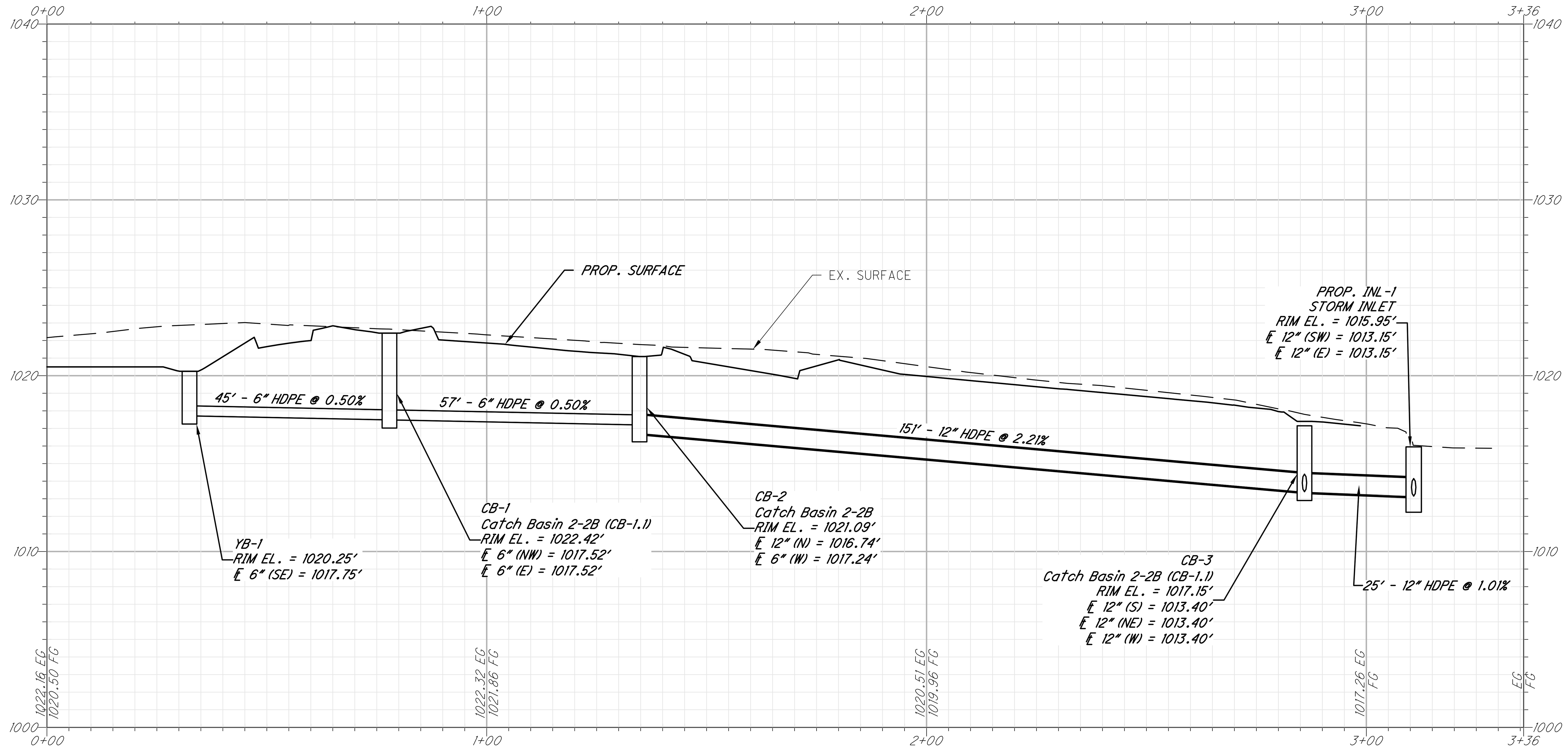
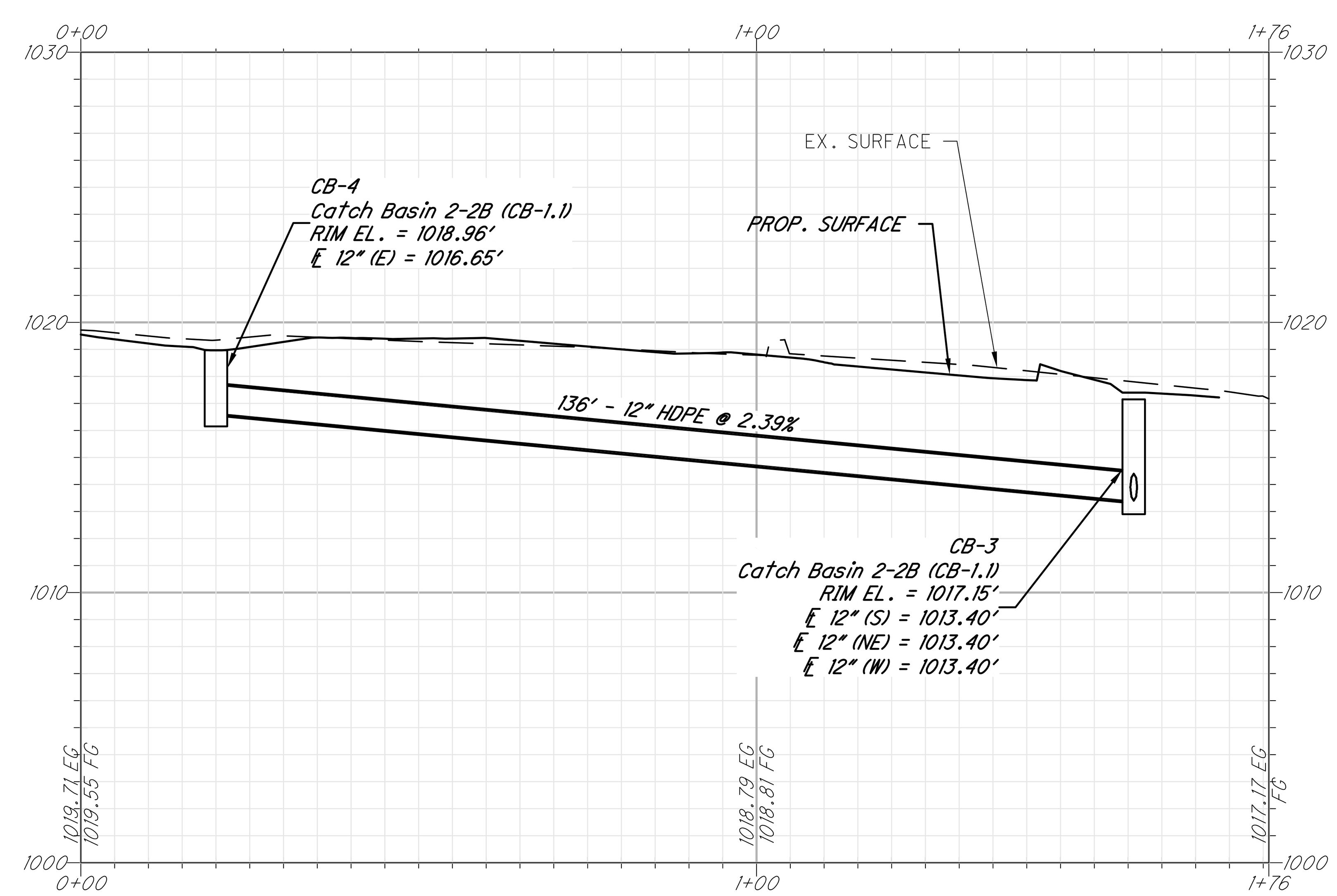
KFC MASSILLON
UTILITY PLAN

PROJECT NUMBER	1712
DATE	2018-05-23



PROFILE: STORM-1

1"=20'H, 1"=5'V



PROFILE: STORM-2

1"=20'H, 1"=5'V

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SCALE (IN FEET)
1 inch = 20 ft.
0 10 20 40

N

KFC MASSILLON

STORM SEWER PROFILES

PROJECT NUMBER: 1712

DATE: 2018-05-23

Kathy Catazaro-Perry, Mayor

Massillon *City of Champions*

CITY OF MASSILLON ENGINEERING
151 LINCOLN WAY EAST
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SANITARY NOTES

SANITARY SEWER SPECIFICATIONS

SANITARY SEWER CONSTRUCTION PROPOSED FOR THIS PROJECT SHALL CONFORM TO THE LATEST CITY OF MASSILLON STANDARDS AND CONSTRUCTION AND MATERIALS SPECIFICATIONS, TEN STATE STANDARDS, AND THE LATEST EDITION OF THE ODOT CMS, OR MODIFIED BY THE CONTRACT DRAWINGS. IF A CONFLICT ARISES BETWEEN SAID STANDARDS IT SHALL BE AT THE DISCRETION OF THE CITY OF MASSILLON ENGINEER AS TO WHICH STANDARD SHALL GOVERN. THE PROJECT CONTRACT DRAWINGS SHALL GOVERN UNLESS NOTED OTHERWISE.

SANITARY GRAVITY SEWER PIPE AND FITTINGS SHALL BE PVC SDR 35 CONFORMING TO ASTM D–3034 UNLESS OTHERWISE NOTED. PVC COMPOUNDS SHALL CONFORM TO ASTM D–1784 PVC PIPE AND FITTINGS SHALL HAVE BELL AND SPIGOT TYPE JOINTS CONFORMING TO ASTM D–3212 AND GASKETS CONFORMING TO ASTM F–477

BACKFILL IN SEWER TRENCHES SHALL CONFORM TO ODOT ITEM 603.10 AND BE PLACED IN LAYERS SUFFICIENT TO MEET THE COMPACTION REQUIREMENT OF 100% OF MAXIMUM LABORATORY DRY DENSITY PER ASTM D–698 AND THOROUGHLY COMPACTED WITH MACHINE MOUNDED COMPACTION EQUIPMENT. THE PLACING OF BACKFILL MATERIAL SHALL BE CONTINUED UNTIL THE TRENCH IS ENTIRELY FILLED AND COMPACTED WITH THE APPROVED GRANULAR MATERIAL TO THE GRADE CALLED FOR ON THE CONTRACT DRAWINGS. EXCAVATED MATERIAL CONFORMING TO ODOT ITEM 203 SHALL BE USED FOR BACKFILLING EXISTING STRUCTURES (AFTER REMOVAL) ONLY. CRUSHED GRAVEL CONFORMING TO GRADATION REQUIREMENTS OF ODOT ITEM 304 OR APPROVED EQUAL AS SHOWN IN ODOT TABLE 703–1 SHALL BE USED FOR BACKFILLING ALL SEWER TRENCH AREAS SHOWN ON THE PLANS AND AS DIRECTED BY THE CITY OF MASSILLON ENGINEER. FLOODING, JETTING, OR PUDDLING OF BACKFILL MATERIAL WILL NOT BE PERMITTED UNLESS APPROVED BY THE CITY OF MASSILLON ENGINEER. COMPACTION TESTING OF THE BACKFILL BY A GEOTECHNICAL ENGINEER MAY BE REQUIRED BY THE OWNER AT THE EXPENSE OF THE CONTRACTOR.

SANITARY SEWERS SHALL BE AIR TESTED FOR LEAKAGE AND MANDREL TESTED FOR DEFLECTION. THE MAXIMUM ALLOWABLE PIPE DEFLECTION SHALL BE 5%.

SANITARY SEWER MANHOLE FRAMES SHALL CONFORM TO EAST JORDON TYPE MASSILLON 1048 OR APPROVED EQUAL.
SANITARY SEWER MANHOLE LIDS SHALL CONFORM TO EAST JORDON TYPE MASSILLON 1040AGS OR APPROVED EQUAL.

PRIOR TO FINAL PAYMENT FOR AND ACCEPTANCE OF SANITARY SEWER INSTALLATION THE RESULTS OF THE AIR PRESSURE TESTS, TELEVISION TESTS AND MADREL TESTS SHALL BE FORWARDED TO THE CITY OF MASSILLON ENGINEER.

DEFLECTION TESTING

MAXIMUM ALLOWABLE PIPE DEFLECTION (REDUCTION IN VERTICAL INSIDE DIAMETER) SHALL BE 5%. DEFLECTION TESTS OF PIPE SHALL BE PERFORMED NOT SOONER THAN 30 DAYS AFTER THE BACKFILL HAS BEEN PROPERLY PLACED AND BEFORE FINAL ACCEPTANCE. LOCATIONS WITH EXCESS DEFLECTION SHALL BE EXCAVATED AND REPAIRED BY RE–BEDDING OR REPLACEMENT OF THE PIPE AT THE CONTRACTOR'S EXPENSE. DEVICES FOR TESTING INCLUDE A DEFLECTOMETER METER, OR PROPERLY SIZED (60, NO–GO) MANDREL OR SEWER BALL. THE DEFLECTION TESTING MUST BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES. FOR THE PURPOSE OF DEFLECTION MEASUREMENTS, THE BASE INSIDE PIPE DIAMETERS WITHOUT DEFLECTION ARE PROVIDED IN TABLE A. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE APPLIED TO THE BASE INSIDE DIAMETER IN DETERMINING THE MINIMUM PERMISSIBLE DIAMETER. IT MUST BE EMPHASIZED THAT TO INSURE ACCURATE TESTING, THE LINES MUST BE THOROUGHLY CLEANED.

TABLE A
INSIDE DIAMETERS FOR DEFLECTION MEASUREMENTS
OF ASTM D 3034 SDR 35 / SDR 21 PVC SEWER PIPE

SIZE	SDR	AVG. O.D.	BASE I.D.	DEFLECTION MANDREL
6"	35	6.275	5.742	5.54
8"	35	8.400	7.665	7.28
10"	35	10.500	9.563	9.08
12"	35	12.500	11.361	10.79

TELEVISION TESTING

ALL SANITARY SEWERS, 8–INCH DIAMETER AND LARGER, MUST PASS AN INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE A COMPLETE INTERNAL INSPECTION DVD TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT. THE RECORDING PROCEDURE SHALL BE IN ACCORDANCE WITH CITY OF MASSILLON ENGINEERING DEPARTMENT STANDARDS.

LEAKAGE TESTS

LEAKAGE TESTS SHALL BE PERFORMED WHICH MAY INCLUDE APPROPRIATE WATER OR LOW PRESSURE AIR TESTING. THE TESTING METHODS SELECTED SHOULD TAKE INTO CONSIDERATION THE RANGE IN GROUNDWATER ELEVATIONS DURING THE TEST AND ANTICIPATED DURING THE DESIGN LIFE OF THE SEWER COMPLETED AND ACCEPTED.

WATER (HYDROSTATIC) TEST

THE LEAKAGE EXFILTRATION OR INFILTRATION SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY [9L/(MM OF PIPE DIAMETER KM D)] FOR ANY SECTION OF THE SYSTEM. AN EXFILTRATION OR INFILTRATION TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET (0.6 M).

AIR TESTING AS PER ASTM F1417

AIR TESTING WILL BE CONDUCTED AS THE PROJECT IS BEING CONSTRUCTED. AT NO TIME WILL MORE THAN 900 FEET OF PIPE BE INSTALLED BEFORE AIR TESTING IS PERFORMED. SEWAGE WILL NOT BE DIVERTED TO ANY SECTION OF PIPE, REGARDLESS OF LENGTH, UNTIL ALL TESTING IS COMPLETED AND ACCEPTED.

AFTER BACKFILLING A MANHOLE TO MANHOLE REACH OF SANITARY SEWER LINE, THE CONTRACTOR SHALL, AT HIS EXPENSE, CONDUCT THE LINE ACCEPTANCE TESTS. THE TESTS SHALL BE PERFORMED ACCORDING TO THE STATED PROCEDURES AND UNDER THE SUPERVISION OF THE CITY OF MASSILLON ENGINEER OR HIS REPRESENTATIVE.

EQUIPMENT USED SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS AND BE APPROVED BY THE CITY OF MASSILLON ENGINEER:

1. PNEUMATIC PLUGS SHALL HAVE A SEALING LENGTH EQUAL TO OR A GREATER THAN THE DIAMETER OF THE PIPE BEING INSPECTED.
2. PNEUMATIC PLUGS SHALL RESIST INTERNAL TEST PRESSURES WITHOUT REQUIRED EXTERNAL BRACING OR BLOCKING.
3. ALL AIR USED SHALL PASS THROUGH A SINGLE CONTROL PANEL.
4. THREE INDIVIDUAL HOSES SHALL BE USED FOR THE FOLLOWING CONNECTIONS:
   a. FROM CONTROL PANEL TO PNEUMATIC PLUGS FOR INFLATION.
   b. FROM CONTROL PANEL TO SEALED LINE FOR INTRODUCING THE LOW PRESSURE AIR.
   c. FROM SEALED LINE TO CONTROL PANEL FOR CONTINUALLY MONITORING AIR PRESSURE RISE IN THE SEALED LINE.

TEST EQUIPMENT TESTING PROCEDURES SHALL BE AS FOLLOWS:

ALL PNEUMATIC PLUGS SHALL BE SEAL TESTED BEFORE BEING USED IN THE ACTUAL TEST INSTALLATION. ONE LENGTH OF PIPE SHALL BE LAID ON THE GROUND AN SEALED AT BOTH ENDS WITH THE PNEUMATIC PLUGS TO BE CHECKED. THE SEALED PIPE SHALL BE PRESSURED TO 5 PSIG. THE PLUGS MUST HOLD AGAINST THIS PRESSURE WITHOUT HAVING TO BE BRACED.
AFTER A MANHOLE TO MANHOLE REACH OF PIPE HAS BEEN BACKFILLED AND CLEANED, AND THE PNEUMATIC PLUGS ARE CHECKED BY THE ABOVE PROCEDURE, THE PLUGS SHALL BE PLACED IN THE LINE AT EACH MANHOLE. LOW PRESSURE AIR SHALL BE SLOWLY INTRODUCED INTO THIS SEALED LINE UNTIL THE INTERNAL AIR PRESSURE REACHES APPROXIMATELY 4 PSI.

Kathy Catazaro-Perry, Mayor

Massillon *City of Champions*

CITY OF MASSILLON ENGINEERING
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SANITARY NOTES

CONTINUED: AIR TESTING AS PER ASTM F1417

AT LEAST TWO MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE. WHEN THE PRESSURE HAS STABILIZED AND IS AT OR ABOVE 3.5 PSIG, THE AIR HOSE FROM THE CONTROL PANEL TO THE AIR SUPPLY SHALL BE DISCONNECTED. THE PORTION OF THE LINE BEING TESTED SHALL BE TERMED "ACCEPTABLE" IF THE TIME REQUIRED IN MINUTES FOR THE PRESSURE TO DECREASE FROM 3.5 TO 2.5 PSIG (GREATER THEN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY BE OVER THE PIPE) SHALL NOT BE LESS THAN THE TIME SHOWN FOR THE GIVEN DIAMETERS IN THE FOLLOWING TABLE:

PIPE DIAMETER IN.	MINIMUM TIME MINUTES	LENGTH FOR MINUTES TIME, FT.	TIME FOR LONGER LENGTH, S	SPECIFICATION TIME LENGTH (L) SHOWN, MINUTES							
				100 FT.	150 FT.	200 FT.	250 FT.	300 FT.	350 FT.	400 FT.	450 FT.
4	3:46	597	0.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	0.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520 L	7:34	7:34	7:34	7:36	7:36	8:52	10:08	11:24
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	198	3.416 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	6.342 L	14:10	14:10	17:46	22:15	26:42	31:09	35:36	40:04
18	17:0	133	7.692 L	17:00	19:13	25:38	32:09	38:27	44:52	51:16	57:41

IN AREAS WHERE GROUND WATER IS KNOWN TO EXIST, THE CONTRACTOR SHALL INSTALL A 1/2 INCH DIAMETER CAPPED PIPE NIPPLE APPROXIMATELY 10 INCHES LONG, THROUGH THE MANHOLE WALL ON TOP OF ONE OF THE SANITARY SEWER LINES ENTERING THE MANHOLE. THIS SHALL BE DONE AT THE TIME THE SANITARY SEWER LINE IS INSTALLED. IMMEDIATELY PRIOR TO THE PERFORMANCE OF THE LINE ACCEPTABILITY TEST, THE GROUND WATER SHALL BE DETERMINED BY REMOVING THE PIPE CAP, BLOWING AIR THROUGH THE PIPE NIPPLE IN THE GROUND SO AS TO CLEAR IT, AND THEN CONNECTING A CLEAR PLASTIC TUBE TO THE NIPPLE. THE PLASTIC TUBE SHALL BE VERTICAL AND A MEASUREMENT OF THE HEIGHT, IN FEET OF WATER OVER THE INVERT OF THE PIPE, SHALL BE TAKEN AFTER THE WATER HAS STOPPED RISING IN THIS PLASTIC TUBE. THE HEIGHT, IN FEET OF WATER OVER THE INVERT OF THE PIPE, SHALL BE TAKEN AFTER THE WATER HAS STOPPED RISING IN THIS PLASTIC TUBE. AIR TEST PRESSURE IS TO BE INCREASED BY 0.433 PSI FOR EACH FOOT THE GROUND WATER IS ABOVE THE INVERT OF THE SEWER LINE BEING TESTED. THE ALLOWABLE DROP OF ONE POUND AND THE TIMING OF THE TEST REMAIN THE SAME.

IF A LINE ACCEPTABILITY TEST IS BEING CONDUCTED ON MORE THAN ONE MANHOLE REACH OF PIPE, THE ENTIRE SECTION BEING TESTED SHALL MEET THE LINE ACCEPTABILITY REQUIREMENTS AS IF ONLY ONE (1) OF THE MANHOLE REACHES IN THE SECTION WERE BEING TESTED.

NEGATIVE AIR PRESSURE (VACUUM) TESTING OF MANHOLES AS PER ASTM C–1244

PREPARATION OF THE MANHOLE:

A. ALL LIFT HOLES SHALL BE PLUGGED.
B. ALL PIPES ENTERING THE MANHOLE SHALL BE TEMPORARILY PLUGGED, TAKING CARE TO SECURELY BRACE THE PIPES AND PLUGS TO PREVENT THEM FROM BEING DRAWN INTO THE MANHOLE.

PROCEDURE:

A. THE TEST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
B. A VACUUM OF 10 IN. OF MERCURY SHALL BE DRAWN ON THE MANHOLE, THE VALVE ON THE VACUUM LINE OF THE TEST HEAD CLOSED, AND THE VACUUM PUMP SHUT OFF. THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 IN OF MERCURY.
C. THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM 10 IN. OF MERCURY TO 9 IN. OF MERCURY MEETS OR EXCEEDS THE VALUES INDICATED IN TABLE BELOW.

MINIMUM TEST TIMES FOR MANHOLES

DEPTH (FT)	DIAMETER, IN.								
	30	33	36	42	48	54	60	66	72
	TIME, IN SECONDS								
8	11	12	14	17	20	23	26	29	33
10	14	15	18	21	25	29	33	36	41
12	17	18	21	25	30	35	39	43	49
14	20	21	25	30	35	41	46	51	57
16	22	24	39	34	40	46	52	58	67
18	25	27	32	38	45	52	59	65	73
20	28	30	35	42	50	53	65	72	81

CLEAN WATER STATEMENT

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

RELATION TO WATER MAINS

SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER.

WORKING AREA

NO EXCAVATION WITH SIDE SLOPES STEEPER THAN 2:1 AND/OR DEEPER THAN 2', OPEN CASTINGS AND PIPES SHALL BE LEFT EXPOSED WHEN THE SITE IS UNATTENDED BY THE CONTRACTOR. THE CONTRACTOR SHALL SECURE ALL SUCH EXCAVATIONS, OPEN CASTINGS AND PIPES AGAINST UNAUTHORIZED ENTRY COVERING WITH STEEL PLATES, TEMPORARY BACKFILLING, FENCING AND SECURITY SERVICES SHALL BE INCLUDED IN THE PRICE BID FOR THE WORK.

FINAL APPROVAL

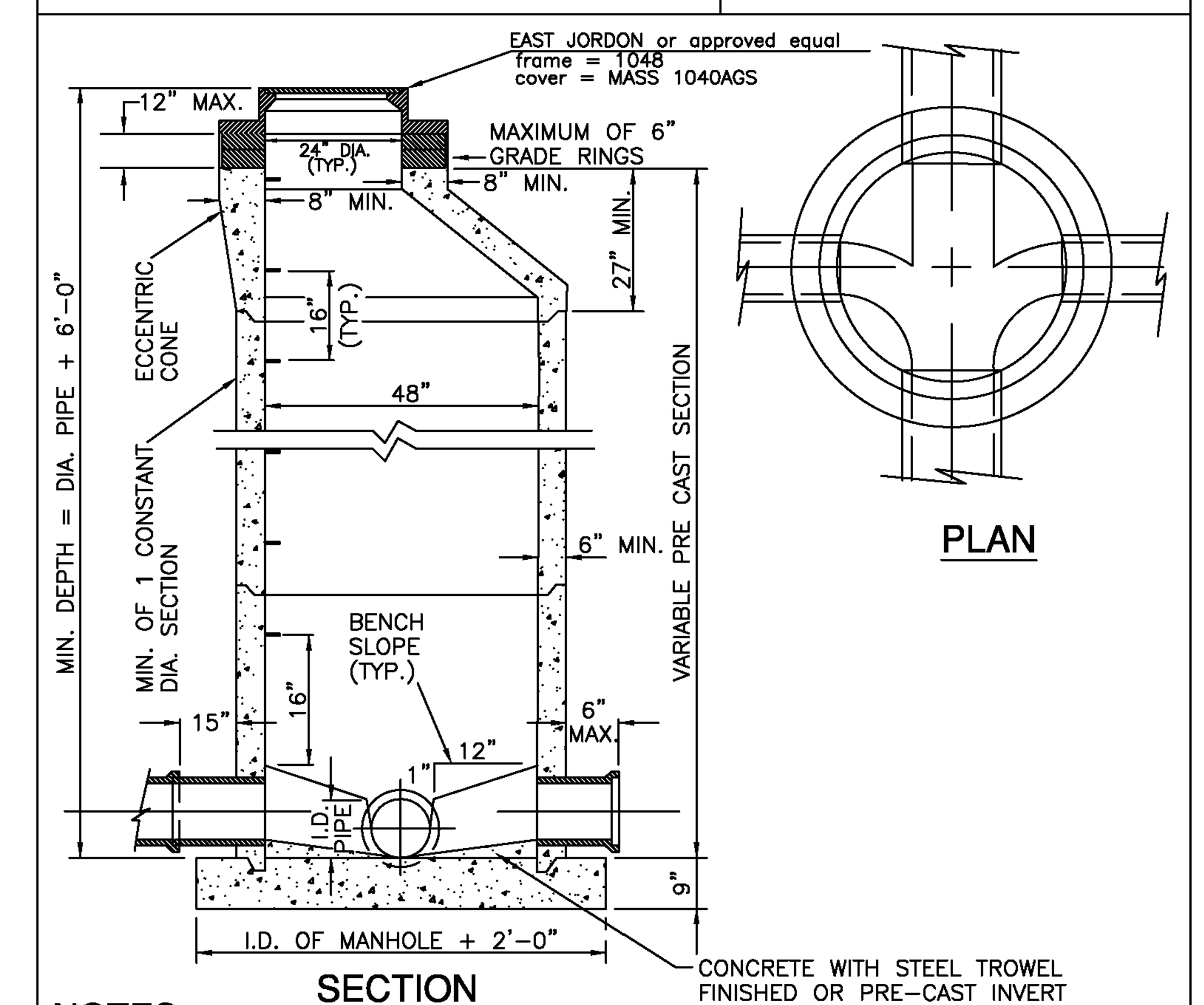
A VIDEO IN THE FORM OF DVD WILL BE MADE BY THE CONTRACTOR AND SUBMITTED TO THE CITY OF MASSILLON ENGINEER PRIOR TO THE PROJECT COMMENCING. AFTER THE FINAL INVOICE IS SUBMITTED THE SITE SHALL BE VIDEOED AGAIN BY THE CONTRACTOR. ANY DISCREPANCIES WILL BE RESOLVED PRIOR TO FINAL PAYMENT. AS BUILT DRAWINGS SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE CITY OF MASSILLON ENGINEER IN A CLEAR AND LEGENDABLE MANNER PRIOR TO FINAL INVOICE.
COST OF THIS WORK SHALL BE INCLUDED IN ITEM 623 CONSTRUCTION STAKING

Kathy Catazaro-Perry, Mayor

Massillon *City of Champions*

CITY OF MASSILLON ENGINEERING
151 LINCOLN WAY EAST
MASSILLON, OHIO (330)830–1722
FAX: (330)830–1786

SANITARY MANHOLE TYPE 3 SEWERS 8" TO 21"



NOTES:

1. IF TOP STEP IS IN 24" DIA. OPENING IT MAY PROJECT NO MORE THAN 3 1/2".
2. M.A. IND. PS–1–PF STEPS OR APPROVED EQUAL.
3. FOR SPECIFICATIONS REGARDING CONCRETE TO BE USED IN MANHOLES SEE ITEM NO. 4&16.
4. FOR PVC & ABS PIPE CONNECTIONS USE ASTM C–923 FLEXIBLE GASKET SUCH AS A–LOK, DURA SEAL III, KOR–N–SEAL OR APPROVED EQUAL. THIS METHOD ALSO ACCEPTABLE FOR VCP.
5. PRE CAST MANHOLES SECTIONS SHALL MEET ASTM C–478.
6. MANHOLE JOINTS SHALL MEET ASTM C–443.
7. MANHOLE ADJUSTMENTS TO GRADE WILL BE NO GREATER THAN 12", USING PRECAST COLLARS MEETING ASTM C–478

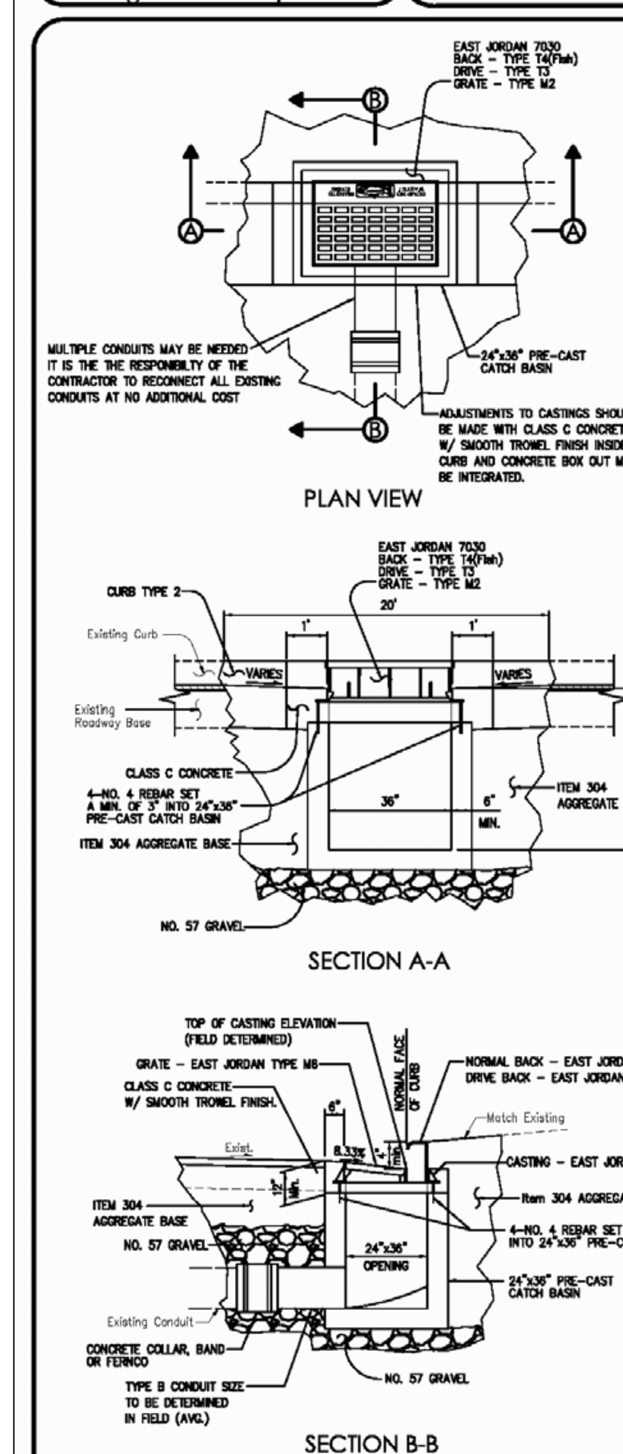
Kathy Catazaro-Perry, Mayor

Massillon *City of Champions*

ITEM 604 MASS7030

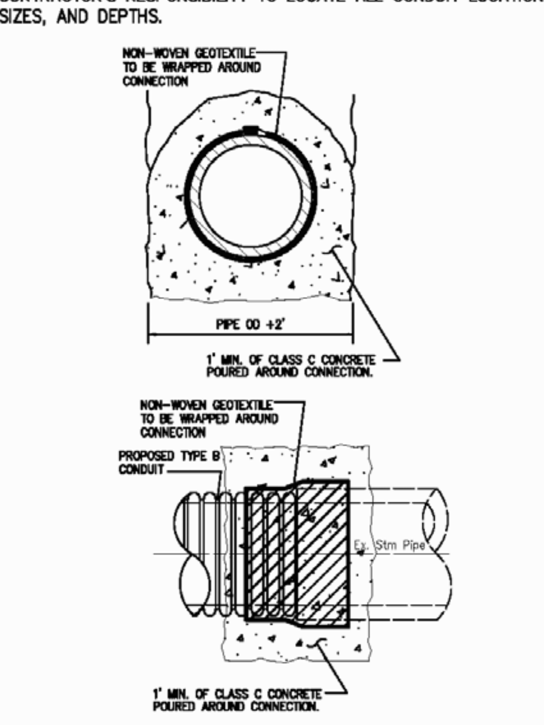
City of Massillon
Stark County, Ohio

DRAWING NAME: ________.DWG
CITY NUMBER: 13st01



ITEM 604 CATCH BASIN MASS7030				
Location Description	Removed	Side	A	Conduits

\# – CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL CONDUIT LOCATIONS, SIZES, AND DEPTHS.

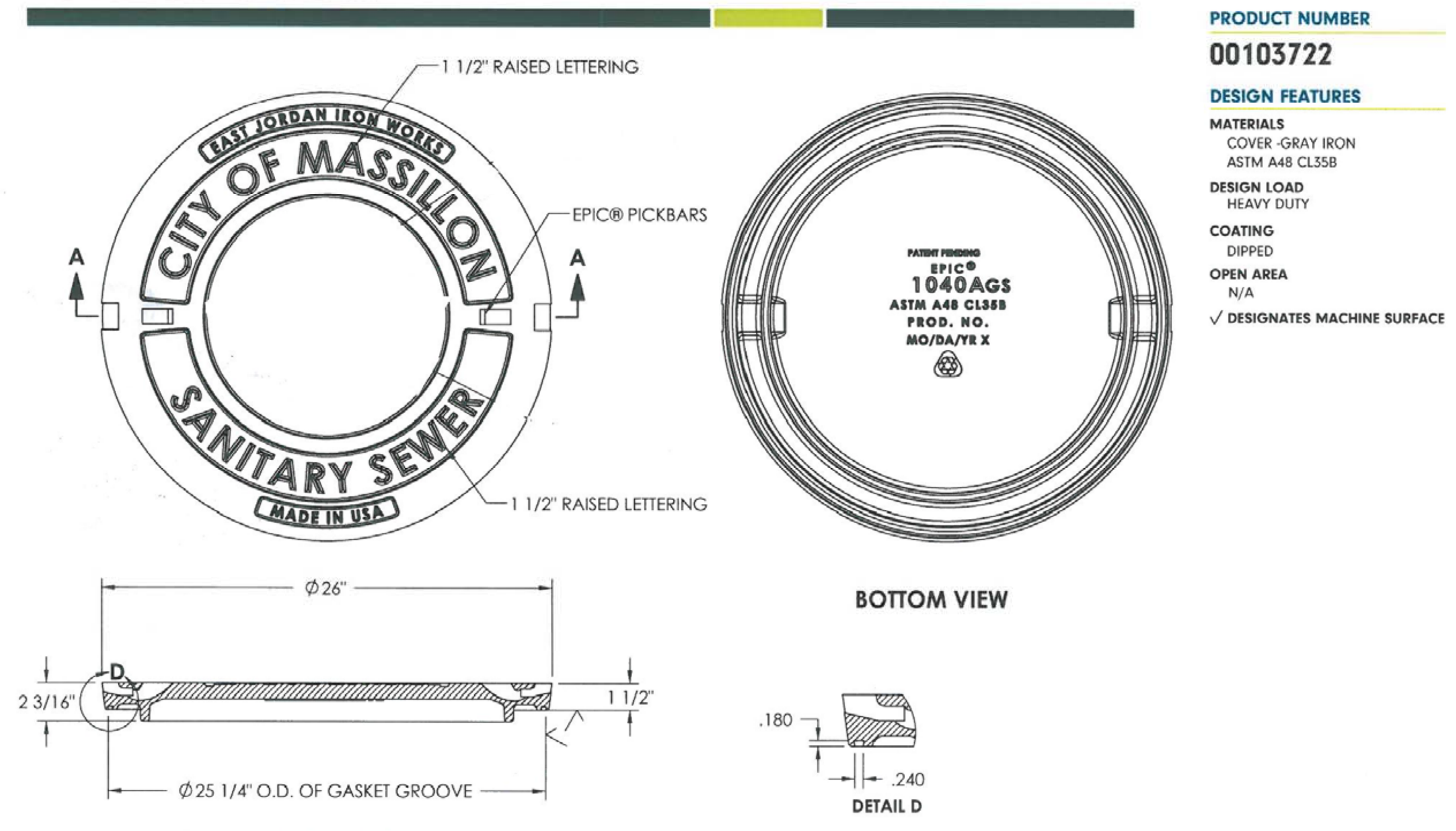


CONCRETE COLLAR

NOTE:

ALL MATERIAL AND LABOR TO PERFORM THE PROPER INSTALLATION OF TYPE ITEM 604 MASS7030 SHALL BE INCLUDED IN THE UNIT PRICE BID. THIS INCLUDES BUT NOT LIMITED TO THE REMOVAL OF EXISTING STRUCTURES, CONDUIT, ROADWAY, CURB, INSTALLATION OF 57 GRAVEL, ITEM 304 AGGREGATE BASE, JOINT SEALER CONDUIT PIPE, FERNCO, CLASS C CONCRETE, CONCRETE COLLAR, AND CURBIING.

1040AGS COVER

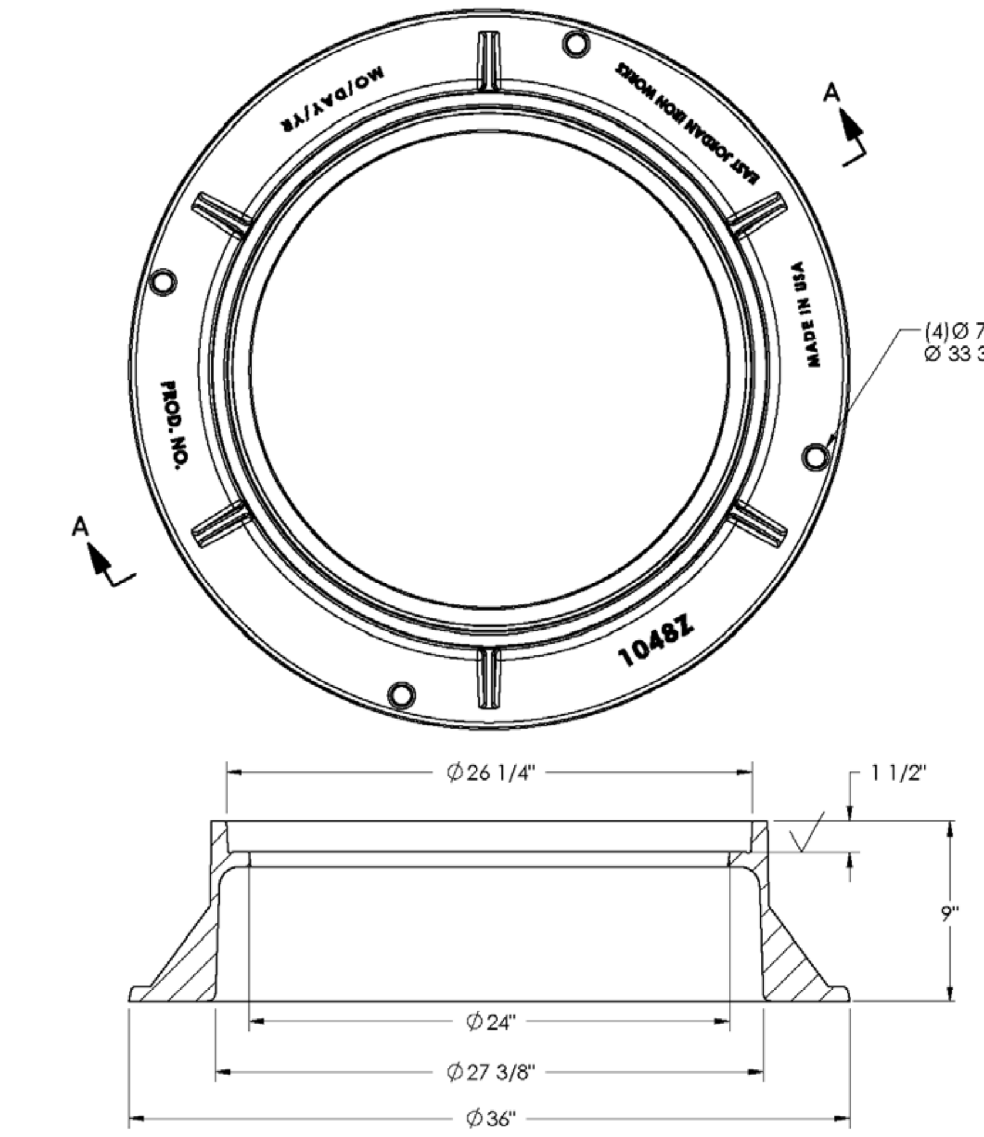


PRODUCT NUMBER
00103722

DESIGN FEATURES
MATERIALS: COVER -GRAY IRON ASTM A48 CL35B
DESIGN LOAD: HEAVY DUTY
COATING: DIPPED
OPEN AREA: N/A
√ DESIGNATES MACHINE SURFACE

Corporate Headquarters
301 Spring Street
PO Box 439
East Jordan, MI
49727-0439
800.874.4100

DRAWING DETAILS
ORIGINAL DRAWING: 3/28/2010
REVISED BY: DEF 4/15/2010



EJIW EAST JORDAN IRON WORKS
800-626-4663
www.ejiw.com
MADE IN USA

PRODUCT NUMBER	00104810
CATALOG NUMBER	1048Z
	FRAME
LOAD RATING	HEAVY DUTY
COATING	DIPPED
SPECIFICATION	FRAME-GRAY IRON ASTM A48 CL35B
ESTIMATED WEIGHT	224 LBS.
OPEN AREA	N/A
√ DESIGNATES MACHINED SURFACE	
DRAWN DVDS-VP	DATE 7/14/2009
LAST REVISED DEW	DATE 8/6/2009

TGC Engineering, LLC
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

1 CITY OF MASSILLON (2018-05-08)

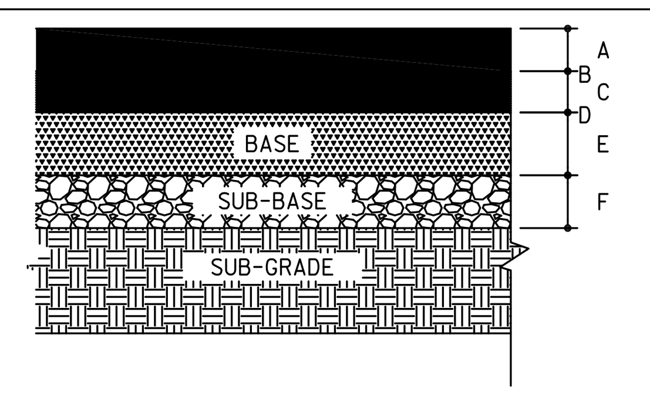
KFC MASSILLON

NOTES & DETAILS

PROJECT NUMBER: 1712

DATE: 2018-05-23

STATE OF OHIO CHRISTOPHER M. SCHMIDT E-80749 REGISTERED PROFESSIONAL ENGINEER

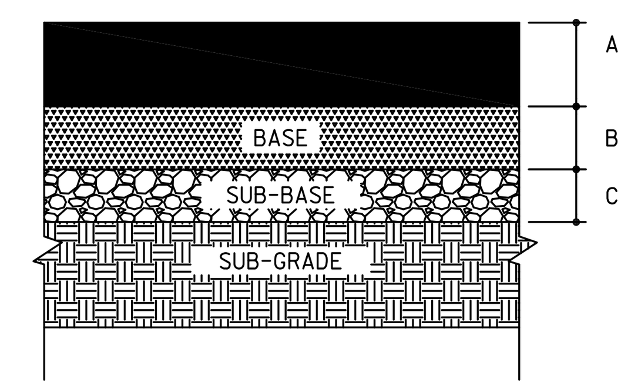


HEAVY DUTY ASPHALT PAVING SECTION
A= 1.5" ODOT ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, P.G. 64-22
B= ODOT ITEM 407, TACK COAT
C= 4.5" ODOT ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, P.G. 64-22.
D= ODOT ITEM 408, PRIME COAT
E= 3.0" ODOT 304, AGGREGATE BASE COURSE
F= OMITTED

LIGHT DUTY ASPHALT PAVING SECTION
A= 1.5" ODOT ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, P.G. 64-22
B= ODOT ITEM 407, TACK COAT
C= 1.5" ODOT ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, P.G. 64-22.
D= ODOT ITEM 408, PRIME COAT
E= 6.0" ODOT 304, AGGREGATE BASE COURSE
F= OMITTED

GENERAL NOTES
1. ALL ASPHALT CONSTRUCTION TO CONFORM TO LATEST VERSION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS.
2. VERIFY SUB-GRADE MEETS MINIMUM REQUIREMENTS STATED IN GEOTECHNICAL REPORT.
3. COMPACT BASE AND SUB-BASE TO 90% RELATIVE DENSITY PER ASTM D2049.

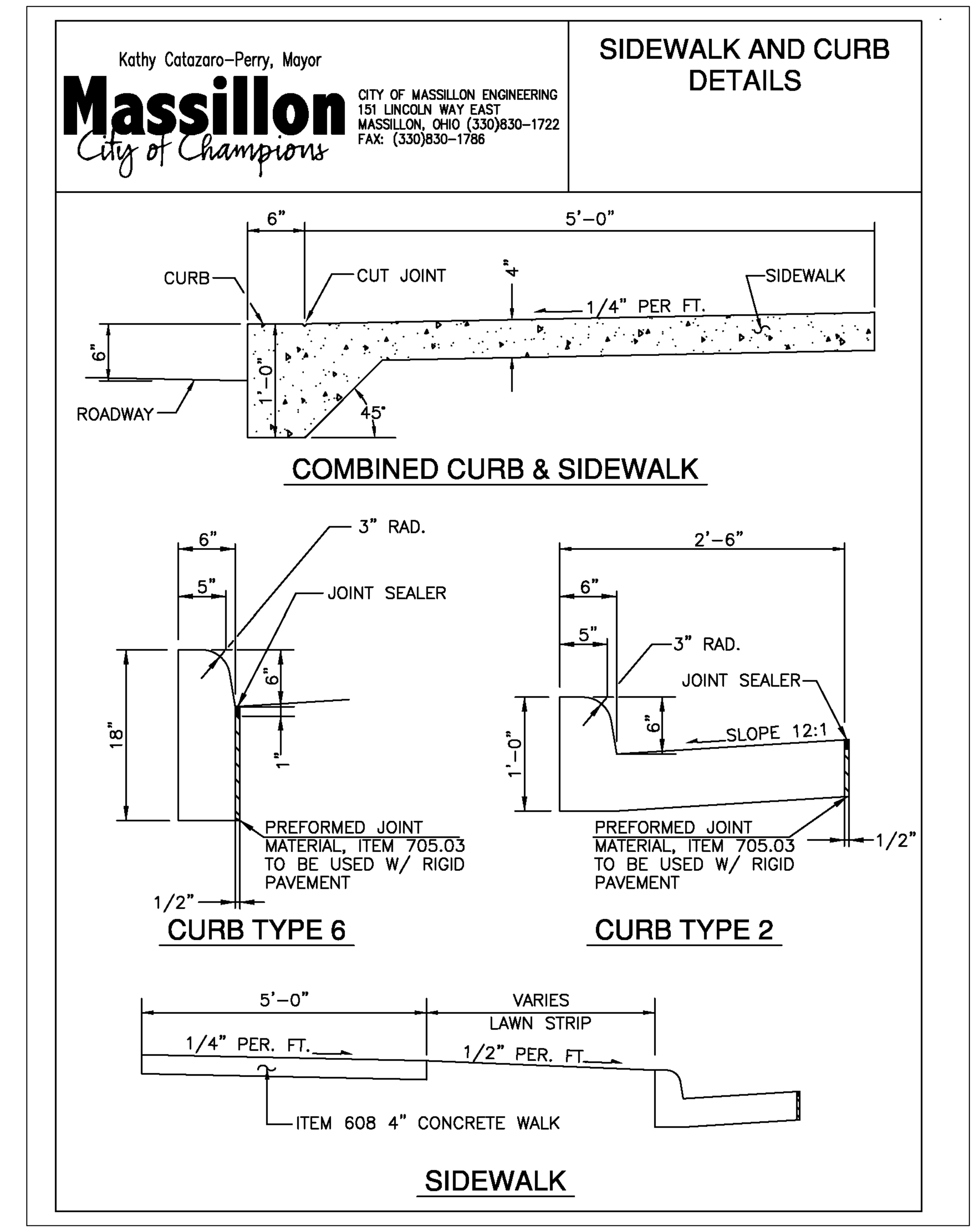
FLEXIBLE PARKING LOT PAVEMENT DETAIL
N.T.S.

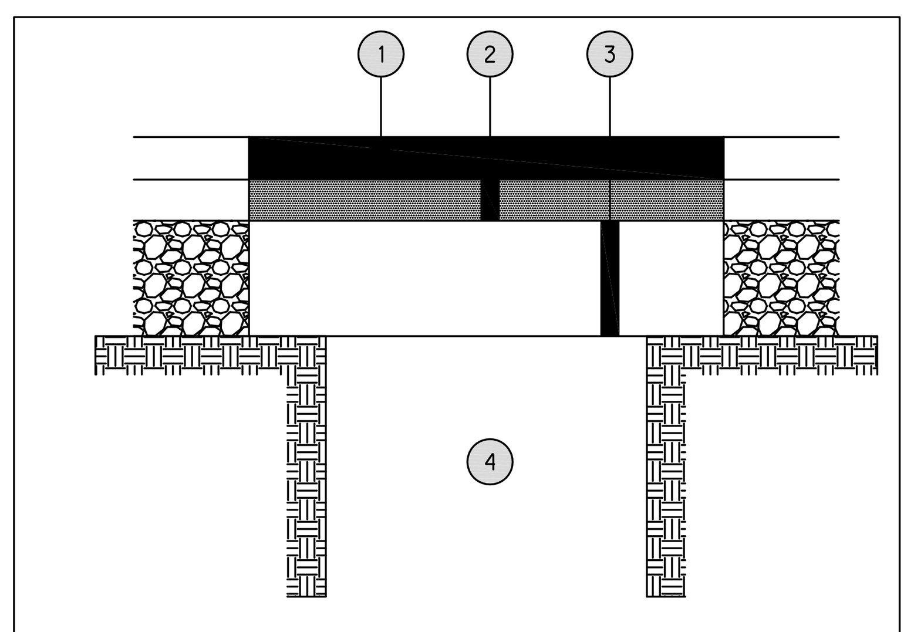


CONCRETE PAVING SECTION
A= 6.0" YARD PAVING AND DUMPSTER PAD
B= 4.0" ODOT 304, AGGREGATE BASE COURSE
C= 4.0" ODOT ITEM 703, #57 CRUSHED STONE

GENERAL NOTES
1. VERIFY SUB-GRADE MEETS MINIMUM REQUIREMENTS STATED IN GEOTECHNICAL REPORT.
2. PROVIDE 3/8" X 4" IMPREGNATED FIBERBOARD EXPANSION JOINT AT 30' O.C.
3. PROVIDE 3/8" X 1-1/4" CONTROL JOINT AT 10' O.C. (WHERE MEETING ADJACENT CONCRETE OR STRUCTURES).
4. PROVIDE SMOOTH DOWELS AT ALL CONSTRUCTION JOINTS.
5. PROVIDE CONCRETE WITH AIR ENTRAINMENT OF 5%, 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
6. PROVIDE LIGHT BROOM FINISH ON ALL EXTERIOR CONCRETE.
7. COMPACT BASE AND SUB-BASE TO 90% RELATIVE DENSITY PER ASTM D2049.

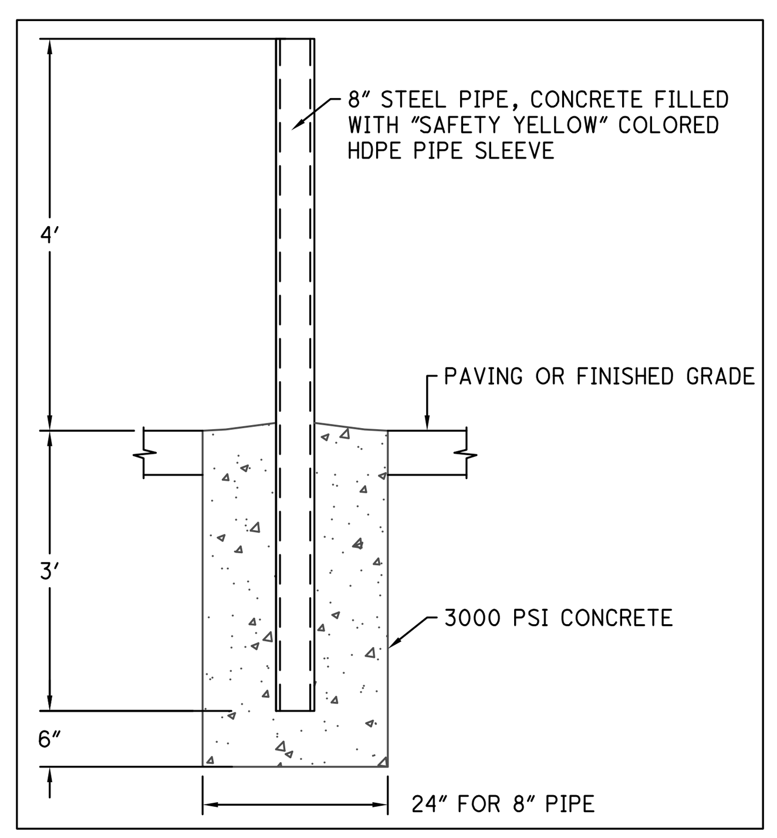
RIGID PAVEMENT DETAIL
N.T.S.



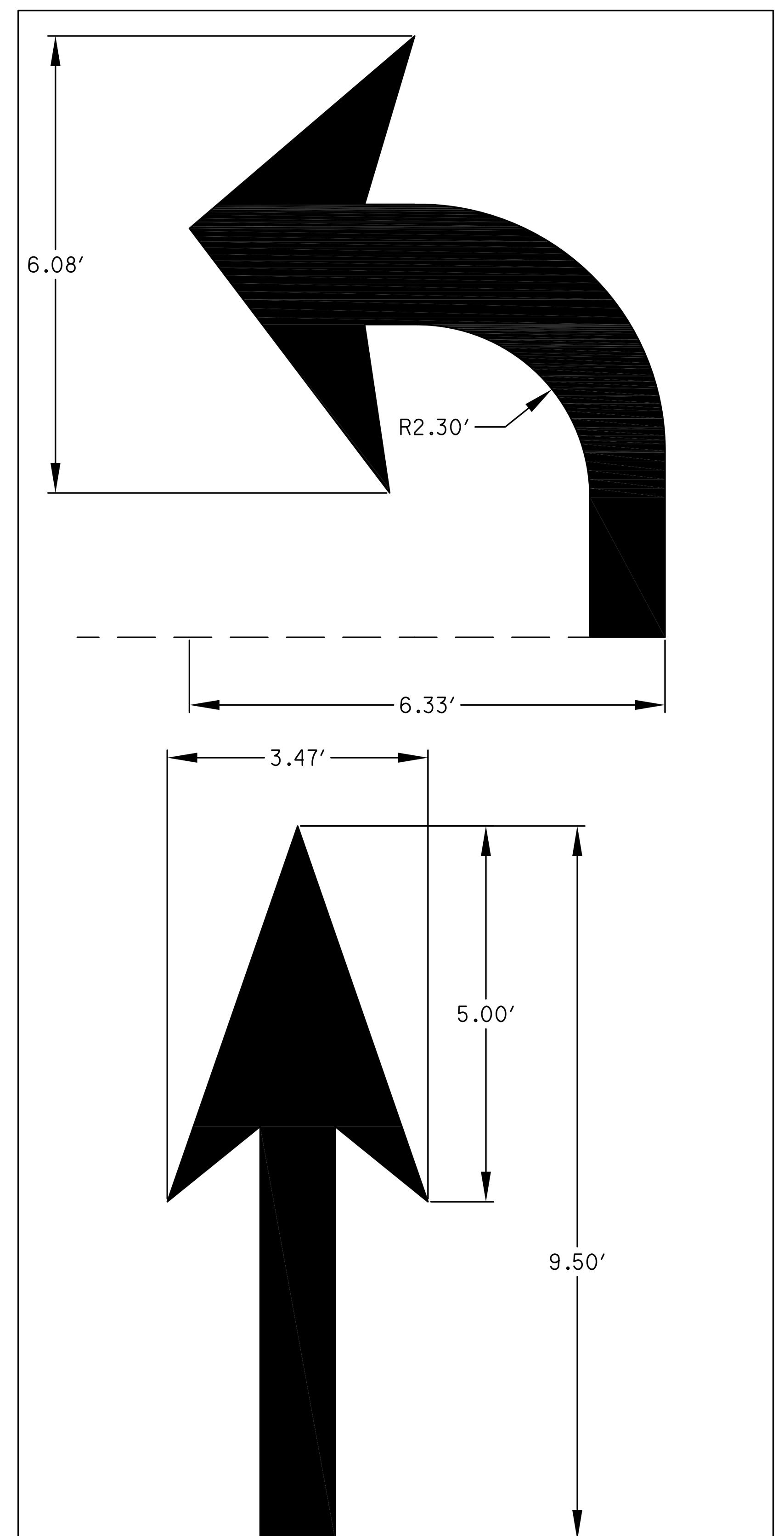


O.D.O.T. SPECIFICATION REFERENCE
1. 1.5" ODOT ITEM 448, ASPHALT CONCRETE SURFACE COURSE
2. 2.0" ODOT ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE
3. 6.0" ODOT 301, ASPHALT CONCRETE BASE COURSE
4. ITEM 613, LOW STRENGTH MORTAR BACKFILL-TYPE 2

OPEN CUT DETAIL
N.T.S.

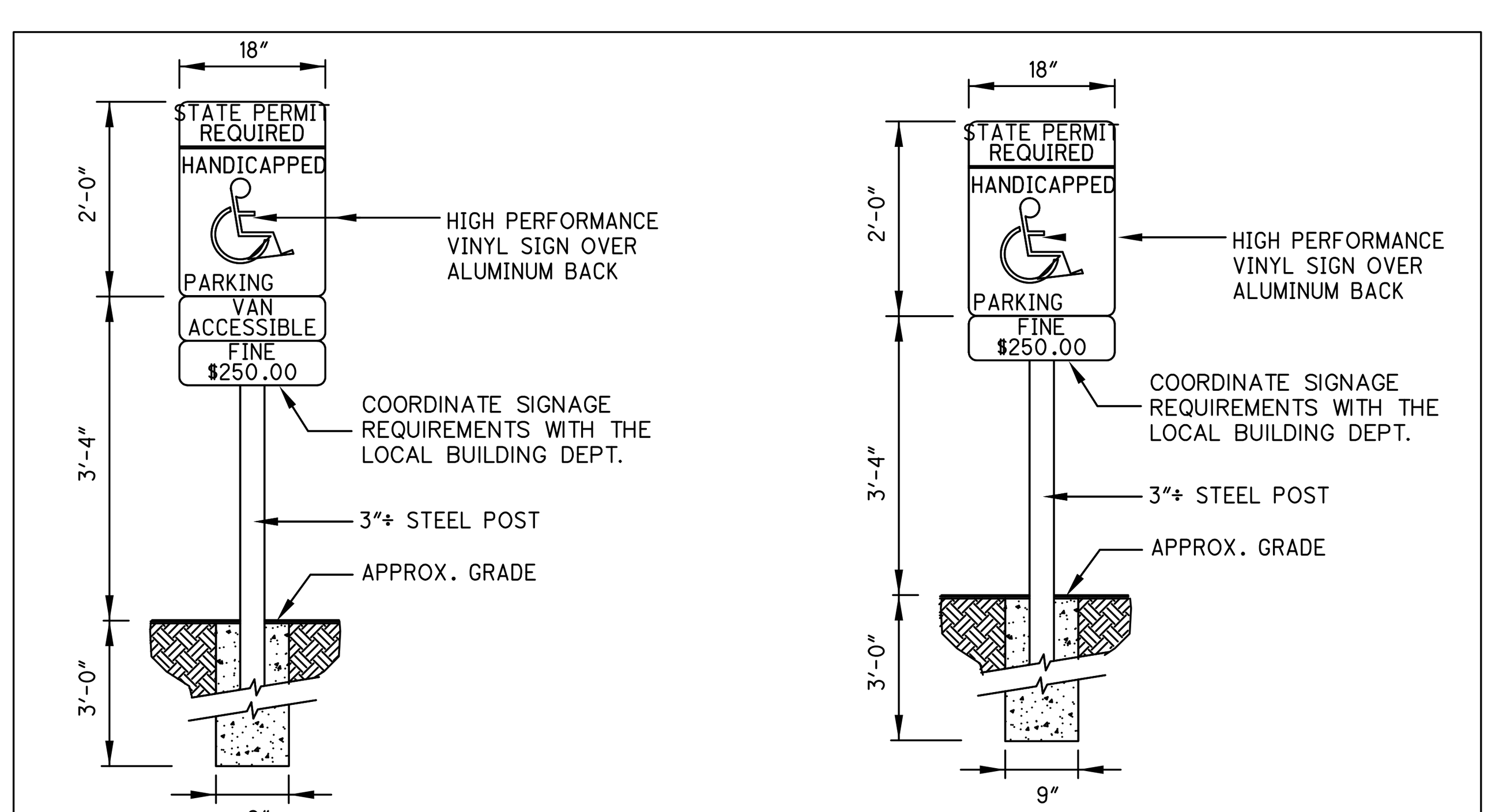


BOLLARD DETAIL
N.T.S.

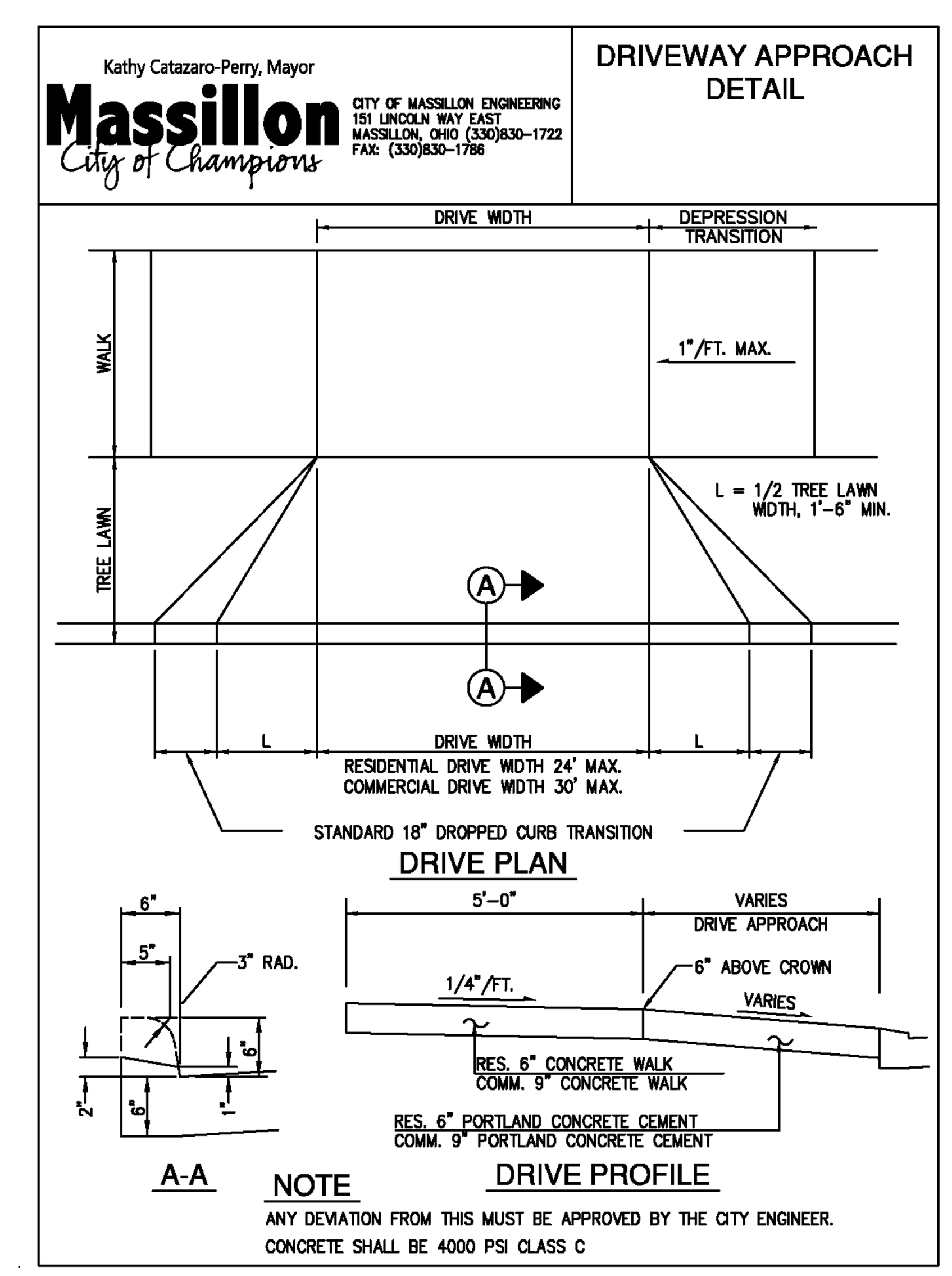


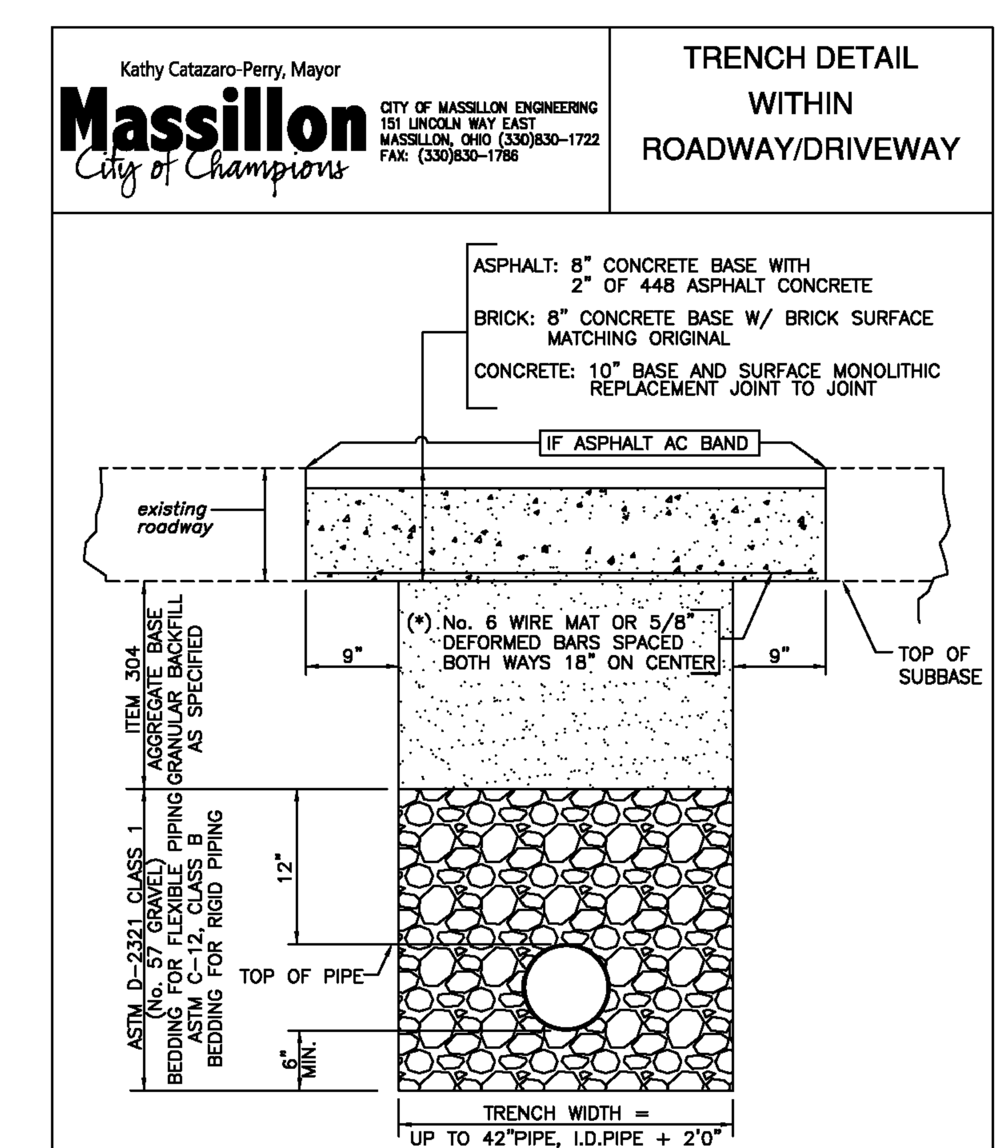
GENERAL NOTES
1. PAVEMENT MARKINGS SHALL CONFORM WITH THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 640 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

PAVEMENT MARKINGS DETAIL
N.T.S.



HANDICAP PARKING SIGN DETAIL
N.T.S.





NOTES
1) CONCRETE BASE SHALL BE OF 1:2:4, 6 BAG MIX, PORTLAND CEMENT CONCRETE USING HIGH EARLY STRENGTH CEMENT AND IT MUST BE CURED AT LEAST 48 HRS.
(*) MUST BE USED WHEN WIDTH OF TRENCH IS GREATER THAN 3' AT THE SUBBASE. FIBER CONCRETE BASE MAY BE USED IN LIEU OF THE BARS.

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED
PROFESSIONAL ENGINEER

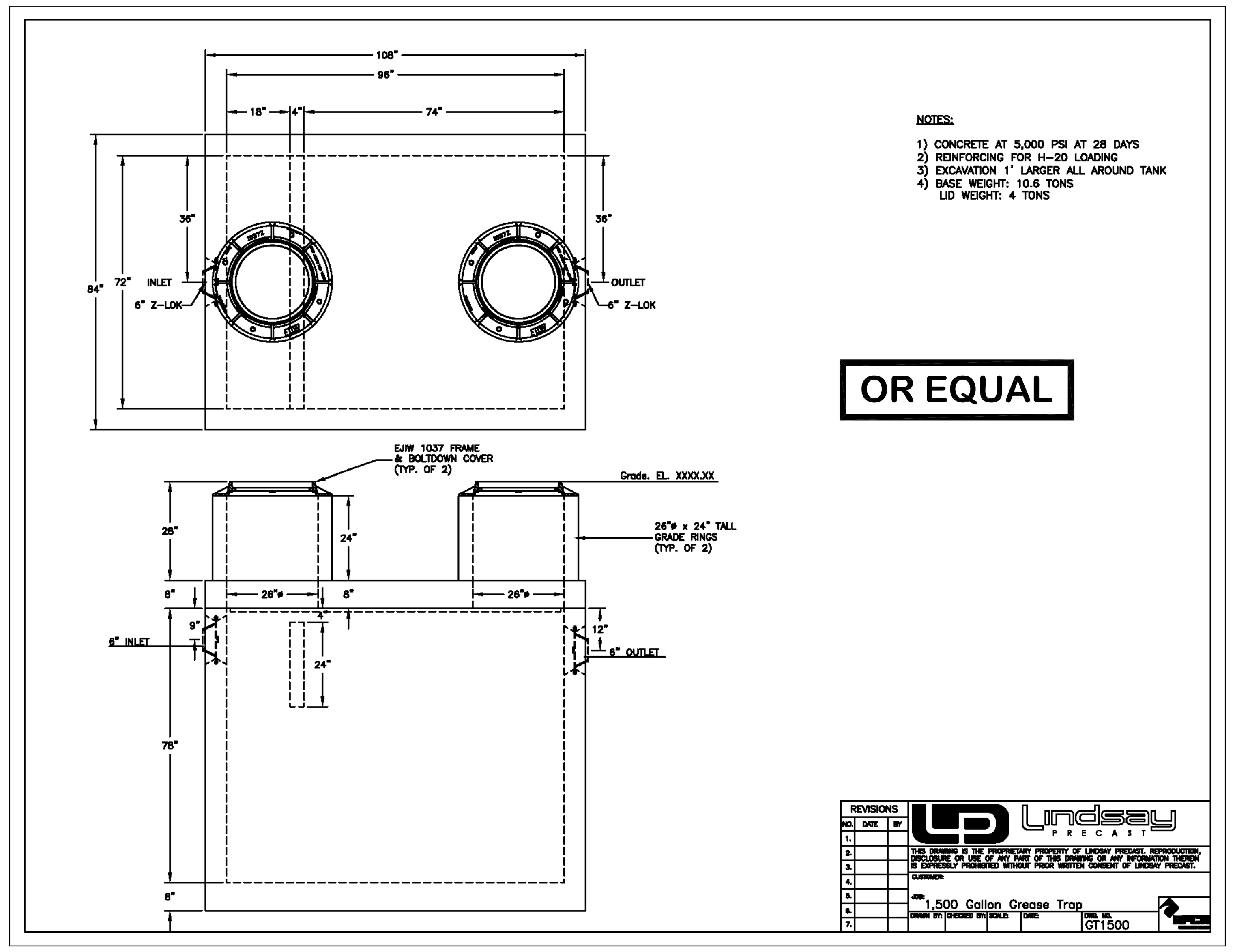
TGC Engineering, LLC
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

1 CITY OF MASSILLON (2018-05-08)

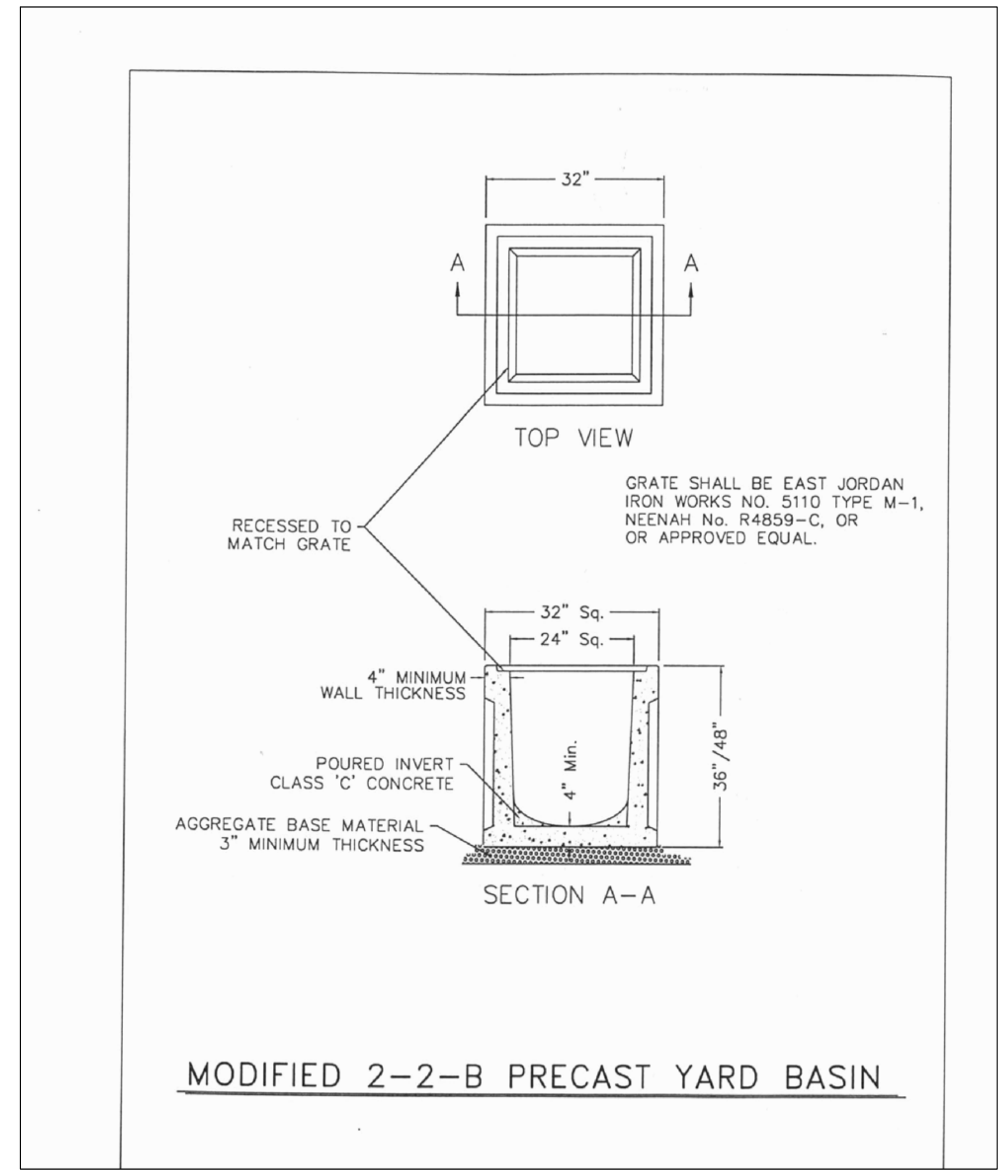
KFC MASSILLON

DETAILS & SPECIFICATIONS

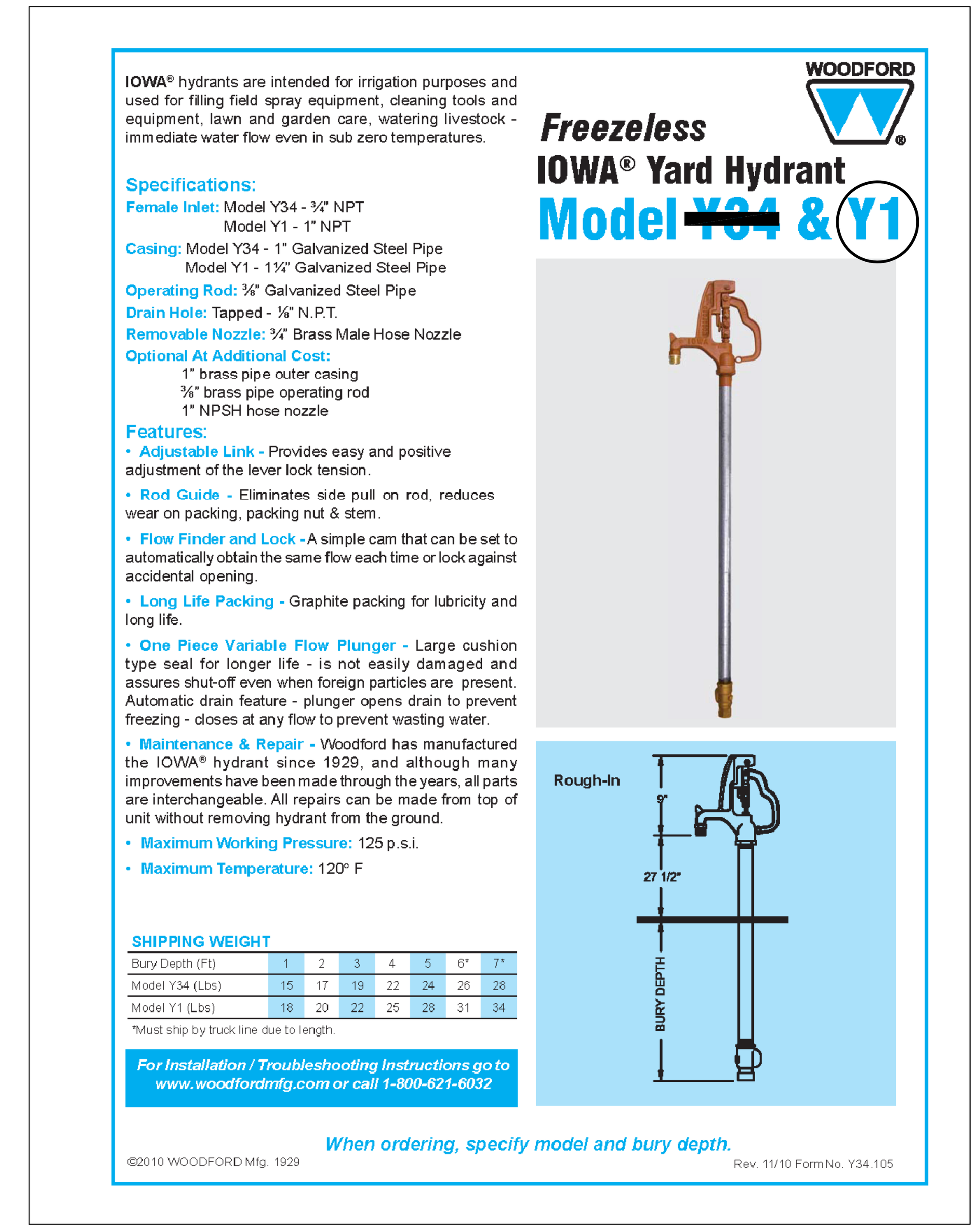
PROJECT NUMBER	1712
DATE	2018-05-23



OR EQUAL



MODIFIED 2-2-B PRECAST YARD BASIN


WOODFORD

Freezeless

IOWA® Yard Hydrant

Model Y34 & Y1

IOWA® hydrants are intended for irrigation purposes and used for filling field spray equipment, cleaning tools and equipment, lawn and garden care, watering livestock - immediate water flow even in sub zero temperatures.

Specifications:
Female Inlet: Model Y34 - ¾" NPT
Model Y1 - 1" NPT
Casing: Model Y34 - 1" Galvanized Steel Pipe
Model Y1 - 1¼" Galvanized Steel Pipe
Operating Rod: ⅜" Galvanized Steel Pipe
Drain Hole: Tapped - ⅛" N.P.T.
Removable Nozzle: ¾" Brass Male Hose Nozzle
Optional At Additional Cost:
1" brass pipe outer casing
⅜" brass pipe operating rod
1" NPSH hose nozzle

Features:
- Adjustable Link - Provides easy and positive adjustment of the lever lock tension.
- Rod Guide - Eliminates side pull on rod, reduces wear on packing, packing nut & stem.
- Flow Finder and Lock - A simple cam that can be set to automatically obtain the same flow each time or lock against accidental opening.
- Long Life Packing - Graphite packing for lubricity and long life.
- One Piece Variable Flow Plunger - Large cushion type seal for longer life - is not easily damaged and assures shut-off even when foreign particles are present. Automatic drain feature - plunger opens drain to prevent freezing - closes at any flow to prevent wasting water.
- Maintenance & Repair - Woodford has manufactured the IOWA® hydrant since 1929, and although many improvements have been made through the years, all parts are interchangeable. All repairs can be made from top of unit without removing hydrant from the ground.
- Maximum Working Pressure: 125 p.s.i.
- Maximum Temperature: 120° F

SHIPPING WEIGHT

Bury Depth (Ft)	1	2	3	4	5	6'	7'
Model Y34 (Lbs)	15	17	19	22	24	26	28
Model Y1 (Lbs)	18	20	22	25	28	31	34

*Must ship by truck line due to length.

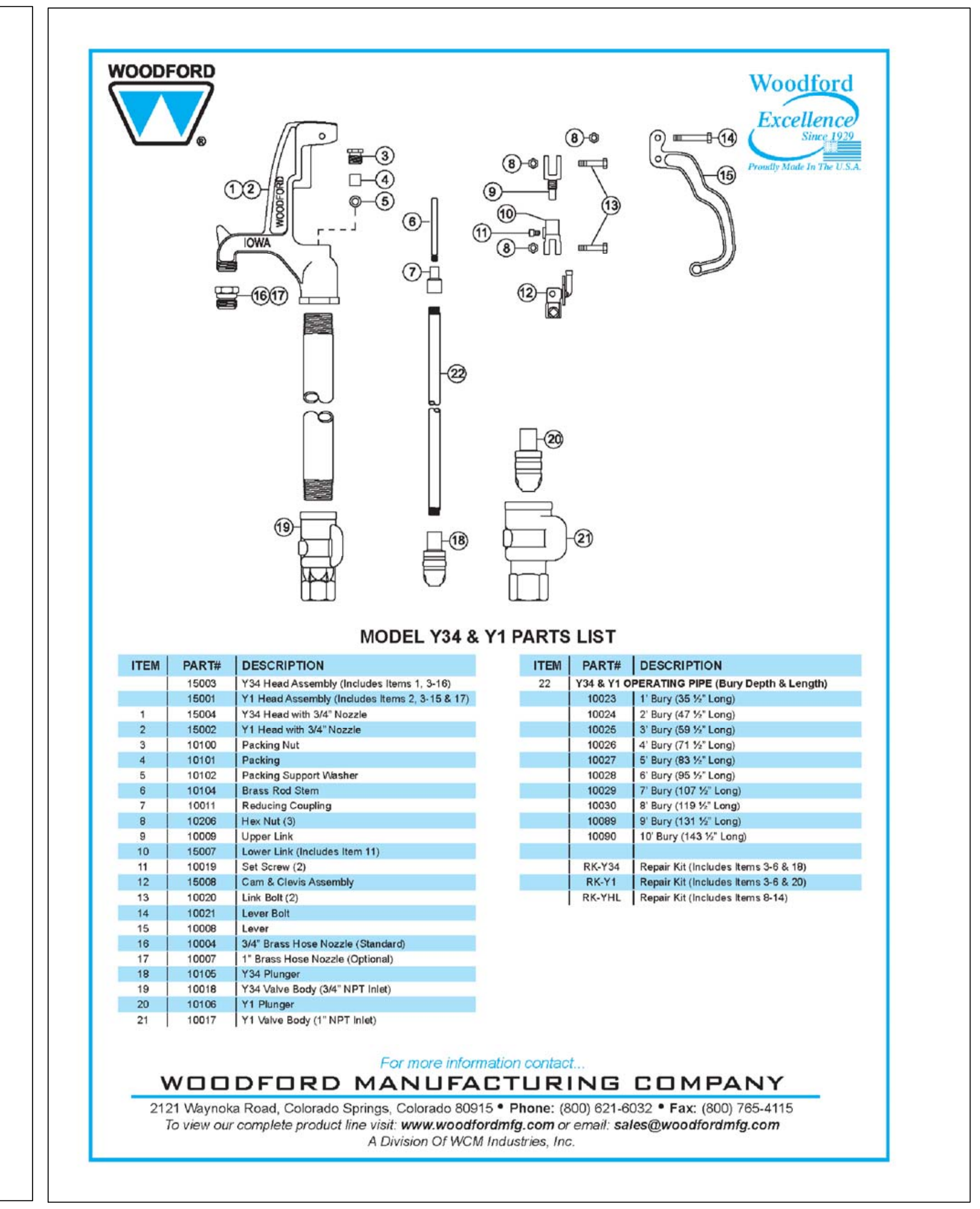
For Installation / Troubleshooting Instructions go to www.woodfordmfg.com or call 1-800-621-6032

Rough-In
27 1/2"
BURY DEPTH

When ordering, specify model and bury depth.

©2010 WOODFORD Mfg. 1929

Rev. 11/10 Form No. Y34 105


WOODFORD

Woodford Excellence Since 1929

MODEL Y34 & Y1 PARTS LIST

For more information contact...

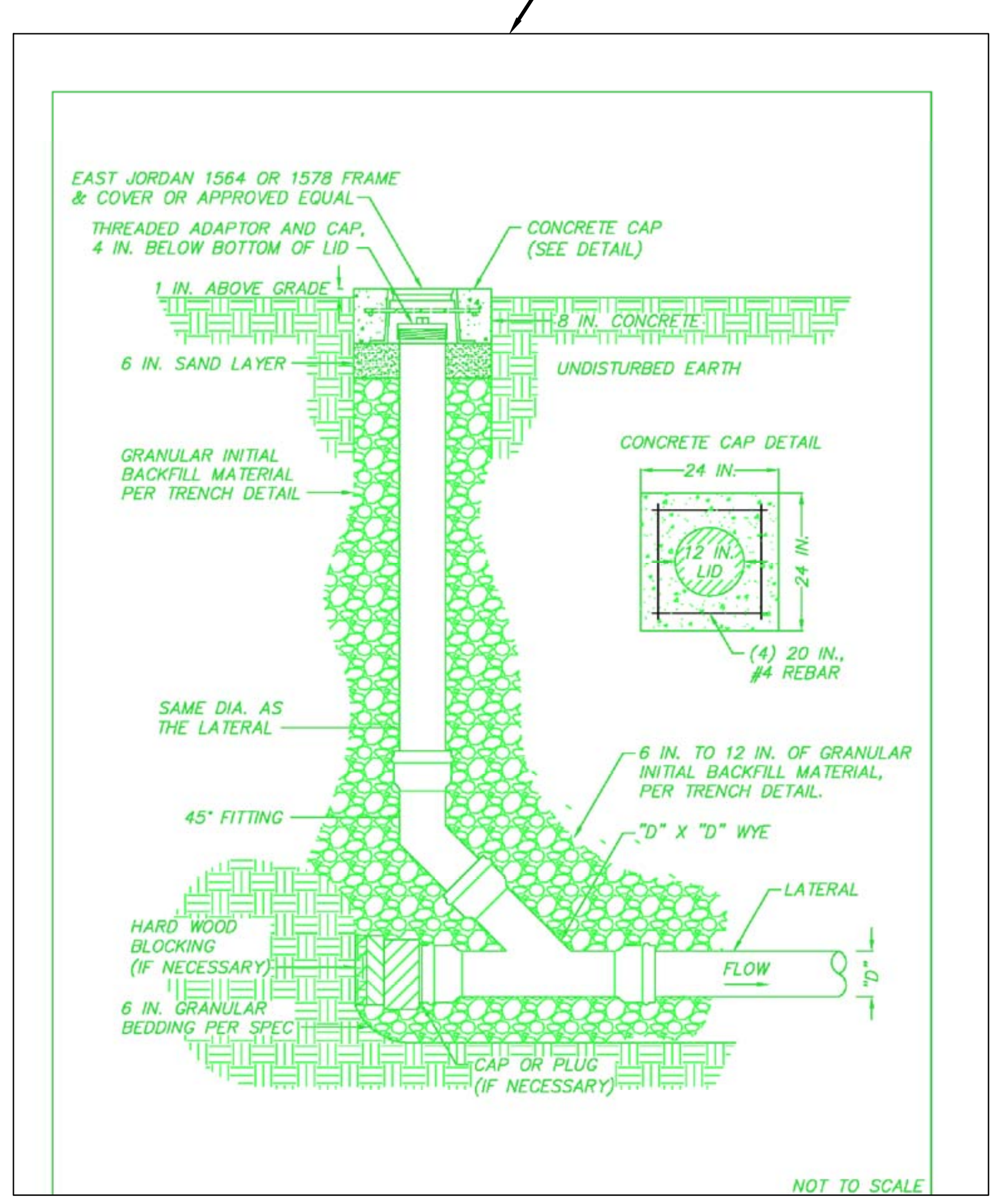
WOODFORD MANUFACTURING COMPANY

2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032 • Fax: (800) 765-4115

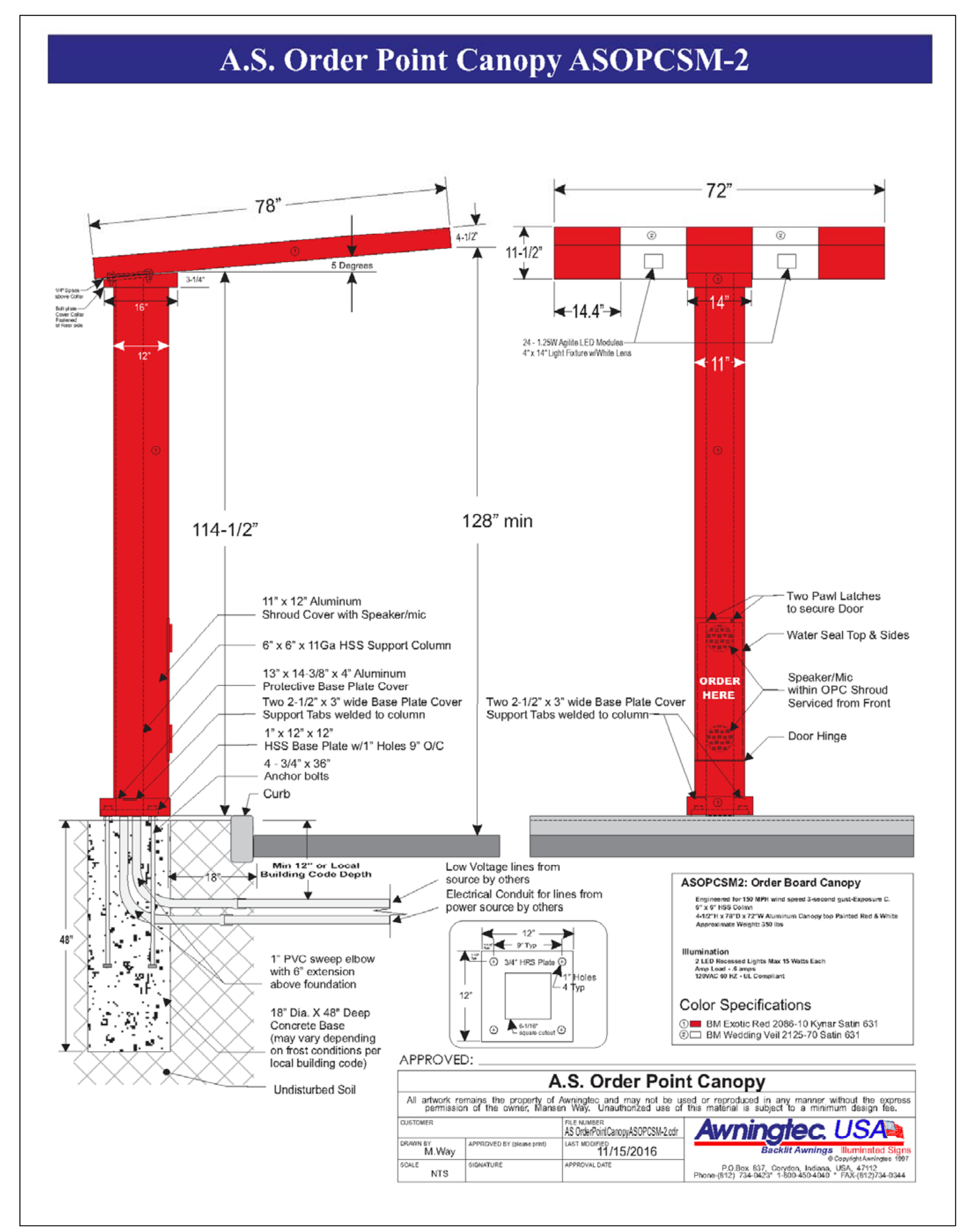
To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com

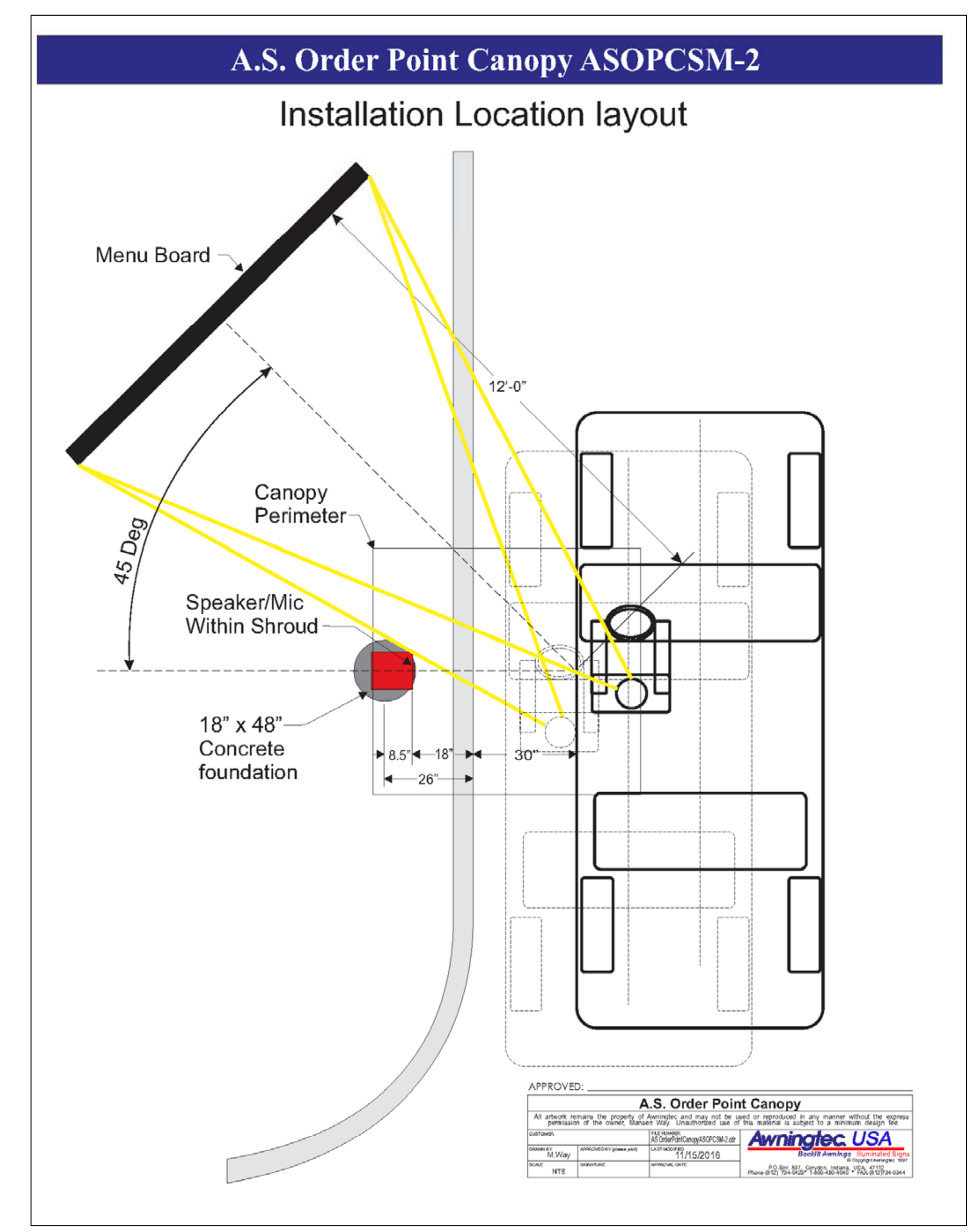
A Division Of WCM Industries, Inc.

REFERENCE BUILDING PLANS, PLUMBING SCHEDULES AND NOTES, SHEET P1.0 FOR MANUFACTURER/MODEL NUMBER FOR YARD CLEAN OUT



SANITARY CLEANOUT DETAIL
N.T.S.





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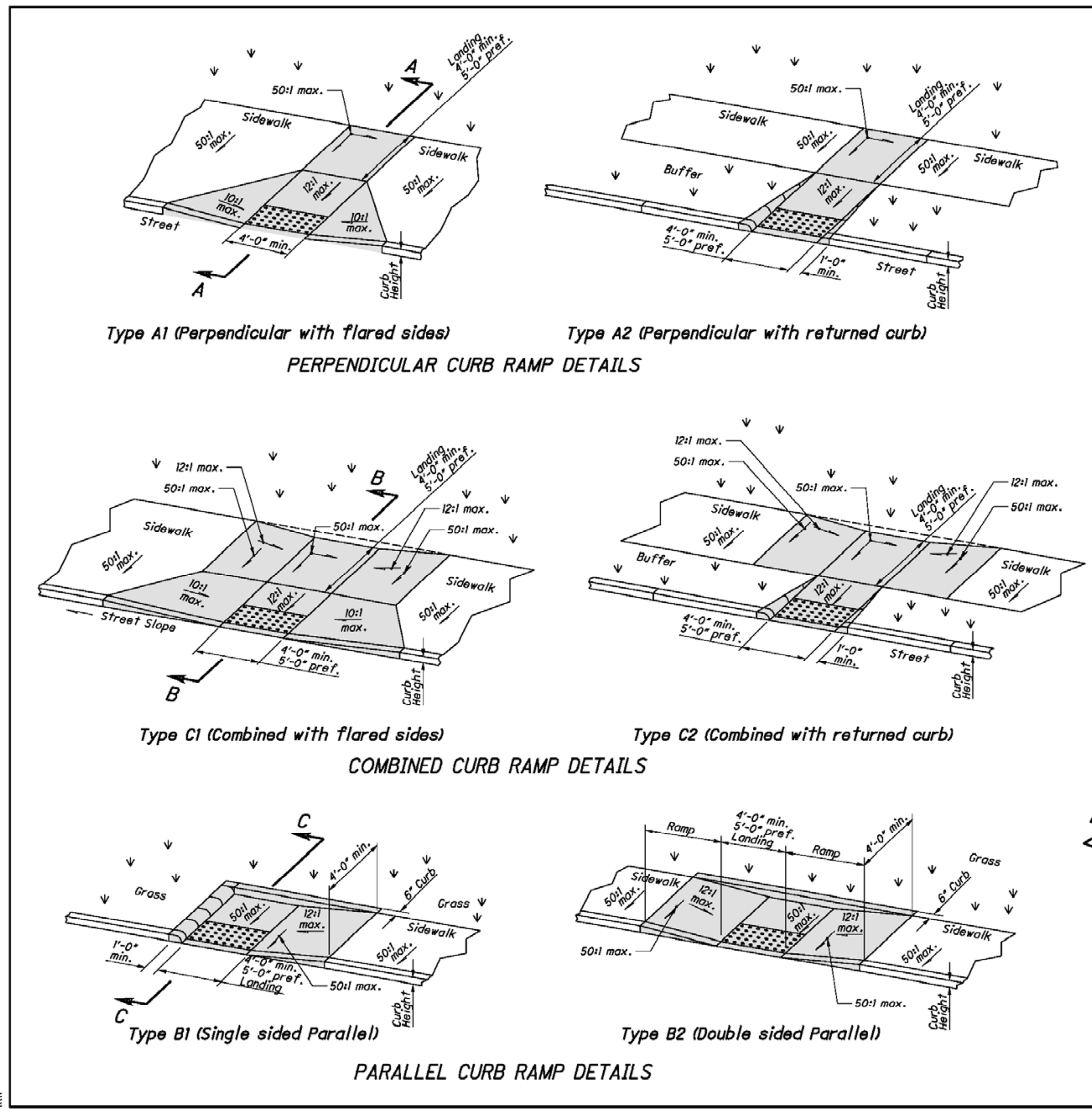
SHARON CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

KFC MASSILLON

DETAILS & SPECIFICATIONS

PROJECT NUMBER	1712
DATE	2018-05-23

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED PROFESSIONAL ENGINEER



Type A1 (Perpendicular with flared sides) — Type A2 (Perpendicular with returned curb)

PERPENDICULAR CURB RAMP DETAILS

Type C1 (Combined with flared sides) — Type C2 (Combined with returned curb)

COMBINED CURB RAMP DETAILS

See Sheet 3 for Sections.

Type B1 (Single sided Parallel) — Type B2 (Double sided Parallel) — Type B3 (Single sided Parallel)

PARALLEL CURB RAMP DETAILS

NOTES CONTINUED

The running slope of the ramp is preferred to be 12:1 or flatter. In existing sidewalks, where the maximum ramp slope is not feasible due to site constraints (e.g. utility poles or vaults, right-of-way limits) it may be reduced as follows:

A) 10:1 for a max. rise of 6",
B) 8:1 for a max. rise of 3",
C) 6:1 over a max. run of 2'-0" for historic areas where a flatter slope is not feasible.

To prevent chasing the grade indefinately, the transition from exisiting sidewalk to the shaded curb ramp area is not required to exceed 15 feet in length.

While ramps may be skewed to the crosswalk, the entire lower landing area must fall within the cross walk that the ramp serves and cannot be located in the traveled lane of opposing traffic.

The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transitions shall be 20:1 ot flatter.

The bottom edge of the ramp shall change planes perpendicular to the landing.

The edge of the curb shall be flush with the edge of the adjacent pavement and gutter and surface slopes that meet grade breaks shall also be flush.

Ramp landings shall be 4' min. x 4' min. with a 50:1 or flatter cross slope and running slope.

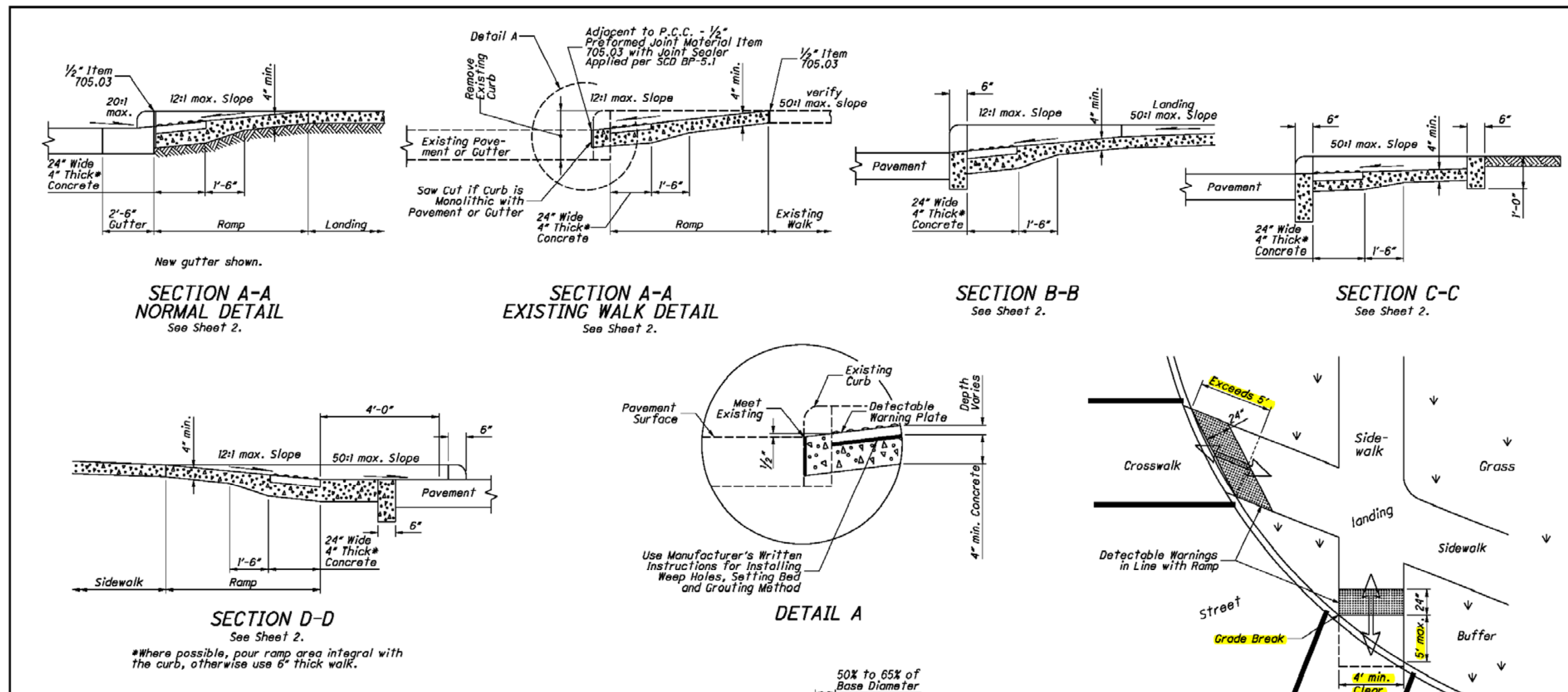
DETECTABLE WARNINGS: Install Detectable Warnings on each curb ramp with approved materials, as shown on Sheet 3. Install these proprietary products as per manufacturer's written instructions.

DRAINAGE: Contractor is to ensure the base of each constructed curb ramp allows for proper drainage, without exceeding allowable cross slope or ramp slopes. Vertical change in level exceeding 1/8" between the 1) pavement and gutter, and 2) gutter and ramp, are not allowed.

SURFACE TEXTURE: Texture concrete surfaces by coarse brooming transverse to the ramp slopes to be rougher than the adjacent walk.

JOINTS: Provide expansion joints in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. Provide a 1/2" Item 705.03 expansion joint filler around the edge of ramps built in existing concrete walks. Lines shown on this drawing indicate the ramp edges and slope changes, and do not necessarily indicate joint lines.

REVISION DATE 7-18-2014 | STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR Reynaldo Stargell | STDS. ENGINEER M. Ruppe | OFFICE OF ROADWAY ENGINEERING | STANDARD ROADWAY CONSTRUCTION DRAWING NEW CURB RAMPS (with Detectable Warnings) | THIS DRAWING REPLACES BP-7.1 DATED 10-15-10. | BP-7.1 | 2/3



SECTION A-A NORMAL DETAIL — SECTION A-A EXISTING WALK DETAIL — SECTION B-B — SECTION C-C — SECTION D-D — DETAIL A — DETECTABLE WARNING ALIGNMENT

SECTION D-D
See Sheet 2.
*Where possible, pour ramp area integral with the curb, otherwise use 6" thick walk.

DETECTABLE WARNINGS NOTES

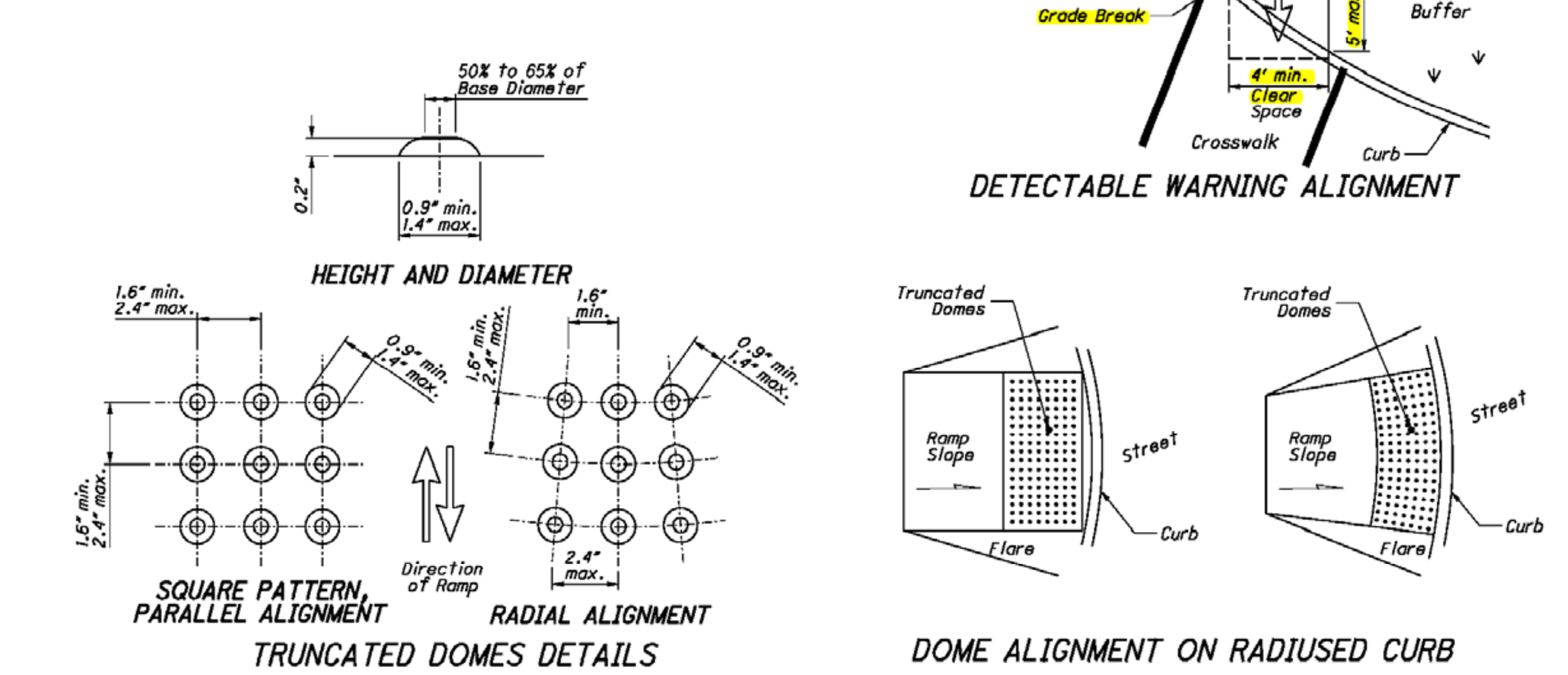
GENERAL: Detectable Warnings are a distinctive surface pattern of truncated domes which are detectable by cane or underfoot to alert people with vision impairments of their approach to streets and hazardous drop-offs.

PLACEMENT: Detectable warnings are to be installed at any location where pedestrians might cross paths with vehicular traffic lanes, such as the base of curb ramps or at blended curbs. A 24" strip of domes is to be installed for the full width of the ramp or walk. Typical street corner placement locations are shown on Sheet 1.

The depth of concrete underneath detectable warning products shall be a minimum of 4". See DETAIL A.

ALIGNMENT: Truncated domes should be aligned with the primary direction of the ramp as shown on the DETECTABLE WARNING ALIGNMENT Detail. Normally the detectable warnings should be flush with the back of the curb, but for skewed conditions see DETECTABLE WARNING ALIGNMENT Detail. For non-standard layouts, detectable warning materials may have to be mitered and placed segmentally.

PRODUCTS & COLORS: Color of the detectable warnings should contrast with surrounding concrete walk and ramp. Black is not an acceptable color. Approved products and guidance on color may be found on the Office of Roadway Engineering Service's Detectable Warnings Approved List. Install products as per manufacturer's printed instructions.

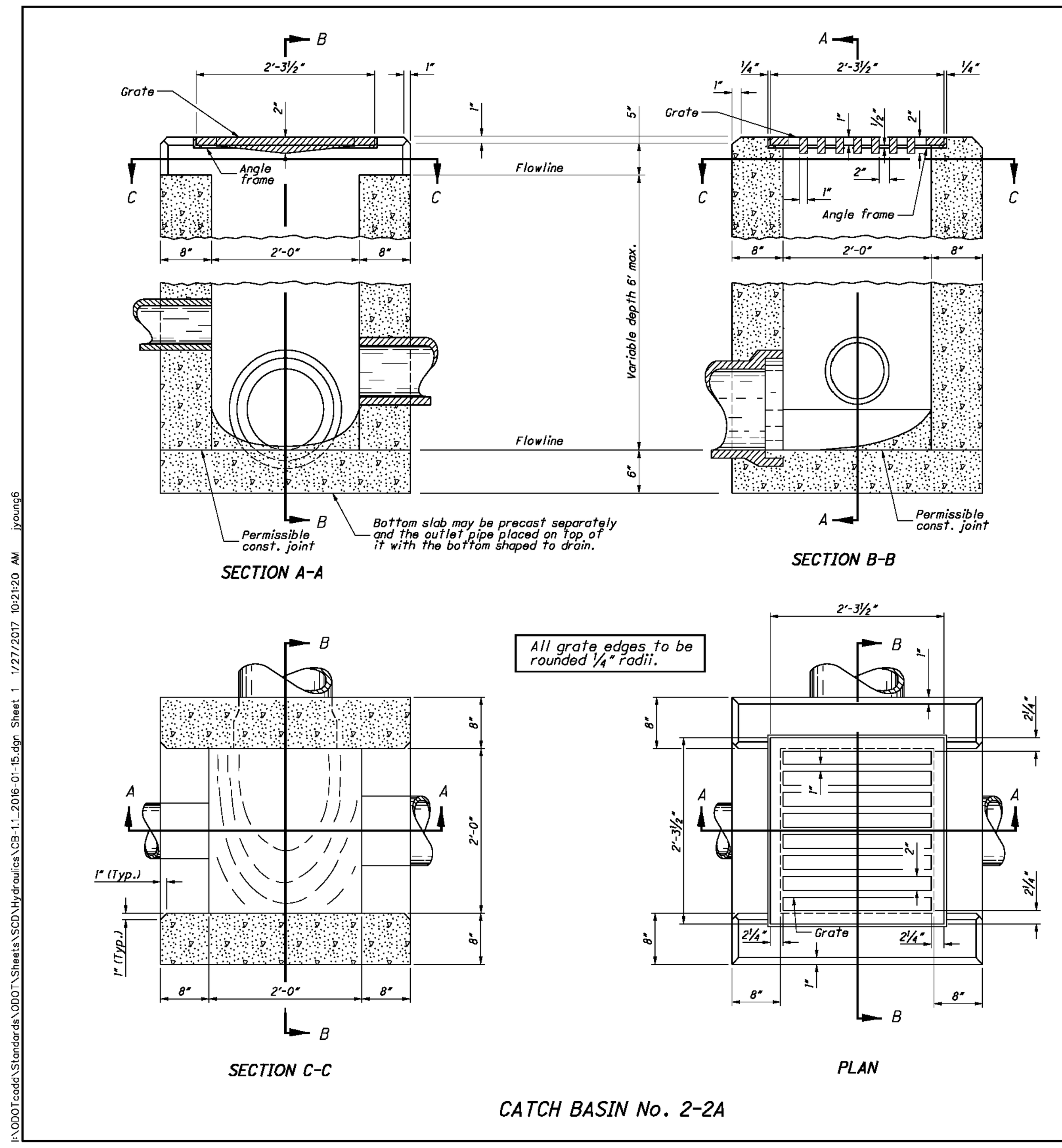


HEIGHT AND DIAMETER — SQUARE PATTERN, PARALLEL ALIGNMENT — RADIAL ALIGNMENT

TRUNCATED DOMES DETAILS

DOME ALIGNMENT ON RADIUSED CURB

REVISION DATE 7-18-2014 | STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR Reynaldo Stargell | STDS. ENGINEER M. Ruppe | OFFICE OF ROADWAY ENGINEERING | STANDARD ROADWAY CONSTRUCTION DRAWING NEW CURB RAMPS (with Detectable Warnings) | THIS DRAWING REPLACES BP-7.1 DATED 10-15-10. | BP-7.1 | 3/3



SECTION A-A — SECTION B-B — SECTION C-C — PLAN

All grate edges to be rounded 1/4" radii.

CATCH BASIN No. 2-2A

NOTES

GENERAL: Catch Basins 2-2A and 2-2B are not intended for traffic bearing applications.

CATCH BASINS 2-2A &B: This sheet depicts Catch Basin 2-2A. See Sheet 2 of 2 for Catch Basin 2-2B.

GRATE AND FRAME: Furnish a design essentially the same and equally as strong as the one shown (see Construction Information table), or meet the requirements of CMS 711.14. Provide grate openings and dimensions as shown here unless otherwise shown in the plans.

Cast the following text into the top of the grate:

"DUMP NO WASTE" and **"DRAINS TO WATERWAY"**

Print text in bold, capital letters at least 1/2" high. "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

WALLS: Construct brick or cast-in-place walls with a nominal 8" thickness. Provide precast walls at least 6" thick with sufficient reinforcing to permit shipping and handling without damage. Do not use brick above the flow line of the side opening for Type 2-2A.

CONCRETE: Use 4000 psi compressive strength for cast-in-place concrete. Meet the requirements of CMS 706.13 for all precast concrete and mark with the catch basin number.

PRECAST BASE: If a precast base is used, set it deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Do not use brick layers to adjust the top elevation.

LOCATION AND ELEVATION: When given on the plans, location is the top center of the grate and the elevation is the flow line of the side inlet.

MINIMUM DEPTH: The minimum depth of CB No. 2-2A is the outside diameter (O.D.) of the outlet pipe plus 7".

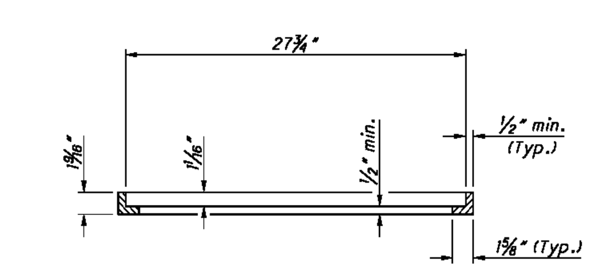
OPENINGS: Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per C&MS 611.

2-2A SIDE INLETS: Provide inlets on both sides of the No. 2-2A catch basin in sags and on upstream side only where the ditch has a continuous down grade past the catch basin. Do not use CB 2-2A within the Clear Zone. The flow line should be 4" to 6" below normal ditch returning to normal 10' to 15' each side of the inlet.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under **Item 611 - Catch Basin, No. 2-2A.**

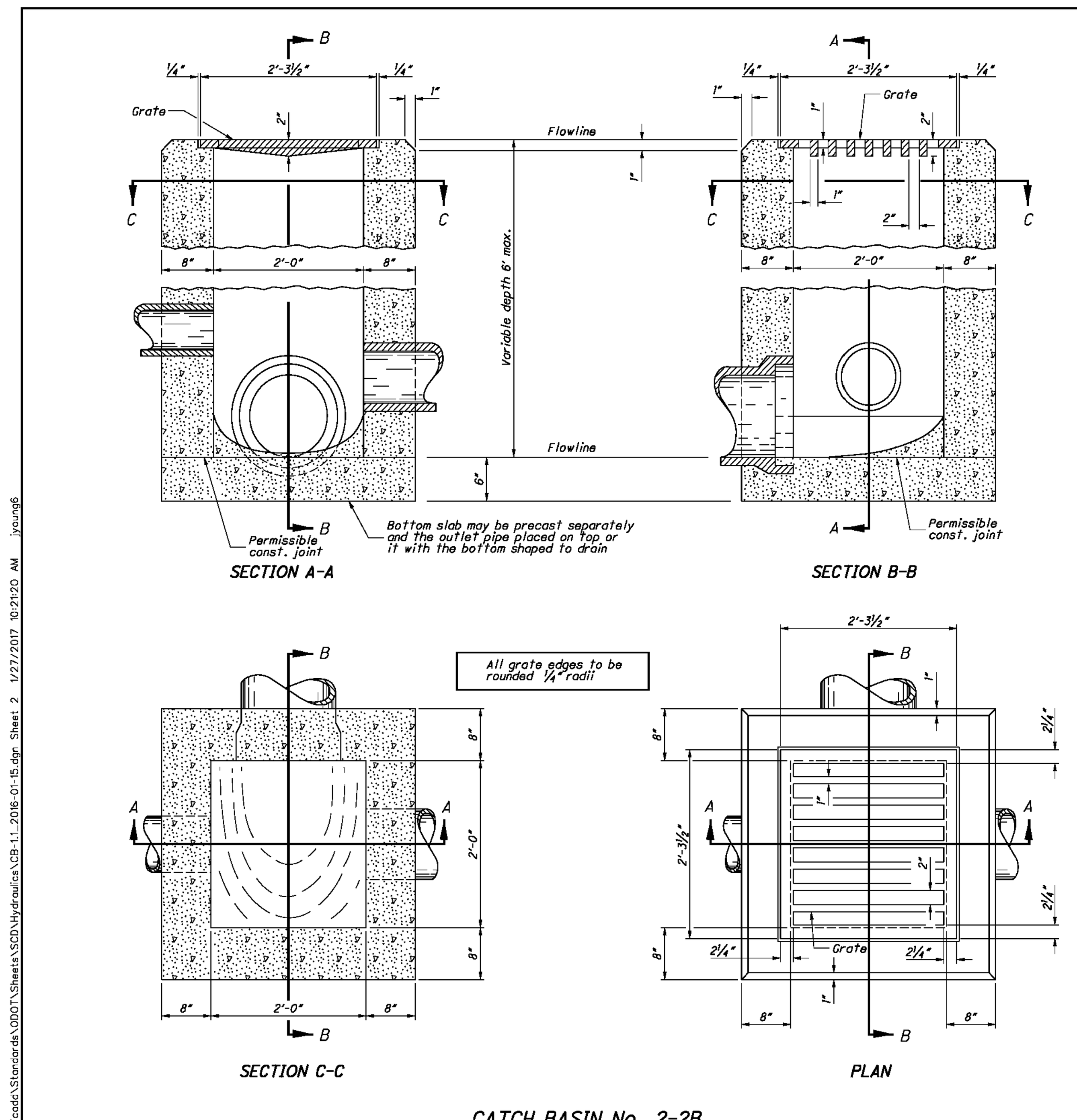
*STRUCTURES IN PAVEMENT TO USE EJIW 5250 FRAME & GRATE, OR EQUAL

CONSTRUCTION INFORMATION
Minimum weight of grate, 120 lbs.
Minimum weight of frame, 40 lbs.



SECTION THRU ANGLE FRAME FOR STANDARD No. 2-2A CATCH BASIN

STATE OF OHIO DEPARTMENT OF TRANSPORTATION HYDRAULICS ENGINEER Jeffery E. Syar | REVISIONS 7-20-01, 7-19-02, 7-15-05, 7-20-12, 1-18-13, 1-15-16 | ROADWAY HYDRAULIC ENGINEER M. Cozzoli | OFFICE OF HYDRAULICS ENGINEERING | STANDARD HYDRAULIC CONSTRUCTION DRAWING CATCH BASINS No's 2-2A & B | CB-1.1 | 1/2



SECTION A-A — SECTION B-B — SECTION C-C — PLAN

All grate edges to be rounded 1/4" radii

CATCH BASIN No. 2-2B

NOTES

CATCH BASINS 2-2A & B: This sheet depicts Catch Basin 2-2B. See Sheet 1 of 2 for Catch Basin 2-2A.

GRATE: Furnish a design essentially the same and equally as strong as the one shown (see Construction Information table), or meet the requirements of CMS 711.14. Provide grate openings and dimensions as shown here unless otherwise shown in the plans.

If necessary, bicycle safe grates will be specified in the plans. Furnish Neenah No. R-4859-C or East Jordan No. 5110 Type M3 bicycle safe grates or approved equals.

Cast the following text into the top of the grate:

"DRAINS TO WATERWAY" and **"DUMP NO WASTE"**

Print text in bold, capital letters at least 1/2" high. "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

WALLS: Construct brick or cast-in-place walls with a nominal 8" thickness. Provide precast walls at least 6" thick with sufficient reinforcing to permit shipping and handling without damage.

CONCRETE: Use 4000 psi compressive strength for cast-in-place concrete. Meet the requirements of CMS 706.13 for all precast concrete and mark with the catch basin number.

PRECAST BASE: If a precast base is used, set it deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Do not use brick layers to adjust the top elevation.

LOCATION AND ELEVATION: When given on the plans, location and elevation are at the top center of the grate. When side openings are provided, the elevation is at the flow line of the side inlet.

MINIMUM DEPTH: The minimum depth of CB No. 2-2B is the outside diameter (O.D.) of the outlet pipe plus 4".

2-2B GRATE ELEVATION: Place grate elevation 4" to 6" below normal ditch and return to normal 10' to 15' each side of inlet.

OPENINGS: Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per C&MS 611.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under **Item 611 - Catch Basin, No. 2-2B.**

*STRUCTURES IN PAVEMENT TO USE EJIW 5250 FRAME & GRATE, OR EQUAL

CONSTRUCTION INFORMATION
Minimum weight of grate, 120 lbs.

CATCH BASIN	OUTLET PIPE SIZE
2-2A	12" to 21"
2-2B	12" to 21"

STATE OF OHIO DEPARTMENT OF TRANSPORTATION HYDRAULICS ENGINEER Jeffery E. Syar | REVISIONS 7-20-01, 7-19-02, 7-15-05, 7-20-12, 1-18-13, 1-15-16 | ROADWAY HYDRAULIC ENGINEER M. Cozzoli | OFFICE OF HYDRAULICS ENGINEERING | STANDARD HYDRAULIC CONSTRUCTION DRAWING CATCH BASINS No's 2-2A & B | CB-1.1 | 2/2

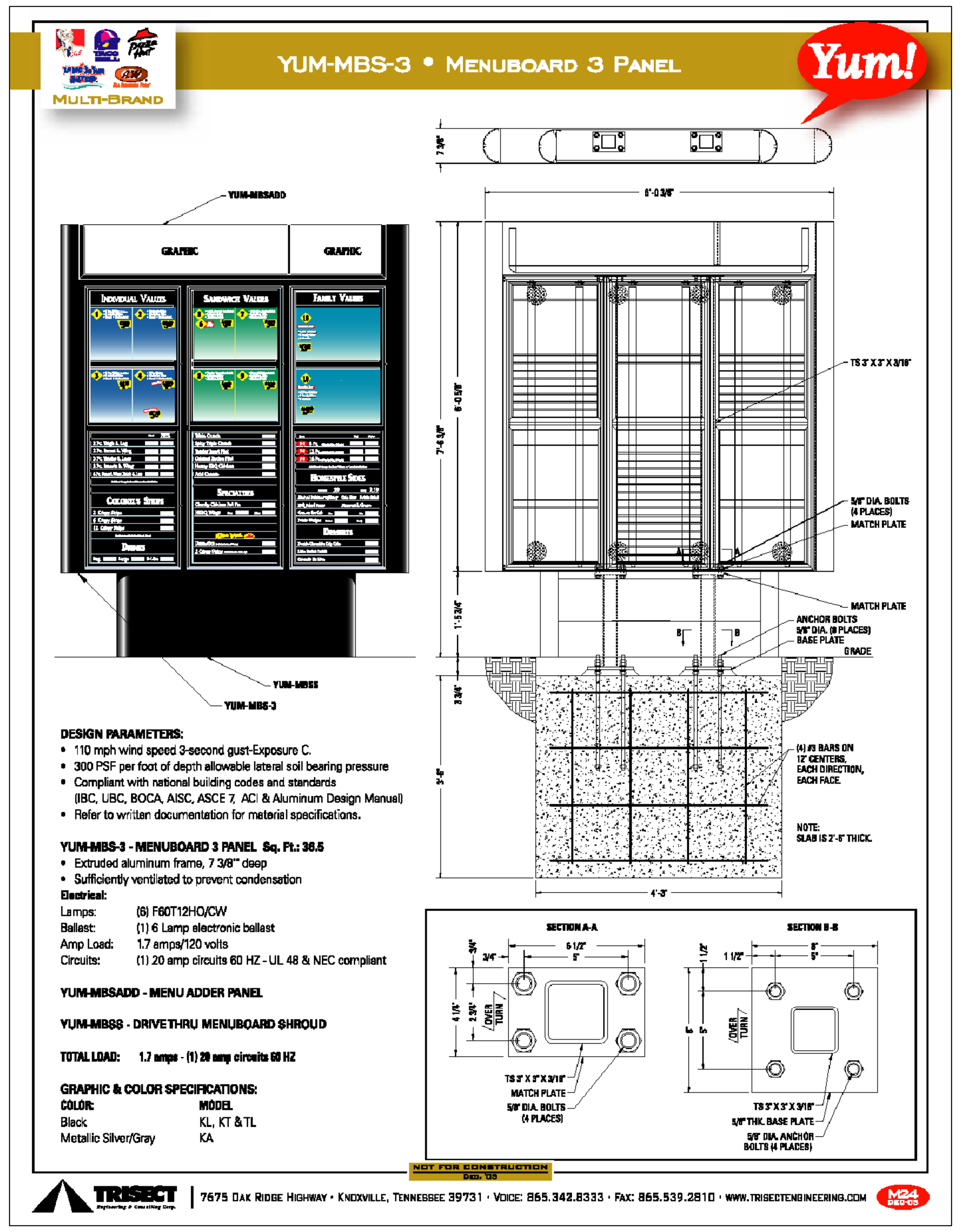
TGC Engineering, LLC
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

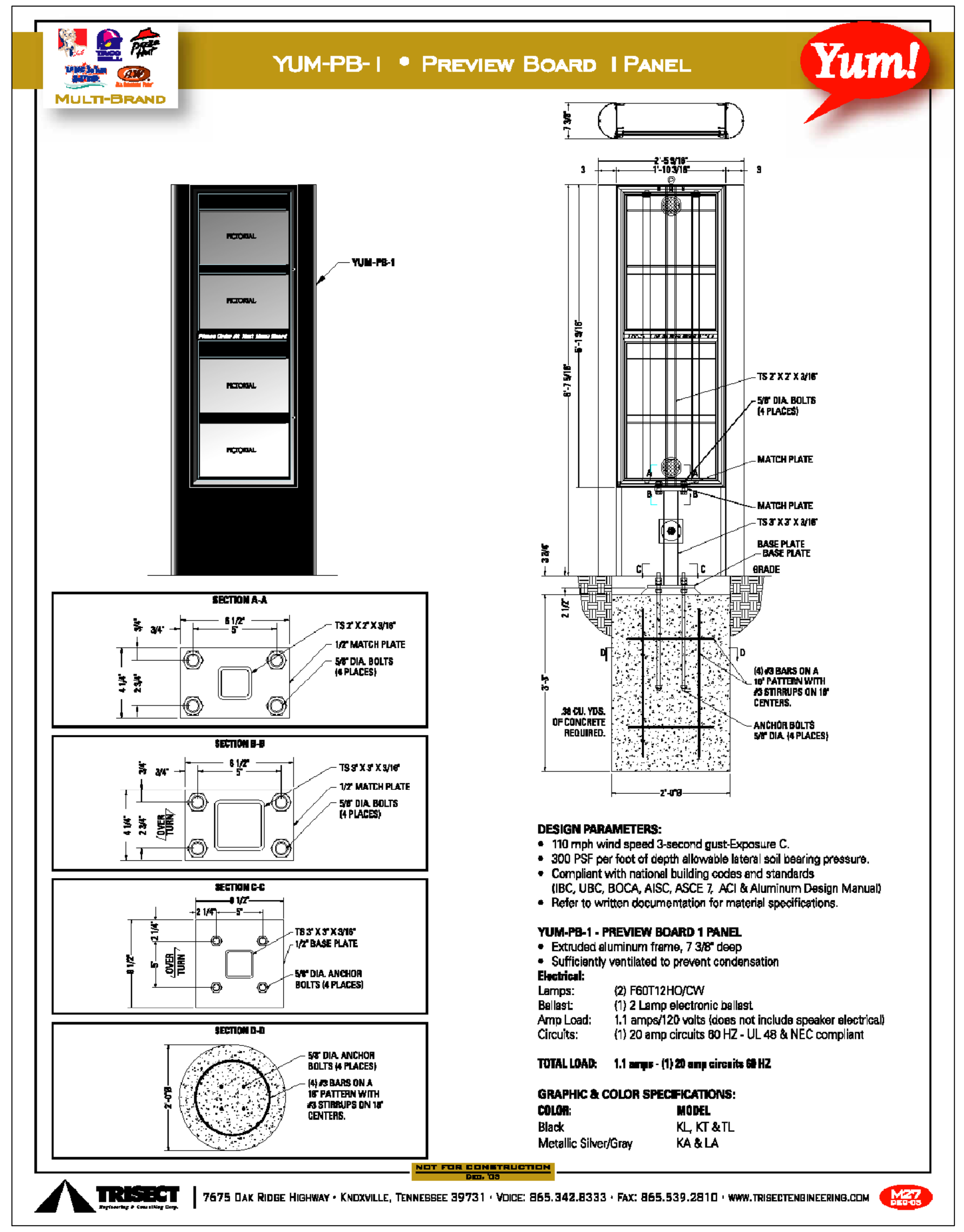
STATE OF OHIO — CHRISTOPHER M. SCHMIDT — E-80749 — REGISTERED PROFESSIONAL ENGINEER

KFC MASSILLON

DETAILS & SPECIFICATIONS

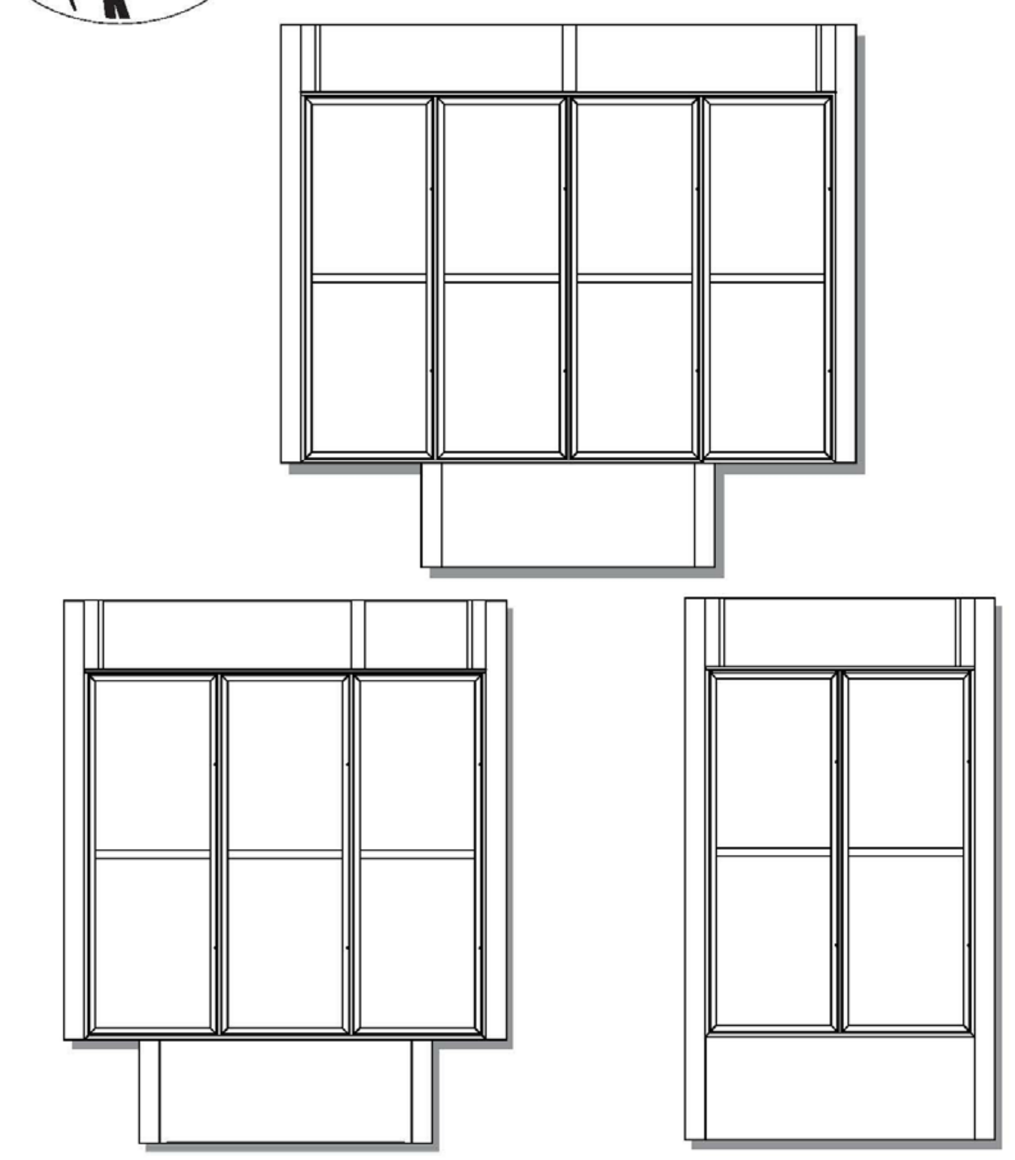
PROJECT NUMBER	1712
DATE	2018-05-23





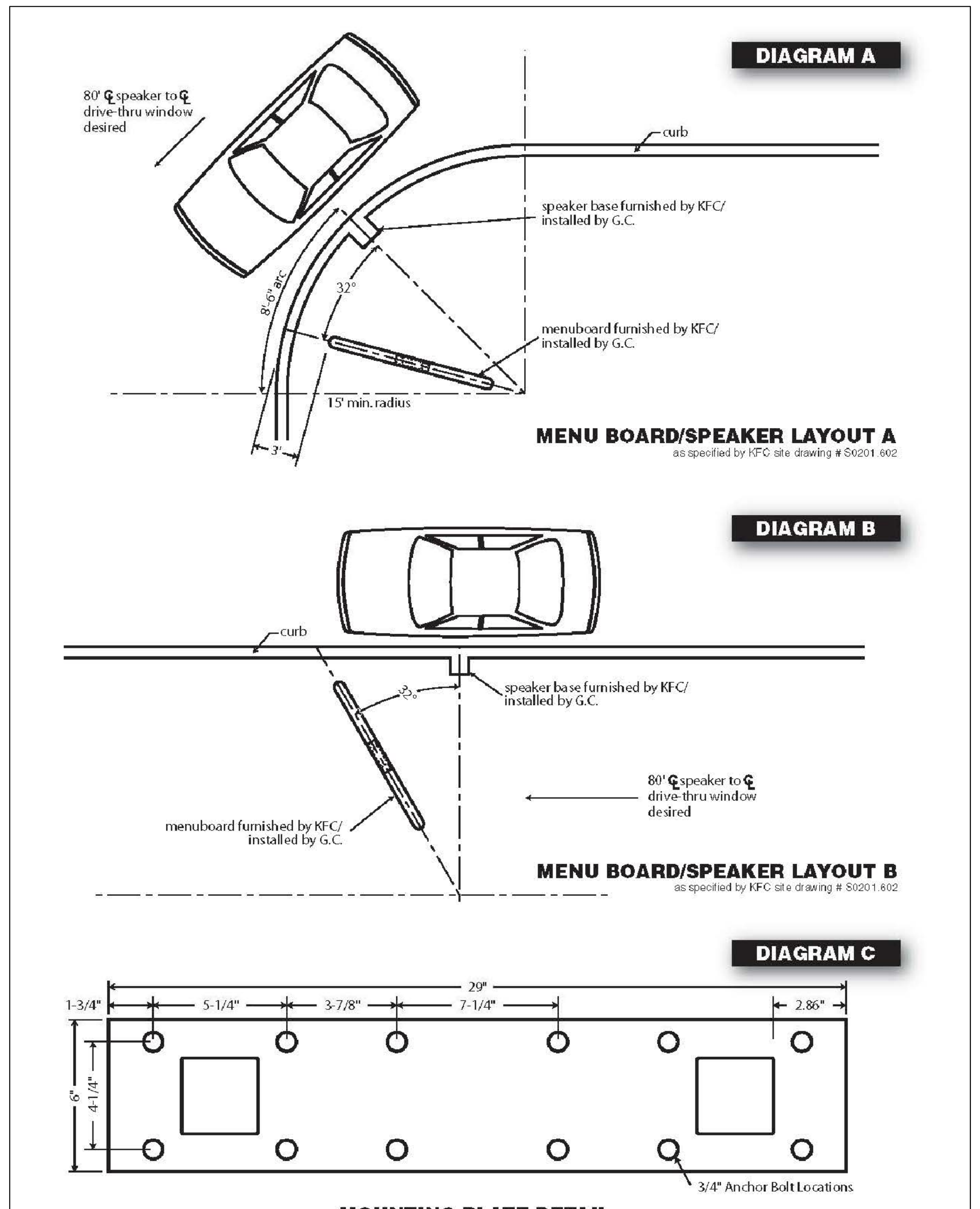
2, 3 or 4 DOOR MENU BOARD

Installation Instructions (150 MPH High Windload)



It is the intent of these diagrams to be used only as a guideline for the installation of the equipment. Be sure to study **all diagrams & template** before construction.

The information contained in this document has set forth certain assumed conditions. It shall be the responsibility of the purchaser and his contractors to verify these assumptions with local governing agencies. In addition, certain assumptions have been made and noted on the drawings and specifications for soil bearing capacity. It shall be the responsibility of the purchaser and his / her contractor to verify these assumptions and make the necessary revisions to the structure and the parking lot design as indicated on the site documents provided by the owner/tenant. It shall be the responsibility of the purchaser and his / her contractor to submit this document to the proper governing agencies for their review and all necessary modifications or revisions.



Before beginning the installation:

[A] Check that you have all the required hardware for the foundation kit: (4) Anchor bolts, (8) Hex nuts w/unit (4) Hex nuts, (8) Flat washers, (4) Lock washers.

[B] Uncrate and test light sign. Notify the Howard Company of any problems.

[C] To lift sign, remove access lid from top of sign and hook to supplied 3/8" eyebolts.

1. Use site plan to establish position of this unit [see Diagram A & B].

2. Excavate foundation and position conduit as indicated. Use template provided to position (8) anchor bolts. Brace anchor bolts to prevent movement and pour concrete [see Diagram C & D]. Be sure that the anchor bolts extend 2-1/2" above grade.

3. A high voltage conduit must be installed to run from the source power to the sign location. A conduit stub should protrude 4" above the concrete slab. Power and ground leads should be pulled through the conduit approximately 36" beyond conduit stub and accessible at the time of final wiring.

4. After final curing of the concrete, remove the (8) 3/4" hex nuts and the mounting template from the anchor bolts. Inspect and clean the threads of the anchor bolts of dried concrete or other debris.

5. Reinstall the (8) hex buts, (1) per anchor bolt, but keep nuts loose (these nuts will be used for leveling the post in the final installation). Run these nuts down near the the foundation grade. Place (1) 3/4" flat washer over each anchor bolt, on top of the hex nuts [see Diagram E].

6. Set the base onto the foundation over cemented 3/4" bolts and secure with 3/4" flat washers, 3/4" lock washers and 3/4" nuts. Adjust the upper and lower 3/4" hex nuts to level Pedestal Weldments [see Diagrams E]. (The base shroud cover will be reinstalled after the Menu Board is completely installed).

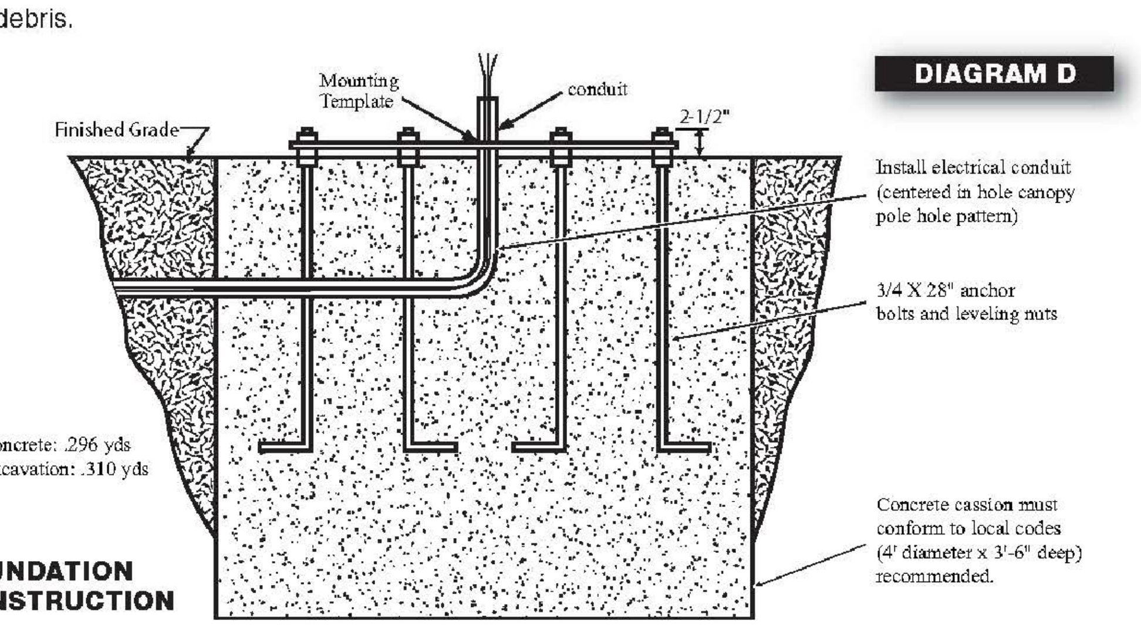
7. Ensure that anchor bolts do not interfere with cladding for proper swivel movement. After final leveling of unit, pivot sign to desired final angle and tighten 3/4" nuts.

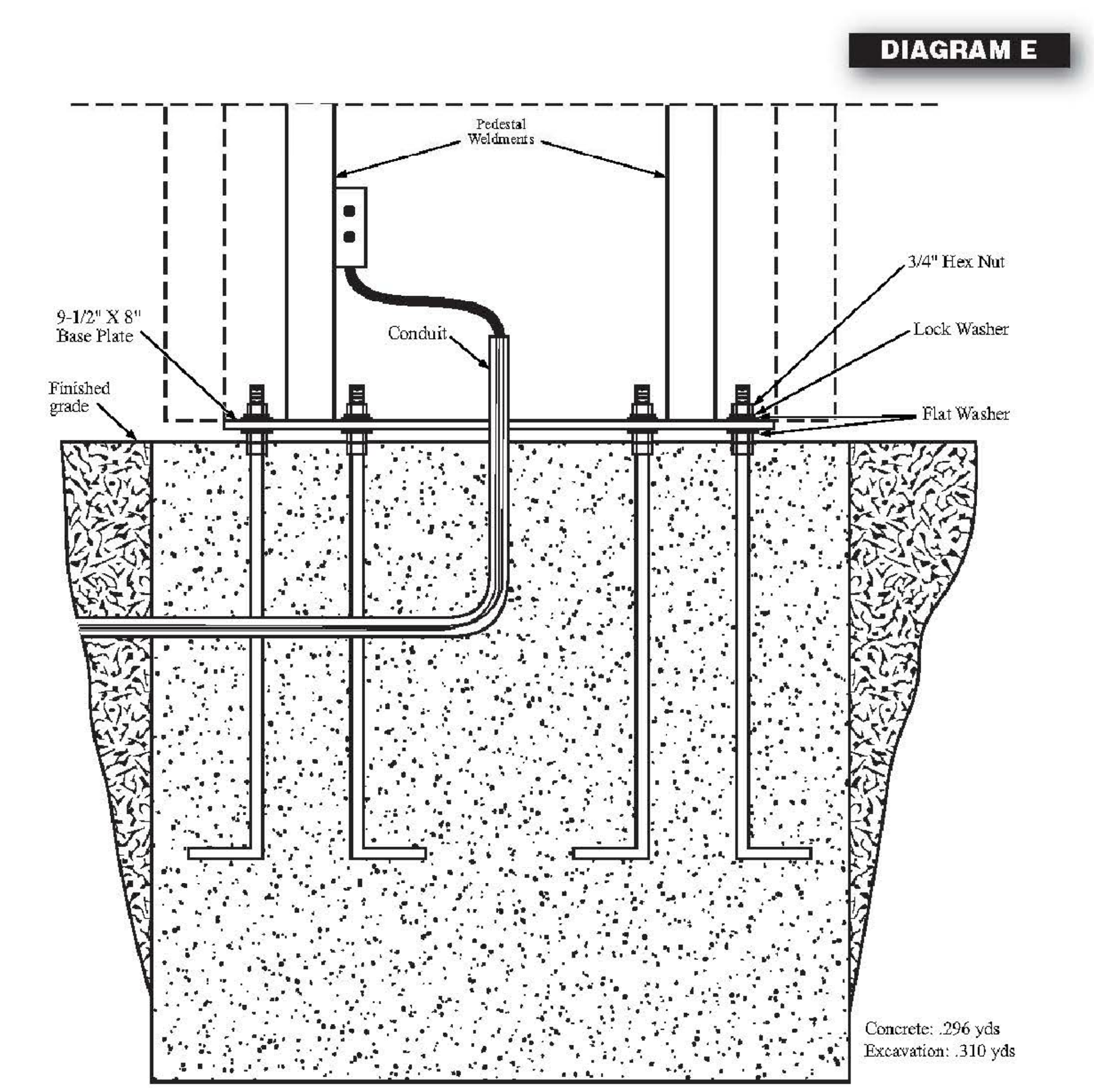
8. Make electrical connection inside the the junction box & conduit to conform to NEC & all applicable local electrical codes.

9. Reinstall lamps, energize source power, turn on power switch, reinstall panels, door, access cover, and tighten shroud cover.

10. Backfill grade to flush with bottom of sign.

11. Clean sign using warm soapy water and a soft cloth. and use touch-up paint provided where necessary.





SIGN MOUNTING/INSTALLATION

ELECTRICAL SPECIFICATIONS:

Maximum Total Connection Load:
- 2 Panel: 3.5 amps
- 3-4 Panel: 6.7 amps

Circuits: 1-20 amp

Ballast:
- 2 Panel: (1) Jefferson 256-496 (3.5 amp)
- 3 Panel: (1) Jefferson 256-672 (4 amp)
- 4 Panel: (2) Jefferson 256-472 (2.7 amp)

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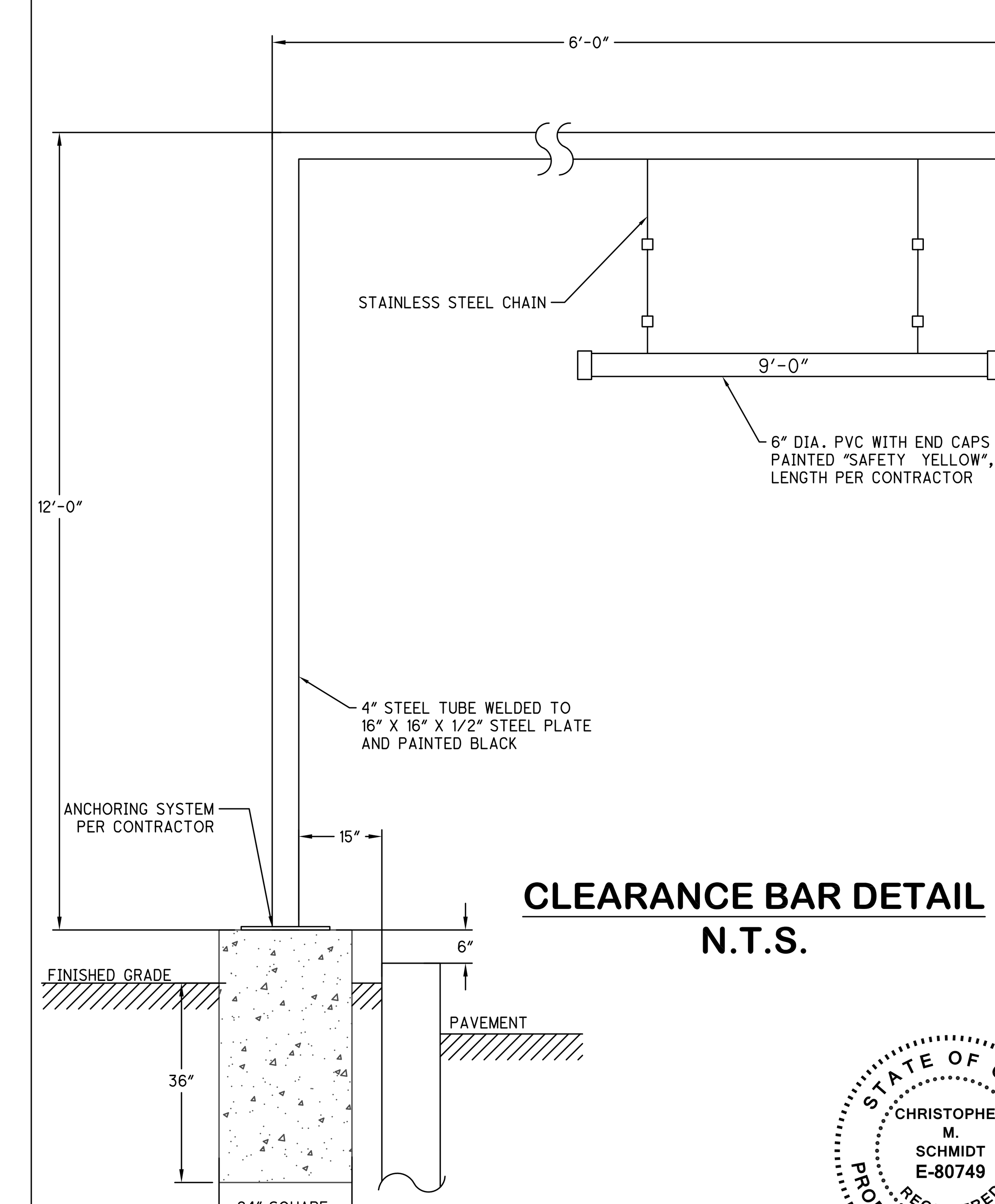


CLEARANCE BAR DETAIL

N.T.S.

TGC Engineering, LLC
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

KFC MASSILLON

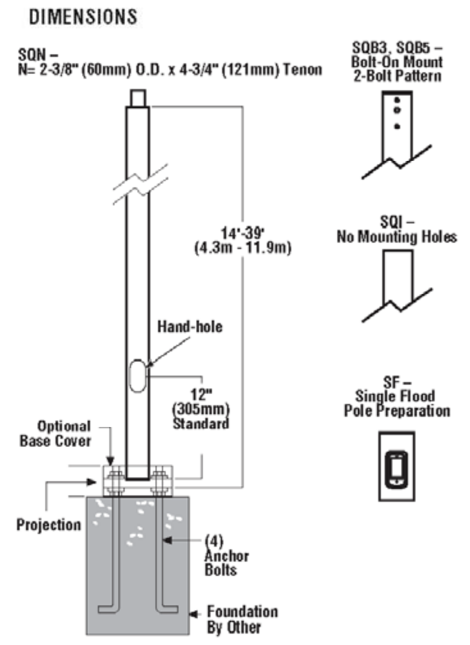
DETAILS & SPECIFICATIONS

PROJECT NUMBER	1712
DATE	2018-05-23

STATE OF OHIO CHRISTOPHER M. SCHMIDT E-80749 REGISTERED PROFESSIONAL ENGINEER

STEEL SQUARE POLES

DIMENSIONS



POLE SHAFT - Pole shaft is electro-welded ASTM-A500 Grade C steel tubing with a minimum yield strength of 50,000 psi. On Tenon Mount steel poles, tenon is 2-3/8" O.D. high-strength pipe. Tenon is 4-3/4" in length. Straight poles are 4", 5", and 6" square.

HAND-HOLE - Standard hand-hole location is 12" above pole base. Poles 22' and above have a 3" x 6" reinforced hand-hole. Shorter poles have a 2" x 4" non-reinforced hand-hole.

BASE - Pole base is ASTM-A36 hot-rolled steel plate with a minimum yield strength of 36,000 psi. Two-piece square base cover is optional.

ANCHOR BOLTS - Poles are furnished with anchor bolts featuring zinc-plated double nuts and washers. Galvanized anchor bolts are optional. Anchor bolts conform to ASTM F 1554-07a Grade 55 with a minimum yield strength of 55,000 psi.

GROUND LUG - Ground lug is standard.

DUPLEX RECEPTACLE - Weatherproof duplex receptacle is optional.

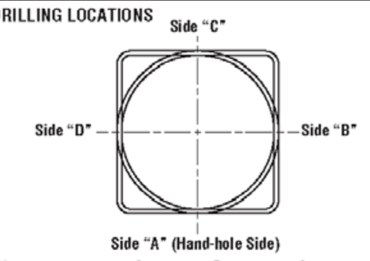
GROUND FAULT CIRCUIT INTERRUPTER - Self-testing ground fault circuit interrupter is optional.

FINISHES - Each pole is finished with DuraGrip®, LSI's baked-on polyester-powder finishing process which electrostatically applies and fuses a polyester powder to the pole. Provides an extremely smooth and uniform finish to withstand extreme weather changes without cracking or peeling, and features a five-year limited warranty. Optional DuraGrip® Plus features the added protection of a 3.0 to 5.0 mil thickness of polyester-powder finish plus an inner coating, as well as a seven-year limited warranty.

DETERMINING THE LUMINAIRE/POLE COMBINATION FOR YOUR APPLICATION:

- Select luminaire from luminaire ordering information
- Select bracket configuration if required
- Determine EPA value from luminaire/bracket EPA chart
- Select pole height
- Select MPH to match wind speed in the application area (See windspeed maps).
- Confirm pole EPA equal to or exceeding value from note above
- Consult factory for special wind load requirements and banner brackets

DRILLING LOCATIONS



SHIPPING WEIGHTS - Steel Square Poles

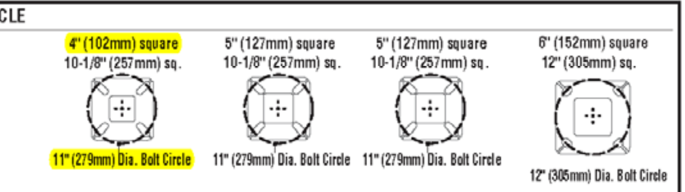
STEEL SQUARE POLES

POLE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: 5SQB5 S07G 24 S PLP SF DGP

ACCESSORY ORDERING INFORMATION

BOLT CIRCLE



STEEL SQUARE POLES

Use ONLY with "Wind Speed Map for ASCE7-05

STEEL SQUARE POLES - ASCE7-05

POLE	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH
4" 11GA 14'	18.7	14.5	11.5	9.1	7.3	5.9	4.6
4" 11GA 16'	15.1	11.5	8.9	6.9	5.4	4.1	3.1
4" 11GA 18'	12.2	9.1	6.8	5.1	3.7	2.7	1.8
4" 11GA 20'	9.5	6.9	4.9	3.4	2.2	1.3	0.5
4" 11GA 22'	7.4	5.1	3.3	2.0	1.1	0.0	0.0
4" 11GA 24'	13.1	9.5	6.8	4.8	3.2	2.0	1.0
4" 11GA 26'	10.7	7.5	5.1	3.3	1.9	0.7	0.0
4" 7GA 20'	14.8	11.2	8.4	6.4	4.8	3.5	2.4
4" 7GA 22'	14.9	11.0	8.2	6.0	4.4	3.0	1.9
4" 7GA 24'	12.4	8.8	6.3	4.4	2.9	1.7	0.8
4" 7GA 26'	10.1	6.9	4.6	2.9	1.6	0.5	0.0
5" 11GA 16'	29.4	23.0	18.2	14.6	11.8	9.6	7.8
5" 11GA 18'	24.2	19.7	14.5	11.4	9.0	7.1	5.5
5" 11GA 20'	20.0	14.9	11.5	8.8	6.6	4.9	3.6
5" 11GA 22'	20.8	15.5	11.7	8.7	6.4	4.6	3.2
5" 11GA 24'	17.2	12.8	9.3	6.6	4.5	3.0	1.6
5" 11GA 26'	14.8	10.2	7.1	4.7	2.8	1.4	0.2
5" 7GA 20'	30.5	23.7	18.6	14.7	11.7	9.3	7.4
5" 7GA 22'	41.2	32.0	25.4	20.3	16.2	13.2	10.5
5" 7GA 24'	36.0	27.9	21.8	17.1	13.5	10.7	8.4
5" 7GA 26'	32.0	23.8	18.3	14.1	10.9	8.3	6.2
5" 7GA 30'	24.1	17.5	13.0	9.4	6.7	4.5	2.8
6" 7GA 24'	51.0	39.7	31.3	24.9	19.9	16.0	12.8
6" 7GA 26'	44.5	34.2	26.7	20.9	16.4	12.9	10.0
6" 7GA 30'	34.3	25.8	19.4	14.6	10.8	7.9	5.4
6" 7GA 35'	24.8	17.8	12.5	8.5	5.4	2.9	0.9
6" 7GA 39'	18.6	12.4	7.8	4.4	1.6	0.0	0.0

All LSI Industries' poles are guaranteed to meet the EPA requirements listed. LSI Industries is not responsible if a pole order has a lower EPA rating than the indicated wind-loading zone where the pole will be located.

CAUTION: This guarantee does not apply if the pole/bracket/fixture combination is used to support any other items such as flags, pennants, or signs, which would add stress to the pole. LSI Industries cannot accept responsibility for harm or damage caused in these situations.

STEEL SQUARE POLES

Use ONLY with "Wind Speed Map for ASCE7-10

STEEL SQUARE POLES - ASCE7-10

POLE	110 MPH	115 MPH	120 MPH	130 MPH	140 MPH	150 MPH	160 MPH	170 MPH	180 MPH
4" 11GA 14'	12.5	11.3	10.2	8.5	6.8	5.8	4.9	4.1	3.6
4" 11GA 16'	9.8	8.6	7.9	6.5	5.4	4.4	3.5	2.9	2.2
4" 11GA 18'	8.1	7.4	6.7	5.4	4.2	3.4	2.8	2.2	1.7
4" 11GA 20'	7.1	6.3	5.6	4.4	3.4	2.7	2.1	1.6	1.1
4" 11GA 22'	9.9	8.8	7.9	6.3	5.1	4.0	3.1	2.5	2.0
4" 11GA 24'	8.6	7.5	6.8	5.3	4.2	3.3	2.5	1.9	1.3
4" 11GA 26'	6.8	6.1	5.5	4.2	3.2	2.3	1.6	1.0	0.6
4" 7GA 20'	10.7	9.7	8.7	7.0	5.7	4.6	3.8	3.1	2.5
4" 7GA 22'	11.3	10.2	9.1	7.3	5.8	4.7	3.5	2.7	2.1
4" 7GA 24'	9.8	8.9	7.8	6.0	4.5	3.5	2.8	2.1	1.6
4" 7GA 26'	7.9	7.1	6.1	4.7	3.6	2.8	1.9	1.2	0.7
5" 11GA 16'	18.1	16.4	14.8	12.3	10.3	8.7	7.3	6.3	5.3
5" 11GA 18'	15.7	14.2	12.8	10.5	8.7	7.3	6.1	5.1	4.3
5" 11GA 20'	13.5	12.3	11.1	9.0	7.4	6.0	4.8	3.8	3.1
5" 11GA 22'	15.8	14.3	12.6	10.2	8.3	6.5	5.4	4.2	3.5
5" 11GA 24'	13.8	12.5	10.8	8.6	6.7	5.2	3.9	3.0	2.1
5" 11GA 26'	11.3	10.3	8.9	6.9	5.3	4.0	3.0	2.2	1.5
5" 7GA 20'	20.7	18.8	17.0	14.0	11.7	9.8	7.9	7.0	5.9
5" 7GA 22'	25.8	23.3	21.0	17.5	14.6	12.3	10.4	8.8	7.5
5" 7GA 24'	23.3	21.0	19.0	15.6	12.9	10.7	9.0	7.5	6.3
5" 7GA 26'	20.0	18.0	16.2	13.2	10.7	8.9	7.3	6.0	4.8
5" 7GA 30'	16.4	14.6	13.0	10.3	7.9	6.5	5.2	4.0	3.1
6" 7GA 24'	35.0	30.8	28.5	23.7	19.6	16.7	14.0	11.8	10.2
6" 7GA 26'	29.2	26.2	23.7	19.3	15.9	13.2	11.0	8.9	7.5
6" 7GA 30'	23.6	21.2	19.0	15.2	12.3	9.9	8.0	6.4	5.0
6" 7GA 35'	17.6	15.2	13.6	10.7	8.2	6.2	4.6	3.2	2.1
6" 7GA 39'	13.9	11.9	10.4	7.7	5.5	3.8	2.4	1.2	0.2

All LSI Industries' poles are guaranteed to meet the EPA requirements listed. LSI Industries is not responsible if a pole order has a lower EPA rating than the indicated wind-loading zone where the pole will be located.

CAUTION: This guarantee does not apply if the pole/bracket/fixture combination is used to support any other items such as flags, pennants, or signs, which would add stress to the pole. LSI Industries cannot accept responsibility for harm or damage caused in these situations.

LED AREA LIGHTS - LSI MIRADA (XALM)

US & Int'l. patents pending

DISTRIBUTION/PERFORMANCE - Proprietary silicone refractor optics provide exceptional coverage and uniformity in Types 2, 3, 5W and FT. Internal Louver (IL) option available for improved back-light control without sacrificing street side performance.

ENERGY SAVING CONTROL OPTIONS - DIM - 0-10 volt dimming enabled with controls by others. Available with integrated LSI Controls wireless modules.

OCCUPANCY SENSING (IMS) – Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels. High level light is activated and increased to full bright upon detection of motion. Low light level (30% maximum drive current) is activated when target zone is absent of motion activity for ~2 minutes. Sensor is located on the center of the access cover and has a detection cone of approximately 45°.

EXPECTED LIFE - Over 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

LEDS - Select high-brightness LEDs in 5000K, 4000K, and 3000K color temperature, 70 CRI.

HOUSING - Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath. Fixture sealed to IP65.

MOUNTING - Tapered rear design allows fixtures to be mounted in 90° and 120° configurations without the need for extension arms. Use with 3" reduced drilling pattern. Wall mount brackets are available for direct mounting to wall.

ELECTRICAL - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277 VAC (50/60Hz input), and 347-480 VAC. Optional PCR and photocells (PC) are available in 120, 208, 240, 277, 347 and 480 volt (supply voltage must be specified).

DRIVER - Available in SS (Super Saver), HO (High Output) and VHO (Very High Output) drive currents. Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F)

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

SHIPPING WEIGHT (in carton) - One fixture: 30 lbs. (13.6 kg).

LISTING - UL listed to U.S. and international safety standards. Suitable for wet locations. For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at www.designlights.org.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.

ARRA Funding Compliant · wet location · RoHS COMPLIANT · CE · FC · IP65

Fixtures comply with ANSI C136.31-2010 American National Standard for Roadway Lighting Equipment - Luminaire Vibration 1.5G requirements.

DOE LIGHTING FACTS

LIGHT OUTPUT - XALM

LED AREA LIGHTS - LSI MIRADA (XALM)

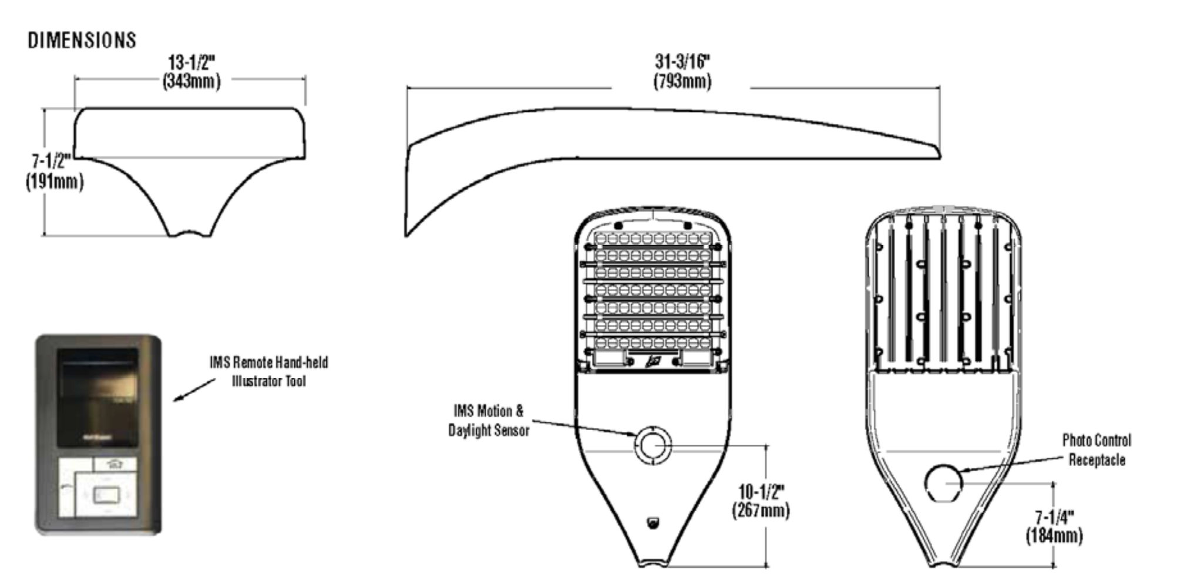
LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: XALM FT LED HO 50 UE WHT

LUMINAIRE EPA CHART - XALM

ACCESSORY ORDERING INFORMATION

DIMENSIONS



BUG LISTING

XALM - Type 3

Drive Current	Color Temp.[1]	Lumens	Watts	LER	BUG Rating
VHO	30	30,344	314	97	B3-U0-G4
VHO-IL[2]	30	25,003	314	80	B2-U0-G4
HO	30	24,654	241	102	B3-U0-G4
HO-IL	30	20,130	241	83	B2-U0-G4
SS	30	17,553	154	114	B2-U0-G3
SS-IL	30	14,552	154	94	B1-U0-G3
VHO	40	33,872	314	108	B3-U0-G4
VHO-IL[2]	40	27,910	314	89	B2-U0-G4
HO	40	27,520	241	114	B3-U0-G4
HO-IL	40	22,471	241	93	B2-U0-G4
SS	40	18,874	154	122	B2-U0-G3
SS-IL	40	15,647	154	102	B1-U0-G3
VHO	50	35,282	314	113	B3-U0-G4
VHO-IL[2]	50	29,073	314	93	B2-U0-G4
HO	50	28,667	241	119	B3-U0-G4
HO-IL	50	23,407	241	97	B2-U0-G4
SS	50	18,874	154	122	B2-U0-G3
SS-IL	50	15,647	154	102	B1-U0-G3

XALM - Type 3

Drive Current	Color Temp.[1]	Lumens	Watts	LER	BUG Rating
VHO	30	28,742	315	91	B3-U0-G4
VHO-IL[2]	30	22,382	315	71	B2-U0-G4
HO	30	24,973	241	104	B3-U0-G4
HO-IL	30	18,937	241	79	B2-U0-G4
SS	30	15,927	154	103	B2-U0-G3
SS-IL	30	12,406	154	80	B1-U0-G3
VHO	40	32,084	315	102	B3-U0-G4
VHO-IL[2]	40	24,985	315	79	B3-U0-G4
HO	40	27,876	241	116	B3-U0-G4
HO-IL	40	21,139	241	88	B2-U0-G4
SS	40	18,858	154	122	B3-U0-G3
SS-IL	40	14,362	154	93	B2-U0-G3
VHO	50	33,421	315	106	B3-U0-G5
VHO-IL[2]	50	26,027	315	83	B3-U0-G4
HO	50	29,037	241	120	B3-U0-G4
HO-IL	50	22,020	241	91	B2-U0-G4
SS	50	18,858	154	122	B3-U0-G3
SS-IL	50	14,362	154	93	B2-U0-G3

1 - Color Temperature: 30-3000K, 40-4000K, 50-5000K
2 - IL - Stated drive current with Integral Reflector.

XALM - Type FT

Drive Current	Color Temp.[1]	Lumens	Watts	LER	BUG Rating
VHO	30	29,911	314	95	B5-U0-G3
VHO-IL[2]	30	17,907	314	57	B2-U0-G3
HO	30	24,676	241	102	B5-U0-G3
HO-IL	30	14,825	241	61	B2-U0-G3
SS	30	17,471	154	113	B4-U0-G2
SS-IL	30	11,003	153	72	B2-U0-G2
VHO	40	33,389	314	106	B5-U0-G4
VHO-IL[2]	40	19,988	314	64	B2-U0-G4
HO	40	27,807	242	115	B5-U0-G3
HO-IL	40	17,109	242	71	B2-U0-G3
SS	40	18,786	154	122	B4-U0-G2
SS-IL	40	11,831	153	77	B2-U0-G2
VHO	50	34,780	314	111	B5-U0-G4
VHO-IL[2]	50	20,822	314	66	B3-U0-G4
HO	50	28,693	241	119	B5-U0-G3
HO-IL	50	17,238	241	71	B2-U0-G3
SS	50	18,786	154	122	B4-U0-G2
SS-IL	50	11,831	153	77	B2-U0-G2

TGC Engineering, LLC
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

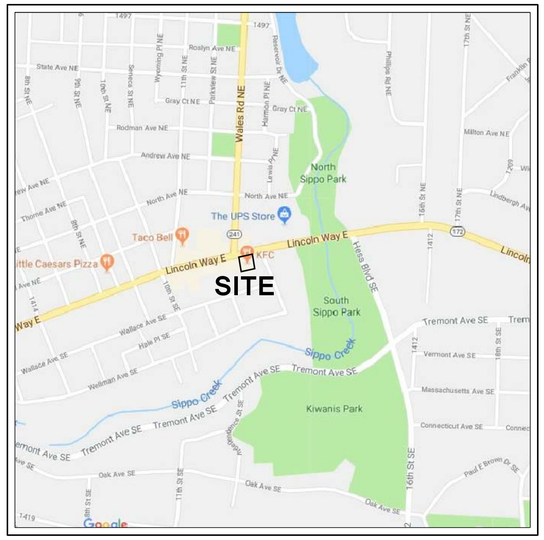
KFC MASSILLON

DETAILS & SPECIFICATIONS

PROJECT NUMBER: 1712

DATE: 2018-05-23

STATE OF OHIO · CHRISTOPHER M. SCHMIDT · E-80749 · REGISTERED · PROFESSIONAL ENGINEER



LOCATION MAP
(N.T.S.)

LATITUDE: N 040°47'58.9"
LONGITUDE: W 081°30'33.0"

N

EROSION & SEDIMENT CONTROL PLAN

KFC MASSILLON

CITY OF MASSILLON, COUNTY OF STARK AND STATE OF OHIO

PROJECT DESCRIPTION:
THE PROJECT IS A COMMERCIAL BUILDING FACILITY WITH INFRASTRUCTURE IMPROVEMENTS, EARTHWORK AND PAVING OPERATIONS. THE TOTAL DISTURBED AREA IS 0.97 ACRES.

OGPUPS
Ohio Oil & Gas Producers Underground Protection Service
800-925-0988 or 8-1-1
www.ogpups.org

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)

TGC ENGINEERING

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
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PROFESSIONAL ENGINEER

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(PHONE) 330.590.8004 (FAX) 888.820.8423

KFC MASSILLON
E&SCP TITLE SHEET

PROJECT NUMBER
1712

DATE
2018-05-23

14
18

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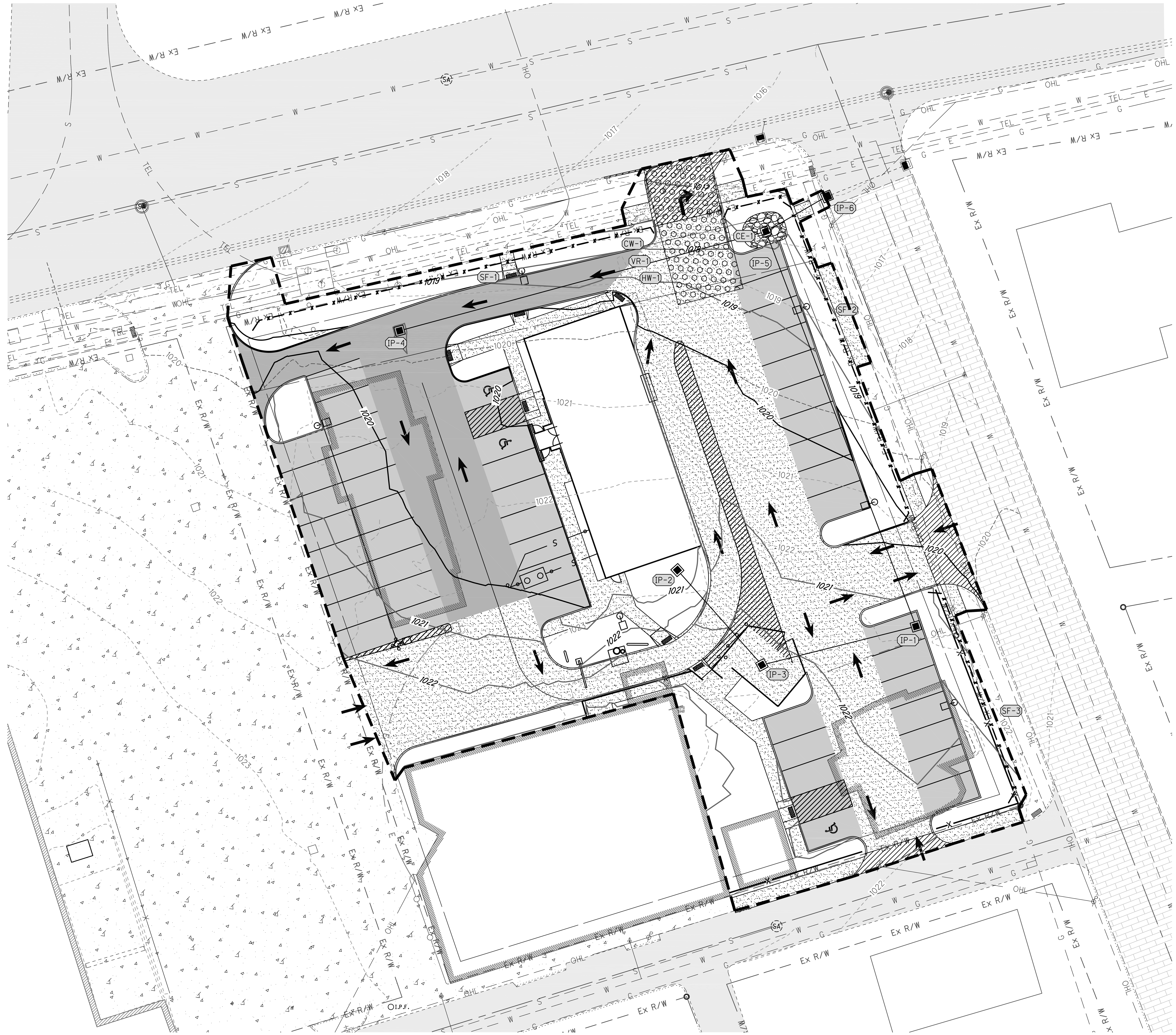
E&SCP LEGEND

SILT FENCE	SF-#
INLET PROTECTION	IP-#
CONCRETE WASHOUT AREA	CW-#
VEHICLE REFUELING	VR-#
HAZARDOUS WASTE STORAGE AREA	HW-#
CONSTRUCTION ENTRANCE (24'W x 50'L x 10"D)	CE-#
CLEARING/ GRADING LIMITS	
SOIL TYPE	CuB



STATE OF OHIO
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PROFESSIONAL ENGINEER

TGC Engineering, LLC
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SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

SCALE (IN FEET)
1 inch = 20 ft.
0 10 20 40

N

KFC MASSILLON
EROSION AND SEDIMENT CONTROL PLAN

PROJECT NUMBER: 1712

DATE: 2018-05-23

GENERAL NOTES:

1. THE CONTRACTOR SHALL REVIEW AND STUDY THE PLANS AND SPECIFICATIONS. IMPLEMENTATION OF THE EROSION CONTROL ACTIVITIES SHOULD CORRESPOND TO CONSTRUCTION ACTIVITIES.

2. EROSION CONTROL MEASURES HAVE BEEN SHOWN FOR THE WORK AREAS AS IDENTIFIED ON THESE PLAN SHEETS. IF WORK IS CONDUCTED IN OTHER AREAS AS PART OF THIS PROJECT, ADDITION EROSION CONTROL MEASURES MAY BE REQUIRED.

3. THE PROJECT ENGINEER OR EROSION CONTROL INSPECTOR SHOULD BE ABLE TO EXPLAIN THE SEDIMENT AND EROSION CONTROLS AND PLAN TO AN OUTSIDE INSPECTOR (I.E. OHIO EPA, ENVIRONMENTAL SERVICES, QAR INSPECTOR, COUNTY SCS).

4. OWNER AND CONTRACTOR SHALL COMPLY WITH SOIL SEDIMENT POLLUTION CONTROL ORDINANCES DURING CONSTRUCTION AND SHALL IMPLEMENT SEDIMENT CONTROL AS DIRECTED BY THE ENGINEER OR THE GOVERNING AGENCY.

5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SPECIFIED ON THE PLANS SHALL CONFORM WITH DETAILS AND SPECIFICATIONS OUTLINED IN THE OHIO DEPARTMENT OF NATURAL RESOURCES BOOKLET, "RAINWATER AND LAND DEVELOPMENT".

6. ALL CONTRACTORS AND BUILDERS ARE REQUIRED TO INSTALL, REGULARLY INSPECT AND MAINTAIN TEMPORARY SEDIMENTATION CONTROLS TO MINIMIZE SOIL EROSION AND OFF-SITE SILTATION.

7. REGULAR INSPECTION AND MAINTENANCE SHALL BE PROVIDED FOR ALL EROSION CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE MAINTAINED THROUGHOUT CONSTRUCTION. INSPECTIONS MUST BE MADE A MINIMUM OF ONCE EVERY SEVEN DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD.

8. EROSION AND SEDIMENT CONTROL PRACTICES NOT ALREADY SPECIFIED MAY BE NECESSARY DUE TO UNFORESEEN ENVIRONMENTAL CONDITIONS AND/OR CHANGES IN THE DRAINAGE PATTERNS CAUSED BY EARTH-MOVING ACTIVITY. IF UNFORSEEN EROSION IS ENCOUNTERED DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES SHALL BE PROVIDED, AS DIRECTED BY THE ENGINEER, AT THE OWNER'S EXPENSE.

9. THE CONTRACTOR SHALL COMPLY WITH ANY FIELD ORDERS FOR SEDIMENT CONTROL AS ISSUED BY EITHER THE ENGINEERING DEPARTMENT, THE COUNTY OR THE ENGINEER OF RECORD.

10. SILT FENCE IS TO BE CONSTRUCTED AT LOCATIONS SHOWN ON THE PLANS PER "SPECIFICATIONS FOR SILT FENCE". SILT FENCE SHALL BE PLACED PRIOR TO ANY EARTH DISTURBING ACTIVITIES.

11. EROSION CONTROL MEASURES MUST BE PROVIDED AROUND ALL DIRT STOCKPILES AND OTHER TEMPORARILY DISTURBED AREAS.

12. THE OUTLET OF THE STORM COLLECTION SYSTEM WILL BE PROPERLY DESIGNED WITH VELOCITY DISSIPATING STRUCTURES/MEDIA. BY USING THESE PRACTICES, NO EROSIVE FLOW VELOCITIES ARE EXPECTED AT THE DISCHARGE LOCATION.

13. UPON THE COMPLETION OF EARTH MOVING ACTIVITIES IN ANY GIVEN AREA, ALL DISTURBED AND ERODED EARTH SHALL BE RE-GRADED AND SEEDED WITHIN SEVEN DAYS BY USING BIN RUN OATS OR ANNUAL RYE TO PROVIDE STABILITY AND SEDIMENT CONTROL. WHERE POSSIBLE, GROWTH SHALL NOT BE MOWED UNTIL IT HAS GONE TO SEED FOR ONE YEAR.

14. PERMANENT GROUND COVER SHALL BE ESTABLISHED AS SOON AS POSSIBLE IN ACCORDANCE WITH THE PLAN.

15. MINIMIZE TRACKING OF SEDIMENTS BY VEHICLES BY UTILIZING THE CONSTRUCTION ENTRANCE AS THE ONLY ENTRANCE FOR VEHICLES. MAINTAIN THIS ENTRANCE WITH STONE AS NEEDED TO PREVENT DIRT AND MUD FROM TRACKING ONTO THE ROADWAY. REGULAR SWEEPING OF THE ROADWAY MAY BE NECESSARY TO ENSURE ROADWAY DOES NOT BUILD UP WITH SEDIMENTS. STREETS DIRECTLY ADJACENT TO CONSTRUCTION ENTRANCES AND RECEIVING TRAFFIC FROM THE DEVELOPMENT AREA SHALL BE CLEANED DAILY TO REMOVE SEDIMENT TRACKED OFF-SITE. IF APPLICABLE, THE CATCH BASINS ON THESE STREETS NEAREST THE CONSTRUCTION ENTRANCES SHALL ALSO BE CLEANED WEEKLY.

16. NO SOLID OR LIQUID WASTE, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED INTO STORM WATER RUNOFF. THE PERMITTEE MUST IMPLEMENT ALL NECESSARY BMP'S TO PREVENT DISCHARGE OF NON-SEDIMENT POLLUTANTS TO THE DRAINAGE SYSTEM OF THE SITE OR SURFACE WATERS OF THE STATE. UNDER NO CIRCUMSTANCE SHALL CONCRETE TRUCKS WASH OUT DIRECTLY INTO A DRAINAGE CHANNEL, STORM SEWER OR SURFACE WATERS OF THE STATE. NO EXPOSURE OF STORM WATER TO WASTE MATERIALS IS RECOMMENDED.

17. ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 14 DAYS OR MORE MUST BE SEEDED AND MULCHED BY NOVEMBER 1 OR MUST HAVE DORMANT SEEDING OR MULCH COVER APPLIED BETWEEN NOVEMBER 1 AND MARCH 1.

18. MAKE FIELD ADJUSTMENTS TO:
   - MEET FIELD CONDITIONS
   - ANTICIPATE FUTURE WORK
   - MAKE CORRECTION BASED ON THE WEEKLY INSPECTIONS

21. ALL FUELING VEHICLES SHALL BE EQUIPPED WITH SPILL KITS. ANY SPILLS OVER 5 GALLONS (OR THE MINIMUM REPORTING LEVEL) SHALL BE REPORTED TO THE APPROPRIATE AGENCY ACCORDING TO STATE AND LOCAL LAWS. FOR SPILLS OVER 25 GALLONS, CONTACT THE EPA (1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES.

22. SITE STABILIZATION, EITHER PERMANENT OR TEMPORARY, MUST FOLLOW THE REQUIREMENTS AS APPLICABLE ON THE TABLES ON THIS SHEET.

23. CONTRACTOR TO IMPLEMENT GOOD HOUSEKEEPING PRACTICES THROUGHOUT CONSTRUCTION.

24. WHERE CONSTRUCTION ACTIVITIES ARE TO OCCUR ON SITES WITH CONTAMINATION FROM PREVIOUS ACTIVITIES, OPERATORS MUST BE AWARE THAT CONCENTRATIONS OF MATERIALS THAT MEET OTHER CRITERIA (IS NOT CONSIDERED A HAZARDOUS WASTE, MEETING VAP STANDARDS, ETC.) MAY STILL RESULT IN STORM WATER DISCHARGES IN EXCESS OF OHIO WATER QUALITY STANDARDS. SUCH DISCHARGES ARE NOT AUTHORIZED BY THIS PERMIT. APPROPRIATE BMP'S INCLUDE, BUT ARE NOT LIMITED TO: THE USE OF BERMS TRENCHES, AND PITS TO COLLECT CONTAMINATED RUNOFF AND PREVENT DISCHARGES, PUMPING RUNOFF INTO A SANITARY SEWER (WITH PRIOR APPROVAL OF THE SANITARY SEWER OPERATOR) OR INTO A CONTAINER FOR TRANSPORT TO AN APPROPRIATE TREATMENT/ DISPOSAL FACILITY AND COVERING AREAS OF CONTAMINATION WITH TARPS OR OTHER METHODS THAT PREVENT STORM WATER FROM COMING IN CONTACT WITH THE MATERIAL. OPERATORS SHOULD CONSULT WITH THE OHIO EPA DIVISION OF SURFACE WATER PRIOR TO SEEKING PERMIT COVERAGE.

25. ANY CONTAMINATED SOILS ENCOUNTERED SHALL BE STOCKPILED PER DIRECTION OF OWNER'S REPRESENTATIVE. "CLEAN" SOIL SHALL BE STOCKPILED SEPARATELY FROM CONTAMINATED SOIL AND SHALL NOT BE COMMINGLED. CONTAMINATED SOILS SHALL BE PLACED ON, AND COVERED WITH VISQUEEN. A BERM SHALL BE CONSTRUCTED AROUND ENTIRE STOCKPILE TO HOLD VISQUEEN DOWN AND PREVENT SURFACE WATER AND RAIN FROM ENTERING SOIL PILE. ALL SEALS OR OVERLAPS IN THE VISQUEEN COVERING SHALL BE SECURED. ALL CONTAMINATED SOILS MUST BE TREATED AND/OR DISPOSED IN OHIO EPA APPROVED SOLID WASTE MANAGMENT FACILITIES OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES (TSDF'S).

26. ADDITIONAL EROSION CONTROL MEASURES MAY BECOME NECESSARY DUE TO CONSTRUCTION SEQUENCING. CONTRACTOR SHALL CONSULT WITH ENGINEER TO DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY.

27. CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH APPLICABLE STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS. WASTE DISPOSAL BY OPEN BURNING IS PROHIBITED. CONTRACTOR SHALL PROPERLY DISPOSE ANY CONTAMINATED SOILS, HAZARDOUS WASTE OR ASBESTOS CONTAINING MATERIAL ENCOUNTERED ON SITE ACCORDING TO CONTRACT DOCUMENTS.

28. CONTAINERS (E.G., DUMPSTERS, DRUMS) MUST BE MADE AVAILABLE FOR DISPOSAL OF DEBRIS, TRASH, HAZARDOUS OR PETROLEUM WASTE. ALL CONTAINERS MUST BE COVERED AND LEAK- PROOF. NO TOXIC OR HAZARDOUS WASTES SHALL BE DISPOSED INTO STORM DRAINS, SEPTIC TANKS, OR BY BURYING, BURNING, OR MIXING OF WASTES.

29. CONSTRUCTION AND DEMOLITION DEBRIS SHALL BE TRANSPORTED TO A LICENSED DISPOSAL FACILITY. THE MATERIAL SHALL BE COVERED WHILE BEING TRANSPORTED.

30. THERE SHALL BE NO TURBID DISCHARGES TO SURFACE WATERS OF THE STATE RESULTING FROM DE-WATERING ACTIVITIES. IF TRENCH OR GROUND WATER CONTAINS SEDIMENT, IT MUST PASS THROUGH A SEDIMENT SETTLING POND OR OTHER EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE, PRIOR TO BEING DISCHARGED FROM THE CONSTRUCTION SITE. ALTERNATIVELY, SEDIMENT MAY BE REMOVED BY SETTING IN PLACE OR BY DE-WATERING INTO A SUMP PIT, FILTER BAG OR COMPARABLE PRACTICE. GROUND WATER DE-WATERING WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS IS NOT REQUIRED TO BE TREATED PRIOR TO DISCHARGE. HOWEVER, CARE MUST BE TAKEN WHEN DISCHARGING GROUND WATER TO ENSURE THAT IT DOES NOT BECOME POLLUTANT LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.

31. ALL EROSION AND SEDIMENT CONTROL SPECIFICATIONS, APPLICATIONS AND TIMETABLES ARE BASED ON THE DESCRIPTIONS AND STANDARDS OF THE OHIO DEPARTMENT OF NATURAL RESOURCES "RAINWATER AND LAND DEVELOPMENT MANUAL".

32. REFERENCE PROJECT DESIGN PLANS FOR ADDITIONAL EROSION AND SEDIMENT CONTROLS THAT MAY BE REQUIRED, BUT ARE NOT IDENTIFIED ON THESE PLANS.

GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES (BMP'S):

MATERIAL HANDLING AND WASTE MANAGEMENT:

1. NON-HAZARDOUS WASTE MATERIALS:
   WASTE DISPOSAL CONTAINERS SHALL BE PROVIDED PRIOR TO MATERIALS BEING DELIVERED TO THE SITE. THE WASTE DISPOSAL CONTAINERS ARE FOR THE PROPER COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, SANITARY GARBAGE, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS TO BE USED ON-SITE. CONTAINERS SHALL BE COVERED AND NOT LEAKING. THE DUMPSTERS SHALL BE INSPECTED WEEKLY AND IMMEDIATELY AFTER STORM EVENTS. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL. CONSTRUCTION DEMOLITION AND DEBRIS (CD&D) WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH ORC 3714 AT AN APPROVED OHIO EPA CD&D LANDFILL. CD&D WASTE IS DEFINED AS ALL MATERIALS ATTACHED TO A STRUCTURE, WHICH IS BEING DEMOLISHED.

2. HAZARDOUS WASTE MATERIALS:
   THE CONTRACTOR WILL ESTABLISH A HAZARDOUS MATERIALS STORAGE AREA CONTAINING PROPER SHIPPING CONTAINERS USED TO STORE THE MATERIALS PRIOR TO THESE MATERIALS BEING DELIVERED TO THE SITE. ALL HAZARDOUS WASTE MATERIALS SUCH AS OIL FILTERS, PETROLEUM PRODUCTS, PAINT, AND EQUIPMENT MAINTENANCE FLUIDS WILL BE STORED IN STRUCTURALLY SOUND AND SEALED SHIPPING CONTAINERS, WITHIN THE HAZARDOUS MATERIALS STORAGE AREA. HAZARDOUS WASTE MATERIALS WILL BE STORED IN APPROPRIATE AND CLEARLY MARKED CONTAINERS AND SEGREGATED FROM OTHER NON-WASTE MATERIALS. SECONDARY CONTAINMENT WILL BE PROVIDED FOR ALL WASTE MATERIALS IN THE HAZARDOUS MATERIALS STORAGE AREA AND WILL CONSIST OF COMMERCIALLY AVAILABLE SPILL PALLETS. THE AREA WILL BE INSPECTED WEEKLY AND AFTER STORM EVENTS. THE AREA WILL BE KEPT CLEAN, WELL ORGANIZED AND EQUIPPED WITH AMPLE CLEANUP SUPPLIES AS APPROPRIATE FOR THE MATERIALS BEING STORED. MATERIAL SAFETY DATA SHEETS, MATERIAL INVENTORY AND EMERGENCY CONTACT NUMBERS WILL BE MAINTAINED IN THE OFFICE TRAILER. ADDITIONALLY, ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND MUNICIPAL REGULATIONS. HAZARDOUS WASTE MATERIALS WILL NOT BE DISPOSED OF INTO THE ON-SITE DUMPSTERS. ALL PERSONNEL WILL BE INSTRUCTED, DURING TAILGATE TRAINING SESSIONS, REGARDING PROPER PROCEDURES FOR HAZARDOUS WASTE DISPOSAL. NOTICES THAT STATE THESE PROCEDURES WILL BE POSTED IN THE OFFICE TRAILER AND THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

3. TEMPORARY SANITARY FACILITIES (PORTABLE TOILETS) WILL BE PROVIDED AT THE SITE UPON THE START OF CONSTRUCTION AND WILL REMAIN THROUGHOUT THE CONSTRUCTION PHASE. THE TOILETS WILL BE LOCATED BY THE CONTRACTOR, AWAY FROM ALL CONCENTRATED FLOW PATHS AND TRAFFIC FLOW AND WILL HAVE COLLECTION PANS UNDERNEATH AS SECONDARY CONTAINMENT. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE FACILITIES AS NEEDED BY A LICENSED WASTE HAULER. THE PORTABLE TOILETS WILL BE INSPECTED WEEKLY FOR EVIDENCE OF LEAKING HOLDING TANKS. TOILETS WITH LEAKING HOLDING TANKS WILL BE REMOVED FROM THE SITE AND REPLACED WITH NEW PORTABLE TOILETS.

ADDITIONAL BEST MANAGEMENT PRACTICES (BMP'S):

REQUIREMENTS:

1. EDUCATE CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, MAKING THEM AWARE OF THE FOLLOWING GENERAL GUIDELINES:

2. WASTE DISPOSAL AND HANDLING OF HAZARDOUS AND OTHER CONSTRUCTION:

   DO:
   - PREVENT SPILLS
   - USE PRODUCTS UP
   - FOLLOW LABEL DIRECTIONS FOR DISPOSAL
   - REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
   - RECYCLE WASTES WHENEVER POSSIBLE

   DON'T:
   - DON'T POUR INTO WATERWAYS, STORM DRAINS OR ONTO THE GROUND
   - DON'T POUR DOWN THE SINK, FLOOR DRAIN OR SEPTIC TANKS
   - DON'T BURN CHEMICALS OR CONTAINERS
   - DON'T MIX CHEMICALS TOGETHER

3. NO CONSTRUCTION RELATED WASTE MATERIALS ARE TO BE BURIED ON-SITE. BY EXCEPTION, CLEAN FILL (BRICKS, HARDENED CONCRETE, SOIL) MAY BE UTILIZED IN A WAY THAT DOES NOT ENCROACH UPON NATURAL WETLANDS, STREAMS OR THEIR FLOODPLAINS, UNLESS PROHIBITED BY LOCAL ORDINANCE OR ZONING. FILLING OF STREAM SIDE AREAS MAY REQUIRE FEDERAL, STATE AND LOCAL PERMITS AND MAY NOT BE PERMITTED TO RESULT IN THE CONTAMINATION OF WATERS OF THE STATE.

4. HANDLING CONSTRUCTION CHEMICALS:
   MIXING, PUMPING, TRANSFERRING OR OTHER HANDLING OF CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.

5. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HRS. OF A 0.5 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER. SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REQUIREMENTS MAY APPLY. A SPCC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVEGROUND TANK OF 660 GALLONS OR MORE, ACCUMULATIVE ABOVEGROUND STORAGE OF 1330 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE. SOILS THAT HAVE BECOME CONTAMINATED MUST BE DISPOSED OF ACCORDANCE WITH ITEM 6 CONTAMINATED SOILS. ALL FUEL/LIQUID TANKS AND DRUMS SHALL BE STORED IN A MARKED STORAGE AREA. A DIKE SHALL BE CONSTRUCTED AROUND THIS STORAGE AREA WITH A MINIMUM CAPACITY EQUAL TO 110% OF THE VOLUME OF ALL CONTAINERS IN THE STORAGE AREA.

6. CONCRETE WASH WATER/WASH OUTS:
   CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT WITH NO POTENTIAL FOR DISCHARGE SHALL BE CONSTRUCTED AS SPECIFIED TO CONTAIN CONCRETE WASH WATER. FIELD TILE OR OTHER SUBSURFACE DRAINAGE STRUCTURES WITHIN 10 FT. OF THE SUMP SHALL BE CUT AND PLUGGED. FOR SMALL PROJECTS, TRUCK CHUTES MAY BE RINSED ON THE LOT AWAY FROM ANY WATER CONVEYANCES. CONCRETE WASH-OUT AREAS ARE SHOWN ON THE PLAN. REFERENCE PLANS FOR CONSTRUCTION DETAILS.

7. CONTAMINATED SOILS:
   IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT LICENSED SANITARY LANDFILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). PLEASE BE AWARE THAT STORM WATER RUN OFF ASSOCIATED WITH CONTAMINATED SOILS ARE NOT AUTHORIZED UNDER OHIO EPA'S GENERAL STORM WATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES. IN THE EVENT THERE ARE LARGE EXTENSIVE AREAS OF CONTAMINATED SOILS ADDITIONAL MEASURES ABOVE AND BEYOND THE CONDITIONS OF OHIO EPA'S GENERAL CONSTRUCTION STORM WATER PERMIT WILL BE REQUIRED. DEPENDING ON THE EXTENT OF CONTAMINATION, ADDITIONAL TREATMENT AND/OR COLLECTION AND DISPOSAL MAY BE REQUIRED. ALL STORM WATER DISCHARGES ASSOCIATED WITH THE CONTAMINATED SOILS MUST BE AUTHORIZED UNDER AN ALTERNATE NPDES (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT.

8. SPILL REPORTING REQUIREMENTS:
   SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST, KITTY LITTER OR OTHER ABSORBANT MATERIAL AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378). SPILLS OF 5 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MIN. OF THE DISCOVERY OF THE RELEASE. ALL SPILLS, WHICH RESULT IN CONTACT WITH WATERS OF THE STATE, MUST BE REPORTED TO OHIO EPA'S HOTLINE.

9. OPEN BURNING:
   NO MATERIALS MAY BE BURNED WHICH CONTAIN RUBBER, GREASE, ASPHALT, OR PETROLEUM PRODUCTS SUCH AS TIRES, CARS, AUTOPARTS, PLASTICS OR PLASTIC COATED WIRE. (SEE OAC 3745-9) OPEN BURNING IS NOT ALLOWED IN RESTRICTED AREAS. RESTRICTED AREAS ARE DEFINED AS: 1) WITHIN CORPORATION LIMITS; 2) WITHIN 1000 FEET OUTSIDE A MUNICIPAL CORPORATION HAVING A POPULATION OF 1000 TO 10,000; AND 3) A ONE MILE ZONE OUTSIDE OF A CORPORATION OF 10,000 OR MORE. OUTSIDE A RESTRICTED AREA, NO OPEN BURNING CAN TAKE PLACE WITHIN 1000 FEET OF AN INHABITED BUILDING LOCATED OFF THE PROPERTY WHERE THE FIRE IS SET. OPEN BURNING IS PERMISSIBLE IN A RESTRICTED AREA FOR THE FOLLOWING ACTIVITIES: HEATING TAR, WELDING AND ACETYLENE TORCHES, SMUDGE POTS AND SIMILAR OCCUPATIONAL NEEDS, AND HEATING FOR WARMTH OR OUTDOOR BARBEQUES. OUTSIDE OF RESTRICTED AREAS, OPEN BURNING IS PERMISSIBLE FOR LANDSCAPE WASTES (PLANT MATERIAL), LAND-CLEARING WASTES (PLANT MATERIAL, WITH PRIOR WRITTEN PERMISSION FROM OHIO EPA), AND AGRICULTURAL WASTES (MATERIAL GENERATED BY CROP, HORTICULTURAL, OR LIVESTOCK PRODUCTION PRACTICES. THIS INCLUDES FENCE POSTS AND SCRAP LUMBER, BUT NOT BUILDINGS).

10. DUST CONTROL/SUPPRESSANTS:
   DUST CONTROL IS REQUIRED TO PREVENT NUISANCE CONDITIONS. DUST CONTROLS MUST BE USED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND NOT BE APPLIED IN A MANNER WHICH WOULD RESULT IN A DISCHARGE TO WATERS OF THE STATE. ISOLATION DISTANCES FROM BRIDGES, CATCH BASINS, AND OTHER DRAINAGEWAYS MUST BE OBSERVED. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN PRECIPITATION IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. USED OIL MAY NOT BE APPLIED FOR DUST CONTROL.

11. OTHER AIR PERMITTING REQUIREMENTS:
   ALL CONTRACTORS AND SUB CONTRACTORS MUST BE MADE AWARE THAT CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS. ACTIVITIES INCLUDING BUT NOT LIMITED TO MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC., WILL REQUIRE SPECIFIC OHIO EPA AIR PERMITS FOR INSTALLATION AND OPERATION. THESE ACTIVITIES MUST SEEK AUTHORIZATION FROM THE CORRESPONDING DISTRICT OF OHIO EPA. NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO OHIO EPA FOR ALL COMMERCIAL SITES TO DETERMINE IF ASBESTOS CORRECTIVE ACTIONS ARE REQUIRED.

12. PROCESS WASTE WATER/LEACHATE MANAGEMENT:
   ALL PROCESS WASTEWATERS MUST BE COLLECTED AND PROPERLY DISPOSED AT AN APPROVED DISPOSAL FACILITY. IN THE EVENT THERE ARE LEACHATE OUTBREAKS ASSOCIATED WITH ONSITE DISPOSAL, MEASURES MUST BE TAKEN TO ISOLATE THIS DISCHARGE FOR COLLECTION AND PROPER DISPOSAL. INVESTIGATIVE MEASURES AND CORRECTIVE ACTIONS MUST BE IMPLEMENTED TO IDENTIFY AND ELIMINATE THE SOURCE OF ALL LEACHATE OUTBREAKS.

13. PERMIT TO INSTALL (PTI) REQUIREMENTS:
   ALL CONTRACTORS AND SUB CONTRACTORS MUST BE MADE AWARE THAT A PTI MUST BE SUBMITTED AND APPROVED BY OHIO EPA PRIOR TO THE CONSTRUCTION OF ALL CENTRALIZED SANITARY SYSTEMS, INCLUDING SEWER EXTENSIONS, AND SEWERAGE SYSTEMS (EXCEPT THOSE SERVING ONE, TWO, AND THREE FAMILY DWELLINGS) AND POTABLE WATER LINES. THE ISSUANCE OF AN OHIO EPA GENERAL PERMIT DOES NOT AUTHORIZE THE INSTALLATION OF ANY SEWERAGE SYSTEM WHERE OHIO EPA HAS NOT APPROVED A PTI.

TEMPORARY STABILIZATION

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREAS WITHIN 50 FEET OF A STREAM AND NOT AT FINAL GRADE	WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN DORMANT FOR MORE THAN 14 DAYS
ALL OTHER AREAS	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE WITHIN AREA
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER	PRIOR TO THE ONSET OF WINTER WEATHER
WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED. THESE TECHNIQUES MAY INCLUDE MULCHING, EROSION MATTING, OR PLACEMENT OF STONE.	

PERMANENT STABILIZATION

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA
ANY AREAS WITHIN 50 FEET OF A STREAM AND AT FINAL GRADE	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE WITHIN AREA
ANY AREAS WITHIN 50 FEET OF A STREAM AND AT FINAL GRADE	WITHIN TWO DAYS OF REACHING FINAL GRADE
ANY OTHER AREAS AT FINAL GRADE	WITHIN SEVEN DAYS OF REACHING FINAL GRADE WITHIN THAT AREA

TEMPORARY EROSION AND SEDIMENT CONTROL IMPLEMENTATION SCHEDULE - NARRATIVE:

THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENT CONTROL PRACTICES ACCORDING TO THE FOLLOWING CONSTRUCTION SCHEDULE IDENTIFIED BELOW. THE CONTRACTOR SHALL MODIFY THE ESTIMATED TIME FRAMES BASED ON FUTURE SCHEDULE CHANGES.

TEMPORARY EROSION AND SEDIMENT CONTROL IMPLEMENTATION SCHEDULE

CONSTRUCTION ACTIVITY	ESTIMATED DATES
CONDUCT PRE-CONSTRUCTION MEETING.	6/1/2018
PROVIDE TEMPORARY SANITARY FACILITIES AND DUMPSTERS.	6/3/2018
PERFORM SITE EARTHWORK. UTILIZE DUST CONTROL AND APPLY TEMPORARY SOIL STABILIZATION AS NEEDED.	6/3/2018
PERFORM PERMANENT SEEDING WITHIN (7) DAYS OF COMPLETION OF FINAL GRADING IN UNPAVED AREAS.	8/30/2018
REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SITE ACHEIVES "FINAL STABILIZATION".	12/1/2018

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED PROFESSIONAL ENGINEER

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(PHONE) 330.590.8004 (FAX) 888.820.8423

KFC MASSILLON
E&SCP NOTES

PROJECT NUMBER: 1712
DATE: 2018-05-23

Specifications
for

Additional Construction Site Pollution Controls

1. Construction personnel, including subcontractors who may use or handle hazardous or toxic materials, shall be made aware of the following general guidelines regarding disposal and handling of hazardous and construction wastes:
   - Prevent spills
   - Use products up
   - Follow label directions for disposal
   - Remove lids from empty bottles and cans when disposing in trash
   - Recycle wastes whenever possible
   - Don't pour into waterways, storm drains or onto the ground
   - Don't pour down the sink, floor drain or septic tanks
   - Don't bury chemicals or containers
   - Don't burn chemicals or containers
   - Don't mix chemicals together
2. **Containers shall be provided for the proper collection of all waste material including construction debris, trash, petroleum products and any hazardous materials used on-site.** Containers shall be covered and not leaking. All waste material shall be disposed of at facilities approved for that material. Construction Demolition and Debris (CD&D) waste must be disposed of at an Ohio EPA approved CD&D landfill.
3. **No construction related waste materials are to be buried on-site.** By exception, clean fill (bricks, hardened concrete, soil) may be utilized in a way which does not encroach upon natural wetlands, streams or floodplains or result in the contamination of waters of the state.
4. **Handling Construction Chemicals.** Mixing, pumping, transferring or other handling of construction chemicals such as fertilizer, lime, asphalt, concrete drying compounds, and all other potentially hazardous materials shall be performed in an area away from any watercourse, ditch or storm drain.
5. **Equipment Fueling and Maintenance,** oil changing, etc., shall be performed away from watercourses, ditches or storm drains, in an area designated for that purpose. The designated area shall be equipped for recycling oil and catching spills. Secondary containment shall be provided for all fuel oil storage tanks. These areas must be inspected every seven days and within 24 hrs. of a 0.5 inch or greater rain event to ensure there are no exposed materials which would contaminate storm water. Site operators must be aware that Spill Prevention Control and Countermeasures (SPCC) requirements may apply. An SPCC plan is required for sites with one single above ground tank of 660

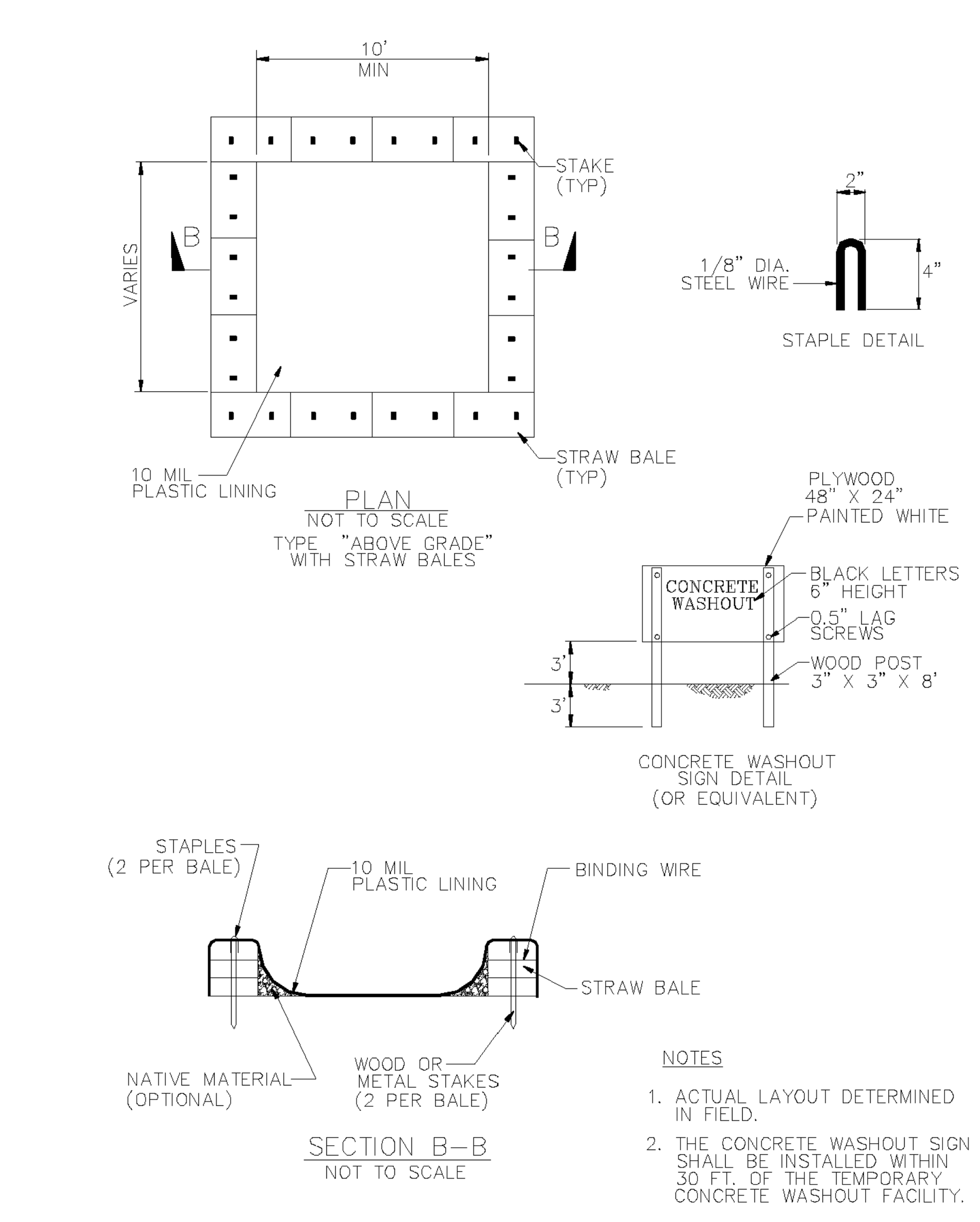
gallons or more, accumulative above ground storage of 1330 gallons or more, or 42,000 gallons of underground storage. Contaminated soils must be disposed of in accordance with Item 8.

6. **Concrete Wash Water** shall not be allowed to flow to streams, ditches, storm drains, or any other water conveyance. A sump or pit with no potential for discharge shall be constructed if needed to contain concrete wash water. Field tile or other subsurface drainage structures within 10 ft. of the sump shall be cut and plugged. For small projects, truck chutes may be rinsed away from any water conveyances.
7. **Spill Reporting Requirements:** Spills on pavement shall be absorbed with sawdust or kitty litter and disposed of with the trash at a licensed sanitary landfill. Hazardous or industrial wastes such as most solvents, gasoline, oil-based paints, and cement curing compounds require special handling. Spills shall be reported to Ohio EPA (1-800-282-9378). Spills of 25 gallons or more of petroleum products shall be reported to Ohio EPA, the local fire department, and the Local Emergency Planning Committee within 30 min. of the discovery of the release. All spills which contact waters of the state must be reported to Ohio EPA.
8. **Contaminated Soils.** If substances such as oil, diesel fuel, hydraulic fluid, antifreeze, etc. are spilled, leaked, or released onto the soil, the soil should be dug up and disposed of at licensed sanitary landfill or other approved petroleum contaminated soil remediation facility. (not a construction/demolition debris landfill). Note that storm water run off associated with contaminated soils are not be authorized under Ohio EPA's General Storm Water Permit associated with Construction Activities.
9. **Open Burning.** No materials containing rubber, grease, asphalt, or petroleum products, such as tires, autoparts, plastics or plastic coated wire may be burned (OAC 3745-19). Open burning is not allowed in restricted areas, which are defined as: 1) within corporation limits; 2) within 1000 feet outside a municipal corporation having a population of 1000 to 10,000; and 3) a one mile zone outside of a corporation of 10, 000 or more. Outside of restricted areas, no open burning is allowed within a 1000 feet of an inhabited building on another property. Open burning is permissible in a restricted area for: heating tar, welding, smudge pots and similar occupational needs, and heating for warmth or outdoor barbeques. Outside of restricted areas, open burning is permissible for landscape or land-clearing wastes (plant material, with prior written permission from Ohio EPA), and agricultural wastes, excluding buildings.
10. **Dust Control or dust suppressants** shall be used to prevent nuisance conditions, in accordance with the manufacturer's specifications and in a manner, which prevent a discharge to waters of the state. Sufficient distance must be provided between applications and nearby bridges, catch basins, and other waterways. Application (excluding water) may not occur when rain is imminent as noted in the short term forecast. Used oil may not be applied for dust control.
11. **Other Air Permitting Requirements:** Certain activities associated with construction will require air permits including but not limited to: mobile concrete batch plants, mobile asphalt plants, concrete crushers, large generators, etc. These activities will require specific Ohio EPA Air Permits for installation and operation. Operators must seek authorization from the corresponding district of Ohio EPA. For demolition of all

commercial sites, a Notification for Restoration and Demolition must be submitted to Ohio EPA to determine if asbestos corrective actions are required.

12. **Process Waste Water/Leachate Management.** Ohio EPA's Construction General Permit only allows the discharge of storm water and does not include other waste streams/discharges such as vehicle and/or equipment washing, on-site septic leachate concrete wash outs, which are considered process wastewaters. All process wastewaters must be collected and properly disposed at an approved disposal facility. In the event, leachate or septage is discharged; it must be isolated for collection and proper disposal and corrective actions taken to eliminate the source of waste water.
13. **A Permit To Install (PTI)** is required prior to the construction of all centralized sanitary systems, including sewer extensions, and sewerage systems (except those serving one, two, and three family dwellings) and potable water lines. Plans must be submitted and approved by Ohio EPA. Issuance of an Ohio EPA Construction General Storm Water Permit does not authorize the installation of any sewerage system where Ohio EPA has not approved a PTI.

Concrete Waste Management WM-8

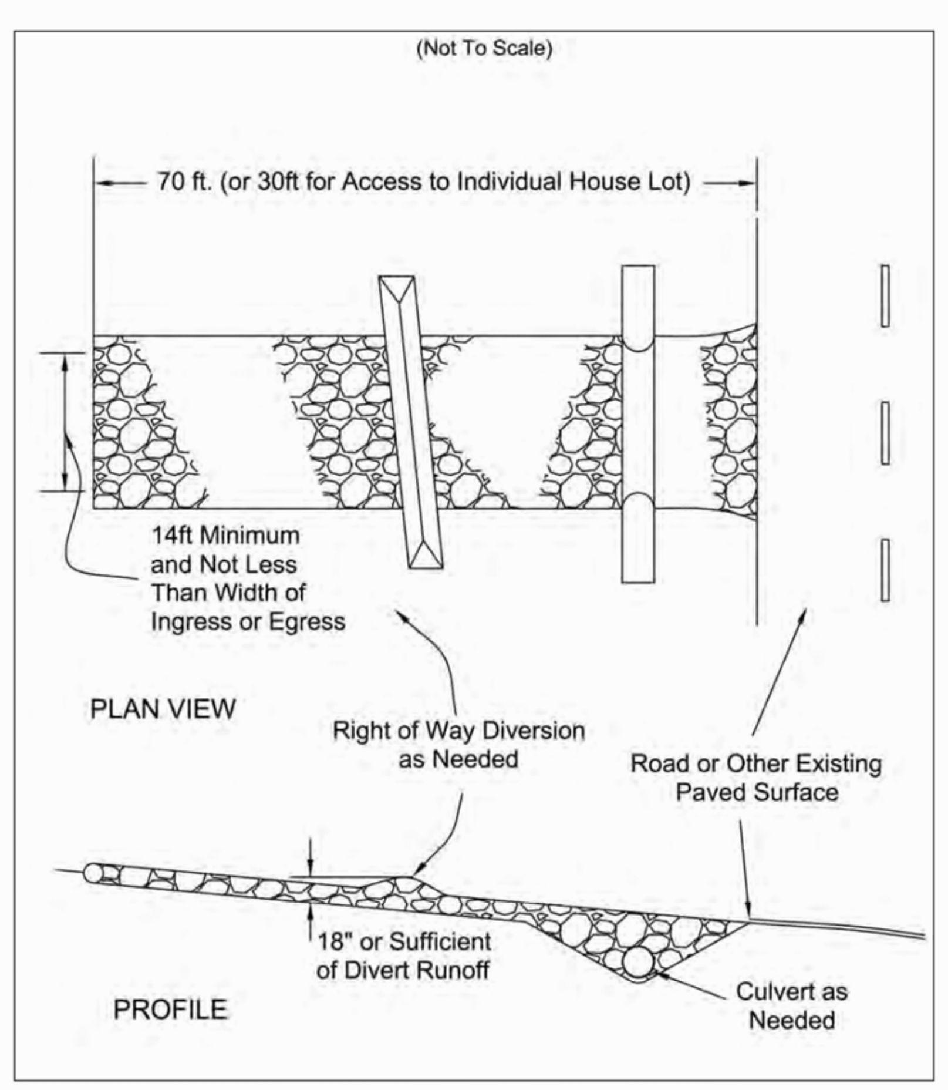


NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

Specifications
for

Construction Entrance



Specifications
for

Construction Entrance

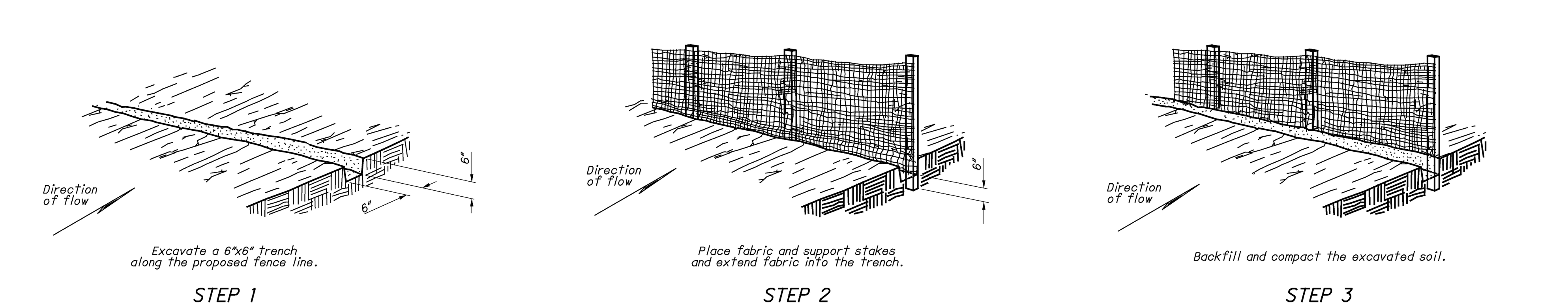
1. Stone Size—ODOT # 2 (1.5-2.5 inch) stone shall be used, or recycled concrete equivalent.
2. Length—The Construction entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. (exception: apply 30 ft. minimum to single residence lots).
3. Thickness -The stone layer shall be at least 6 inches thick for light duty entrances or at least 10 inches for heavy duty use.
4. Width -The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress occurs.
5. Geotextile -A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong rot-proof polymeric fibers and meet the following specifications:

Figure 7.4.1

Geotextile Specification for Construction Entrance	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 psi.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	320 psi.
Minimum Elongation	20%
Equivalent Opening Size	EOS < 0.6 mm.
Permittivity	1×10-3 cm/sec.

6. Timing—The construction entrance shall be installed as soon as is practicable before major grading activities.
7. Culvert -A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance or to prevent runoff from being directed out onto paved surfaces.
8. Water Bar -A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.
9. Maintenance -Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
10. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction-site shall be restricted from muddy areas.
11. Removal—the entrance shall remain in place until the disturbed area is stabilized or replaced with a permanent roadway or entrance.

PERIMETER GEOTEXTILE FABRIC FENCE



NOTES

MATERIALS:
Furnish 30" wide geotextile fabric with sound wood supports with maximum on-center spacing of 10'. Use geotextile fabric conforming to 712.09, Type C.

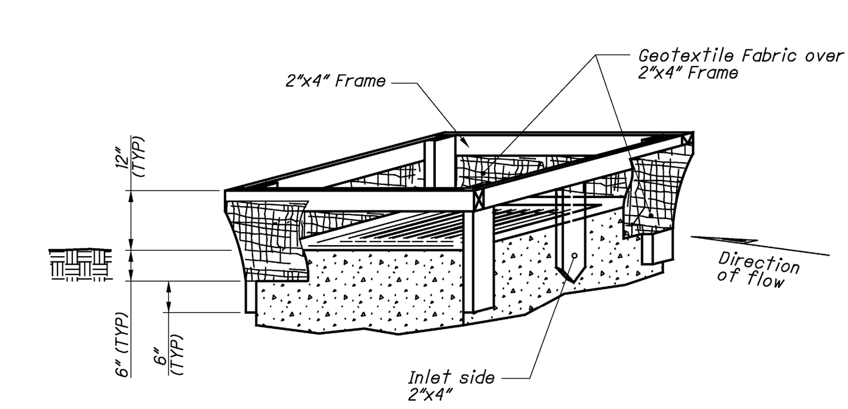
CONSTRUCTION:
Trench the geotextile fabric fence as detailed. The contractor may elect to trench the fence detailed on steps 1 through 3 in one plowing operation.

PAYMENT:
The Department will pay for accepted quantities at the prices shown in Appendix F of Supplemental Specification 832 (SS832) for the following items:

- Perimeter Geotextile Fabric Fence

All items shown on this Standard Construction Drawing that are required for construction that are not specifically identified in SS832 Appendix F are considered incidental.

INLET PROTECTION



INLET PROTECTION

NOTES

MATERIALS:
Furnish inlet protection consisting of 18" wide geotextile fabric fence with a securely nailed 2"x4" wood frame with a vertically driven 2"x4" on the inlet, or flow, side of the structure. Use geotextile fabric conforming to 712.09, Type C.

CONSTRUCTION:
Construct an 18" wide geotextile fabric fence supported around a storm drain inlet or catch basin with a securely nailed 2"x4" wood frame. Excavate a 6" trench around the inlet, and drive support posts 6" below the excavated trench bottom. Stretch the fabric around the frame. Secure it tightly, ensuring that 6" of fabric is in the trench. Overlap the fabric on one side of the inlet so that the fabric ends are not attached to the same post. Backfill and compact the excavated soil tightly onto the fabric. Place a vertical 2"x4" in the center of the inlet so that the top is at the top of the fence and the bottom is at least 6" below the bottom of the ditch.

PAYMENT:
The Department will pay for accepted quantities at the prices shown in Appendix F of Supplemental Specification 832 (SS832) for the following items:

- Inlet Protection

All items shown on this Standard Construction Drawing that are required for construction that are not specifically identified in SS832 Appendix F are considered incidental.

OFFICE OF HYDRAULIC ENGINEERING
STANDARD HYDRAULIC CONSTRUCTION DRAWING
CONSTRUCTION EROSION CONTROL
SCD NUMBER DM-4.4
2/2

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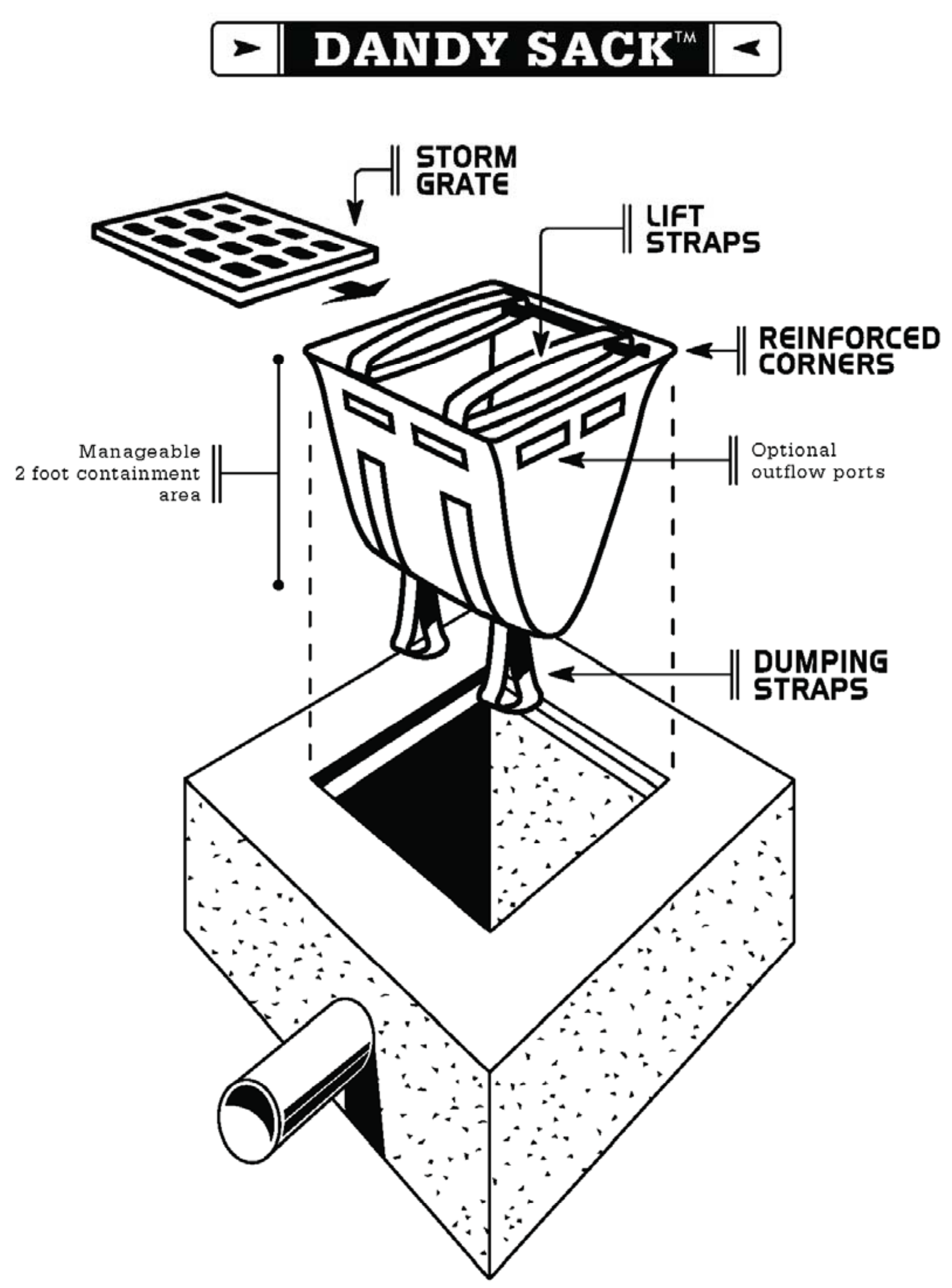
KFC MASSILLON
E&SCP DETAILS

PROJECT NUMBER 1712
DATE 2018-05-23

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED PROFESSIONAL ENGINEER



Specifications
for
Dust Control

1. Vegetative Cover and/mulch – Apply temporary or permanent seeding and mulch to areas that will remain idle for over 21 days. Saving existing trees and large shrubs will also reduce soil and air movement across disturbed areas. See Temporary Seeding; Permanent Seeding; Mulching Practices; and Tree and Natural Area Protection practices.
2. Watering – Spray site with water until the surface is wet before and during grading and repeat as needed, especially on haul roads and other heavy traffic routes. Watering shall be done at a rate that prevents dust but does not cause soil erosion. Wetting agents shall be utilized according to manufacturers instructions.
3. Spray-On Adhesives – Apply adhesive according to the following table or manufacturers' instructions.

Table 7.5.1 Adhesives for Dust Control

Adhesive	Water Dilution (Adhesive: Water)	Nozzle Type	Application Rate Gal./Ac.
Latex Emulsion	12.5:1	Fine	235
Resin in Water Acrylic Emulsion (No-traffic)	4:1	Fine	300
Acrylic Emulsion (No-traffic)	7:1	Coarse	450
Acrylic Emulsion (Traffic)	3.5:1	Coarse	350

4. Stone – Graded roadways and other suitable areas will be stabilized using crushed stone or coarse gravel as soon as practicable after reaching an interim or final grade. Crushed stone or coarse gravel can be used as a permanent cover to provide control of soil emissions.
5. Barriers – Existing windbreak vegetation shall be marked and preserved. Snow fencing or other suitable barrier may be placed perpendicular to prevailing air currents at intervals of about 15 times the barrier height to control air currents and blowing soil.
6. Calcium Chloride - This chemical may be applied by mechanical spreader as loose, dry granules or flakes at a rate that keeps the surface moist but not so high as to cause water pollution or plant damage. Application rates should be strictly in accordance with suppliers' specified rates.
7. Operation and Maintenance - When Temporary Dust Control measures are used; repetitive treatment should be applied as needed to accomplish control.

Street Cleaning - Paved areas that have accumulated sediment from construction should be cleaned daily, or as needed, utilizing a street sweeper or bucket -type endloader or scraper.

Specifications
for
Permanent Seeding

Site Preparation
1. Subsoiler, plow, or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.
2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.
3. Topsoil shall be applied where needed to establish vegetation.

Seedbed Preparation
1. Lime—Agricultural ground limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 pounds per 1,000-sq. ft. or 2 tons per acre.
2. Fertilizer—Fertilizer shall be applied as recommended by a soil test. In place of a soil test, fertilizer shall be applied at a rate of 25 pounds per 1,000-sq. ft. or 1000 pounds per acre of a 10-10-10 or 12-12-12 analyses.
3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or other suitable field implement to a depth of 3 inches. On sloping land, the soil shall be worked on the contour.

Seeding Dates and Soil Conditions

Seeding should be done March 1 to May 31 or August 1 to September 30. If seeding occurs outside of the above-specified dates, additional mulch and irrigation may be required to ensure a minimum of 80% germination. Tillage for seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

Dormant Seedings
1. Seedings should not be made from October 1 through November 20. During this period, the seeds are likely to germinate but probably will not be able to survive the winter.
2. The following methods may be used for "Dormant Seeding":

- From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
- From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.
- Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
- Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

Mulching
1. Mulch material shall be applied immediately after seeding. Dormant seeding shall be mulched. 100% of the ground surface shall be covered with an approved material.
2. Materials

- Straw—If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons per acre or 90 pounds (two to three bales) per 1,000-sq. ft. The mulch shall be spread uniformly by hand or mechanically applied so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
- Hydroseeders—If wood cellulose fiber is used, it shall be applied at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
- Other—Other acceptable mulches include rolled erosion control mattings or blankets applied according to manufacturer's recommendations or wood chips applied at 6 tons per acre.

3. Straw and Mulch Anchoring Methods

Straw mulch shall be anchored immediately to minimize loss by wind or water.

- Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 inches.
- Mulch Netting—Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
- Asphalt Emulsion—Asphalt shall be applied as recommended by the manufacture or at the rate of 160 gallons per acre.
- Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equivalent may be used at rates specified by the manufacturer.
- Wood Cellulose Fiber—Wood cellulose fiber shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water with the mixture containing a maximum of 50 pounds cellulose per 100 gallons of water.

Irrigation

Permanent seeding shall include irrigation to establish vegetation during dry weather or on adverse site conditions, which require adequate moisture for seed germination and plant growth.

Irrigation rates shall be monitored to prevent erosion and damage to seeded areas from excessive runoff.

Table 7.10.2 Permanent Seeding

Seed Mix	Seeding Rate		Notes:
	Lbs./acre	Lbs./1,000 Sq. Feet	
General Use			
Creeping Red Fescue Domestic Ryegrass Kentucky Bluegrass	20-40 10-20 20-40	1/2-1 1/4-1/2 1/2-1	For close mowing & for waterways with <2.0 ft/sec velocity
Tall Fescue	40-50	1-1 1/4	
Turf-type (dwarf) Fescue	90	2 1/4	
Steep Banks or Cut Slopes			
Tall Fescue	40-50	1-1 1/4	
Crown Vetch Tall Fescue	10-20 20-30	1/4-1/2 1/2-3/4	Do not seed later than August
Flat Pea Tall Fescue	20-25 20-30	1/2-3/4 1/2-3/4	Do not seed later than August
Road Ditches and Swales			
Tall Fescue	40-50	1-11/4	
Turf-type (Dwarf) Fescue Kentucky Bluegrass	 90 5	 2 1/4 0.1	
Lawns			
Kentucky Bluegrass Perennial Ryegrass	100-120	2 2	
Kentucky Bluegrass Creeping Red Fescue	100-120	2 1-1/2	For shaded areas

Note: Other approved seed species may be substituted.

Specifications
for
Temporary Seeding

Table 7.8.1 Temporary Seeding Species Selection

Seeding Dates	Species	Lb./1000 ft2	Lb/Acre
March 1 to August 15	Oats Tall Fescue Annual Ryegrass	3 1 1	128 (4 Bushel) 40 40
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 40 40
	Annual Ryegrass Perennial Ryegrass Creeping Red Fescue Kentucky Bluegrass	1.25 3.25 0.4 0.4	55 142 17 17
	Oats Tall Fescue Annual Ryegrass	3 1 1	128 (3 bushel) 40 40
August 16th to November	Rye Tall Fescue Annual Ryegrass	3 1 1	112 (2 bushel) 40 40
	Wheat Tall Fescue Annual Ryegrass	3 1 1	120 (2 bushel) 40 40
	Perennial Rye Tall Fescue Annual Ryegrass	1 1 1	40 40 40
	Annual Ryegrass Perennial Ryegrass Creeping Red Fescue Kentucky Bluegrass	1.25 3.25 0.4 0.4	40 40 40
November 1 to Feb. 29	Use mulch only or dormant seeding		

Note: Other approved species may be substituted.

1. Structural erosion and sediment control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction site.
2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 21 days or greater. These idle areas shall be seeded within 7 days after grading.
3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. Temporary seeding should not be postponed if ideal seedbed preparation is not possible.
4. Soil Amendments—Temporary vegetation seeding rates shall establish adequate stands of vegetation, which may require the use of soil amendments. Base rates for lime and fertilizer shall be used.
5. Seeding Method—Seed shall be applied uniformly with a cyclone spreader, drill, cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

Specifications
for
Temporary Seeding

Mulching Temporary Seeding

1. Applications of temporary seeding shall include mulch, which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates on favorable, very flat soil conditions may not need mulch to achieve adequate stabilization.
2. Materials:

- Straw—If straw is used, it shall be unrotted small-grain straw applied at a rate of 2 tons per acre or 90 lbs./ 1,000 sq. ft. (2-3 bales)
- Hydroseeders—If wood cellulose fiber is used, it shall be used at 2000 lbs./ ac. or 46 lb./ 1,000-sq.-ft.
- Other—Other acceptable mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 ton/ ac.

3. Straw Mulch shall be anchored immediately to minimize loss by wind or water. Anchoring methods:

- Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but left to a length of approximately 6 inches.
- Mulch Netting—Netting shall be used according to the manufacturers recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
- Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Track or equivalent may be used at rates recommended by the manufacturer.
- Wood-Cellulose Fiber—Wood-cellulose fiber binder shall be applied at a net dry wt. of 750 lb./ac. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb. / 100 gal.

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KFC MASSILLON

E&SCP DETAILS

PROJECT NUMBER
1712

DATE
2018-05-23

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED
PROFESSIONAL ENGINEER

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