PROJECT #SP19-019
SITE PLAN FOR CITY COUNCIL APPROVAL
FOR
MICHIGAN SCHOOLS & GOVERNMENT CREDIT UNION
PROPOSED CREDIT UNION WITH DRIVE-THRU FACILITIES

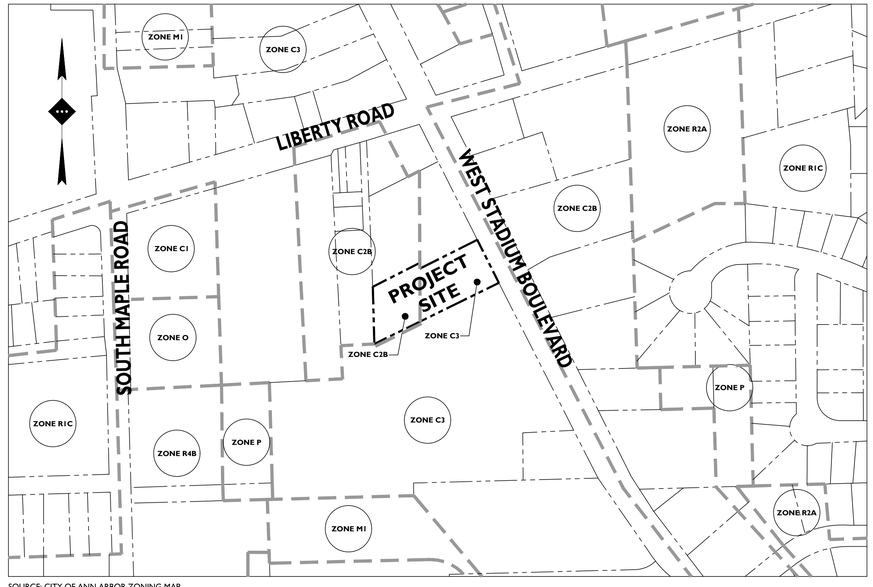
PARCEL ID: 09-09-30-318-028
2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

SOURCE: USGS ONLINE MAPS

LOCATION MAP
SCALE: 1" = 2,000'±

SOURCE: GOOGLE EARTH PRO

AERIAL MAP
SCALE: 1" = 200'±



SOURCE: CITY OF ANN ARBOR ZONING MAP

ZONING MAP
SCALE: 1" = 200'±

PROJECT SUMMARY

A 3,803 SQUARE FOOT ONE-STORY STANDALONE CREDIT UNION IS BEING PROPOSED ON SITE. A DRIVE-THRU IS PROPOSED ALONG THE REAR OF THE BUILDING IN ACCORDANCE WITH THE SPECIAL USE STANDARDS FOR DRIVE-THRU FACILITIES. THE SITE IS LOCATED WITHIN BOTH THE C3 - FRINGE COMMERCIAL DISTRICT & THE C2B - BUSINESS SERVICE DISTRICT. C3 ZONING HAS BEEN ASSUMED FOR ALL ZONING REQUIREMENTS. PARKING IS PROPOSED ON SITE ALONG WITH ASSOCIATED BICYCLE PARKING IN ACCORDANCE WITH THE CURRENT REQUIREMENTS AND STANDARDS. STORMWATER WILL BE DETAINED AND RELEASED TO THE EXISTING STORM SEWER WITHIN THE WEST STADIUM BOULEVARD RIGHT-OF-WAY. PREVIOUSLY, AN AUTO ZONE WAS APPROVED ON THE PROPERTY. A SPECIAL EXCEPTION USE PETITION (SEU19-003) IS REQUIRED AS PART OF THIS PLAN. A ZONING PETITION (Z19-010) IS REQUIRED TO ZONE THE PROPERTY AS C-3.

STATEMENT OF INTEREST IN LAND

DEVELOPER HAS ENTERED INTO A LAND CONTRACT WITH CURRENT PROPERTY OWNER. FINAL SALE OF PARCELS IS CONTINGENT ON SITE PLAN AND OTHER PROJECT APPROVALS.

PARCEL AREA

51,016± SQUARE FEET = 1.171± ACRES

LEGAL DESCRIPTION

THE LAND SITUATED IN THE CITY OF ANN ARBOR, COUNTY OF WASHTENAW, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SECTION 30, TOWN 2 SOUTH, RANGE 6 EAST; THENCE NORTH 854.71 FEET; THENCE NORTH 75 DEGREES 48 MINUTES 00 SECONDS EAST 743.10 FEET; THENCE SOUTH 01 DEGREES 56 MINUTES 00 SECONDS EAST 451.29 FEET FOR A POINT OF BEGINNING; THENCE NORTH 65 DEGREES 10 MINUTES 00 SECONDS EAST 150.49 FEET; THENCE SOUTH 00 DEGREES 03 MINUTES 00 SECONDS WEST 11.02 FEET; THENCE NORTH 65 DEGREES 10 MINUTES 00 SECONDS EAST 173.96 FEET, THENCE SOUTH 24 DEGREES 50 MINUTES 00 SECONDS EAST 140.00 FEET; THENCE SOUTH 65 DEGREES 10 MINUTES 00 SECONDS WEST 383.29 FEET, THENCE NORTH 01 DEGREES 56 MINUTES 00 SECONDS WEST 162.97 FEET TO THE POINT OF BEGINNING.

PLANS PREPARED BY:

STONEFIELD engineering & design

Detroit, MI · New York, NY
Princeton, NJ · Tampa, FL · Rutherford, N
www.stonefieldeng.com

607 Shelby Suite 200, Detroit, MI 48226
Phone 248.247.1115

PLAN REFERENCE MATERIALS:

1. THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
   - BOUNDARY / TOPOGRAPHIC SURVEY PREPARED BY KEM-TEC & ASSOCIATES DATED 12/13/2018; REVISED 08/02/2019
   - ARCHITECTURAL PLANS
   - GEOTECHNICAL REPORT
   - AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO
   - PHASE-1 REPORT PREPARED BY PM ENVIRONMENTAL DATED 12/26/2018
   - ALL REFERENCE MATERIAL LISTED ABOVE SHALL BE CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION CONTAINED WITHIN THESE MATERIALS SHALL BE UTILIZED IN CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF EACH REFERENCE AND REVIEW IT THOROUGHLY PRIOR TO THE START OF CONSTRUCTION.

DRAWING SCALE

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

APPLICANT

MICHIGAN SCHOOLS AND GOVERNMENT CREDIT UNION
40400 GARFIELD ROAD
CLINTON, MICHIGAN 48038
(586)-263-8800

OWNER

WEST STADIUM, LLC
P.O. BOX 1325
ANN ARBOR, MICHIGAN 48106

PETITIONER'S AGENT

MICHAEL BLANEK
MBLANEK@STUCKYVITALE.COM
27172 WOODWARD AVENUE
ROYAL OAK, MICHIGAN 48067
(248)-546-6700

811 Know what's **below** **Call** before you dig.

SHEET INDEX

ARCHITECTURAL SHEETS

ISSUE	DATE	BY	DESCRIPTION
5	10-28-2019	KML	REVISIONS PER 3RD PLANNING REVIEW COMMENTS
4	10-11-2019	KML	REVISIONS PER 2ND PLANNING REVIEW COMMENTS
3	08-22-2019	ADG	REVISIONS PER PLANNING REVIEW COMMENTS
2	08-08-2019	ADG	REVISIONS PER PLANNING REVIEW COMMENTS
1	05-30-2019	ADG	SUBMISSION FOR SITE PLAN APPROVAL

NOT APPROVED FOR CONSTRUCTION

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PROPOSED CREDIT UNION WITH DRIVE-THRU FACILITIES

PARCEL ID: 09-09-30-318-028
2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

STATE OF MICHIGAN · JAKE MADDESTON · 6201065336 · LICENSED PROFESSIONAL ENGINEER

STONEFIELD engineering & design

SCALE: AS SHOWN | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: COVER SHEET

DRAWING: C-1

V:\P2021\PM\19060-STUCKY VITALE\2151 WEST STADIUM BOULEVARD, ANN ARBOR, MI\CAD\PLOTS\01-COVER.DWG

VICINITY MAP
(NOT TO SCALE)

PARCEL AREA
51,016± SQUARE FEET = 1.171± ACRES

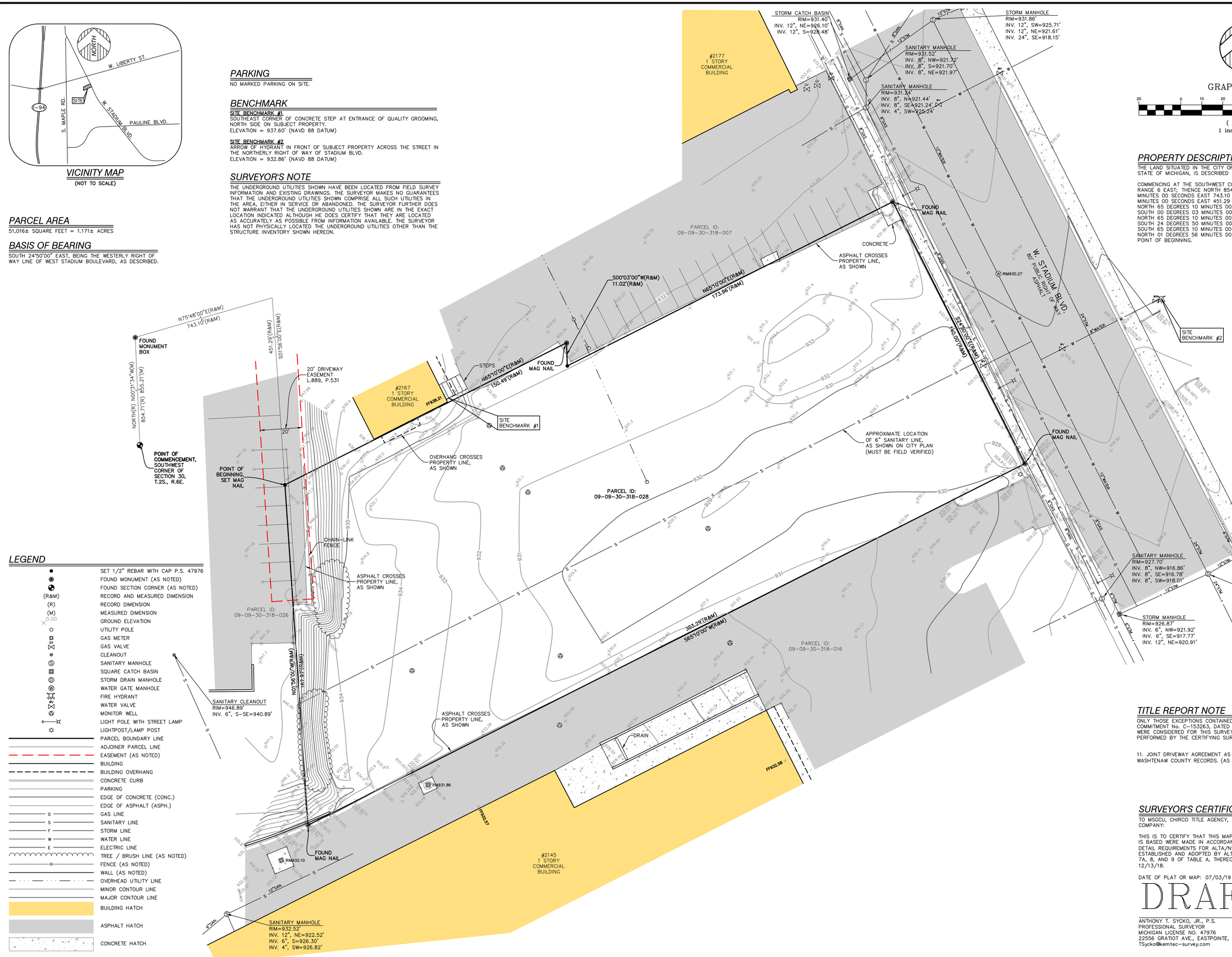
BASIS OF BEARING
SOUTH 24°50'00" EAST, BEING THE WESTERLY RIGHT OF WAY LINE OF WEST STADIUM BOULEVARD, AS DESCRIBED.

PARKING
NO MARKED PARKING ON SITE.

BENCHMARK
SITE BENCHMARK #1
SOUTHEAST CORNER OF CONCRETE STEP AT ENTRANCE OF QUALITY GROOMING, NORTH SIDE ON SUBJECT PROPERTY.
ELEVATION = 937.60' (NAVD 88 DATUM)

SITE BENCHMARK #2
ARROW OF HYDRANT IN FRONT OF SUBJECT PROPERTY ACROSS THE STREET IN THE NORTHERLY RIGHT OF WAY OF STADIUM BLVD.
ELEVATION = 932.86' (NAVD 88 DATUM)

SURVEYOR'S NOTE
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.



LEGEND

●	SET 1/2" REBAR WITH CAP P.S. 47976
◉	FOUND MONUMENT (AS NOTED)
◕	FOUND SECTION CORNER (AS NOTED)
(R&M)	RECORD AND MEASURED DIMENSION
(R)	RECORD DIMENSION
(M)	MEASURED DIMENSION
+0.00	GROUND ELEVATION
○	UTILITY POLE
⊠	GAS METER
⋈	GAS VALVE
⊛	CLEANOUT
Ⓢ	SANITARY MANHOLE
▦	SQUARE CATCH BASIN
Ⓓ	STORM DRAIN MANHOLE
Ⓦ	WATER GATE MANHOLE
⋇	FIRE HYDRANT
⋈	WATER VALVE
◎	MONITOR WELL
⟜	LIGHT POLE WITH STREET LAMP
☼	LIGHTPOST/LAMP POST
	PARCEL BOUNDARY LINE
	ADJOINER PARCEL LINE
	EASEMENT (AS NOTED)
	BUILDING
	BUILDING OVERHANG
	CONCRETE CURB
	PARKING
	EDGE OF CONCRETE (CONC.)
	EDGE OF ASPHALT (ASPH.)
G	GAS LINE
S	SANITARY LINE
r	STORM LINE
W	WATER LINE
E	ELECTRIC LINE
	TREE / BRUSH LINE (AS NOTED)
X	FENCE (AS NOTED)
	WALL (AS NOTED)
	OVERHEAD UTILITY LINE
	MINOR CONTOUR LINE
	MAJOR CONTOUR LINE
	BUILDING HATCH
	ASPHALT HATCH
	CONCRETE HATCH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

PROPERTY DESCRIPTION
THE LAND SITUATED IN THE CITY OF ANN ARBOR, COUNTY OF WASHTENAW, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SECTION 30, TOWN 2 SOUTH, RANGE 6 EAST; THENCE NORTH 854.71 FEET; THENCE NORTH 75 DEGREES 48 MINUTES 00 SECONDS EAST 743.10 FEET; THENCE SOUTH 01 DEGREES 56 MINUTES 00 SECONDS EAST 451.29 FEET FOR A POINT OF BEGINNING; THENCE NORTH 65 DEGREES 10 MINUTES 00 SECONDS EAST 150.49 FEET; THENCE SOUTH 00 DEGREES 03 MINUTES 00 SECONDS WEST 11.02 FEET; THENCE NORTH 65 DEGREES 10 MINUTES 00 SECONDS EAST 173.96 FEET; THENCE SOUTH 24 DEGREES 50 MINUTES 00 SECONDS EAST 140.00 FEET; THENCE SOUTH 65 DEGREES 10 MINUTES 00 SECONDS WEST 383.29 FEET, THENCE NORTH 01 DEGREES 56 MINUTES 00 SECONDS WEST 162.97 FEET TO THE POINT OF BEGINNING.

TITLE REPORT NOTE
ONLY THOSE EXCEPTIONS CONTAINED WITHIN THE CHIRCO TITLE AGENCY, INC. COMMITMENT No. C-153263, DATED OCTOBER 26, 2018, AND RELISTED BELOW WERE CONSIDERED FOR THIS SURVEY. NO OTHER RECORDS RESEARCH WAS PERFORMED BY THE CERTIFYING SURVEYOR.

11. JOINT DRIVEWAY AGREEMENT AS RECORDED IN LIBER 889, PAGE 531, WASHTENAW COUNTY RECORDS. (AS SHOWN)

SURVEYOR'S CERTIFICATION
TO MSGCU, CHIRCO TITLE AGENCY, AND FIDELITY NATIONAL TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDED ITEMS 2, 4, 7A, 8, AND 9 OF TABLE A, THEREOF. THE FIELD WORK WAS COMPLETED ON 12/13/18.

DATE OF PLAT OR MAP: 07/03/19

DRAFT

ANTHONY T. SYCKO, JR., P.S.
PROFESSIONAL SURVEYOR
MICHIGAN LICENSE NO. 47976
22556 GRATIOT AVE., EASTPOINTE, MI 48021
TSycko@kemtec-survey.com

REVISION	DATE	BY	DESCRIPTION
#3	10/28/19	JV	CHANGED STORM SEWER LINE TO AN "r"
#2	08/02/19	CMC	ADDED SANITARY LINE PER CITY PLANS
#1	07/11/19	DLD	ADDED SANITARY STRUCTURES

ALTA / NSPS LAND TITLE SURVEY

PREPARED FOR: STUCKY-VITALE ARCHITECTS
2151-2161 W. STADIUM BLVD., ANN ARBOR MICHIGAN 48103,
PART OF THE SOUTHWEST 1/4 OF SECTION 30,
TOWN 2 SOUTH, RANGE 6 EAST

KEM-TEC
PROFESSIONAL ENGINEERING, SURVEYING & ENVIRONMENTAL SERVICES
A GROUP OF COMPANIES
Eastpointe (800) 295.5222 FAX: (586) 772.4048
Detroit (313) 730.8577 FAX: (586) 772.4048
Ann Arbor (734) 994.0888 FAX: (734) 994.0887
Grand Blanc (888) 694.0001 FAX: (810) 694.9955
www.kemtecgroupofcompanies.com

DRAWN BY:	DLD/MRJ
CHECKED BY:	ATS
DATE:	JULY 03, 2019
PROJECT NO.	18-04300
DATE	07/03/19
DATE	07/03/19
SCALE:	1" = 20'

1

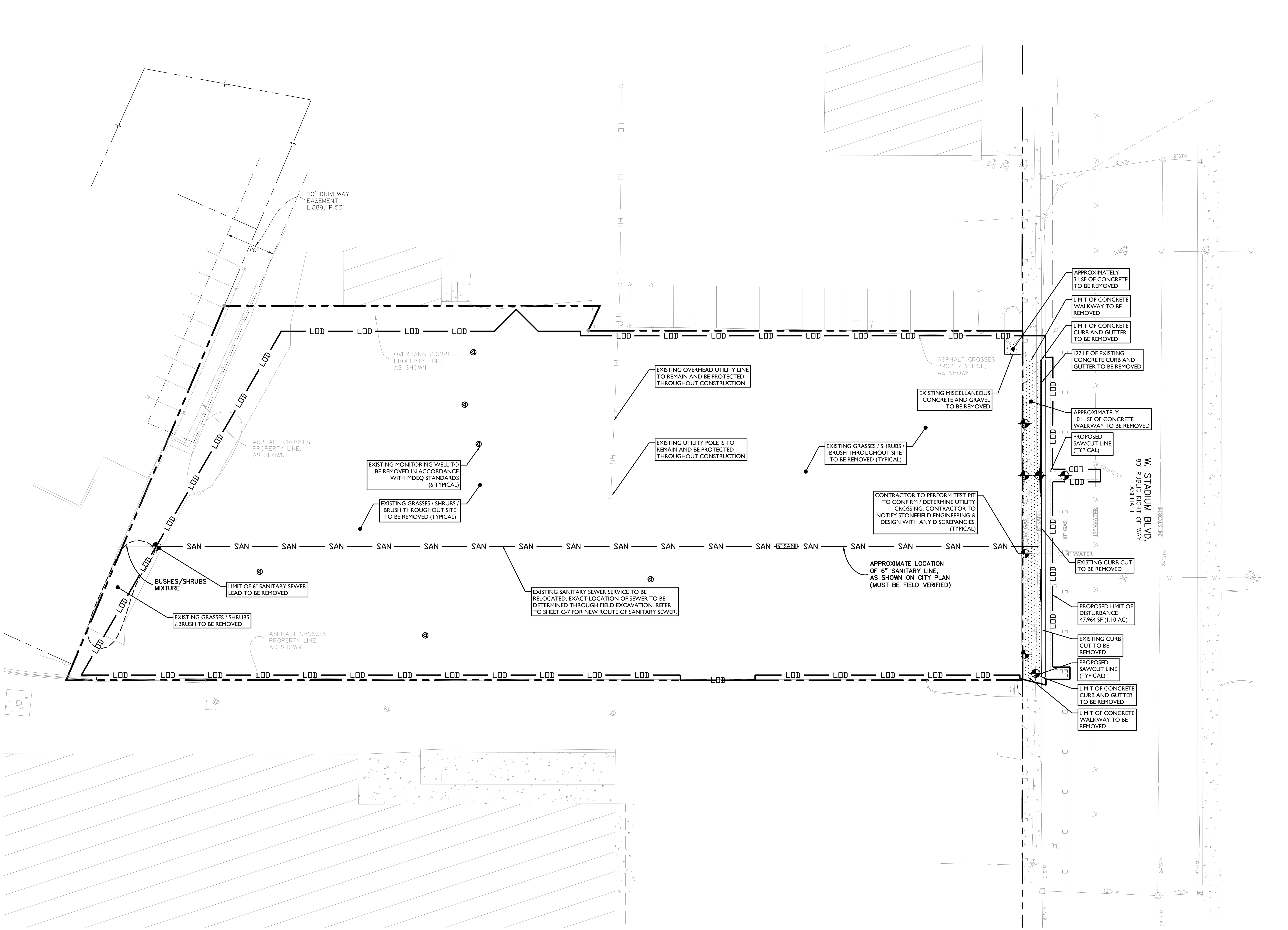
1 OF 1 SHEETS

ALL EXISTING GRASSES / SHRUBS / BRUSH ON SITE TO BE REMOVED. CONTRACTOR TO HYDROSEED AREAS AS NECESSARY.

SITE CONTAINS CONTAMINATED SOILS. CONTRACTOR TO FOLLOW GUIDELINES CONTAINED WITHIN THE DUE CARE PLAN.

ALL FEATURES WITHIN THE RIGHT-OF-WAY ARE TO REMAIN UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IF SIGNIFICANT DISCREPANCIES ARE DISCERNED BETWEEN THIS PLAN AND FIELD CONDITIONS.

ALL SITE FEATURES WITHIN THE LIMIT OF DISTURBANCE INDICATED ON THIS PLAN ARE TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IF SIGNIFICANT DISCREPANCIES ARE DISCERNED BETWEEN THIS PLAN AND FIELD CONDITIONS



SYMBOL	DESCRIPTION
— — — —	FEATURE TO BE REMOVED / DEMOLISHED
—— LOD ——	LIMIT OF DISTURBANCE
— — — —	SAW CUT LINE / LIMIT OF MILLING
(dotted box)	CONCRETE REMOVAL
(test pit symbol)	TEST PIT

Know what's **below**
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DEMOLITION NOTES

1. THE WORK REFLECTED ON THE DEMOLITION PLAN IS TO PROVIDE GENERAL INFORMATION TOWARDS THE EXISTING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE ENTIRE PLAN SET AND ASSOCIATED REPORTS/REFERENCE DOCUMENTS INCLUDING ALL DEMOLITION ACTIVITIES AND INCIDENTAL TASKS NECESSARY TO COMPLETE THE SITE IMPROVEMENTS.
2. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF DEMOLITION ACTIVITIES.
3. EXPLOSIVES SHALL NOT BE USED UNLESS WRITTEN CONSENT FROM BOTH THE OWNER AND ANY APPLICABLE GOVERNING AGENCY IS OBTAINED. BEFORE THE START OF ANY EXPLOSIVE PROGRAM, THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL LOCAL, STATE, AND FEDERAL PERMITS. ADDITIONALLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SEISMIC TESTING AS REQUIRED AND ANY DAMAGES AS THE RESULT OF SAID DEMOLITION PRACTICES.
4. ALL DEMOLITION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL CODES. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL UTILITIES ARE DISCONNECTED IN ACCORDANCE WITH THE UTILITY AUTHORITY'S REQUIREMENTS PRIOR TO STARTING THE DEMOLITION OF ANY STRUCTURE. ALL EXCAVATIONS ASSOCIATED WITH DEMOLISHED STRUCTURES OR REMOVED TANKS SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO SUPPORT SITE AND BUILDING IMPROVEMENTS. A GEOTECHNICAL ENGINEER SHOULD BE PRESENT DURING BACKFILLING ACTIVITIES TO OBSERVE AND CERTIFY THAT BACKFILL MATERIAL WAS COMPACTED TO A SUITABLE CONDITION.
5. DEMOLISHED DEBRIS SHALL NOT BE BURIED ON SITE. ALL WASTE/DEBRIS GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.
6. THE CONTRACTOR IS TO CONFIRM ALL EXISTING UTILITY CROSSINGS PROVIDE A MINIMUM SEPARATION DISTANCE OF 18 INCHES. IF SEPARATION IS NOT PROVIDED, THE CONTRACTOR IS TO NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING.
7. THE CONTRACTOR IS TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR WATER AND SANITARY SEWER CONNECTION IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING.

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

ISSUE	DATE	BY	DESCRIPTION
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MICHIGAN SCHOOLS & GOVERNMENT CREDIT UNION

PROPOSED CREDIT UNION WITH DRIVE-THRU FACILITIES

PARCEL ID: 09-09-30-318-028
2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

STATE OF MICHIGAN · JAKE MODESTOW · PROFESSIONAL ENGINEER · 6201065336

STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE:
DEMOLITION PLAN

DRAWING:
C-2

V:\M\2019\M-19060-STUCKY VITALE-2151 WEST STADIUM BOULEVARD, ANN ARBOR, MI\CADD\PLOTS\SP-02-DEMO.DWG

TABLE OF LAND USE AND ZONING

PARCEL ID: 09-09-30-318-028

FRINGE COMMERCIAL DISTRICT (C3)

PROPOSED USE

CREDIT UNION	PERMITTED USE
DRIVE-THRU FACILITIES	SPECIAL EXCEPTION USE *

ZONING REQUIREMENT	EXISTING	PROPOSED	REQUIRED
ZONING	C3 / C2B	C3	C3
MINIMUM LOT AREA	51,016 SF (1.17 AC)	51,016 SF (1.17 AC)	6,000 SF (0.14 AC)
MINIMUM LOT WIDTH	140.0 FT	140.0 FT	60 FT
MAXIMUM FLOOR AREA RATIO	N/A	7.5% (3,803 SF)	200%
MAXIMUM BUILDING HEIGHT	N/A	22.5 FT (1 STORY)	55 FT (4 STORIES)
MINIMUM FRONT YARD SETBACK	0.0 FT	10.0 FT	10 FT
MINIMUM SIDE YARD SETBACK (SOUTH)	0.0 FT	5.8 FT	0 FT
MINIMUM SIDE YARD SETBACK (NORTH)	0.0 FT	74.2 FT	0 FT
MINIMUM REAR YARD SETBACK	0.0 FT	209.5 FT	20 FT
PARKING - AUTOMOBILES (MINIMUM)	N/A	21 SPACES	18 SPACES MIN
PARKING - AUTOMOBILES (MAXIMUM)	N/A	21 SPACES	21 SPACES MAX
PARKING - BICYCLES	N/A	4 SPACES - CLASS C	2 SPACES - CLASS C

* SEE DRIVE-THRU NOTE FOR ADDITIONAL INFORMATION

DRIVE-THRU NOTE:

1. THE DRIVE-THROUGH FACILITIES MAY NOT BE LOCATED BETWEEN A STREET AND THE PRINCIPAL BUILDING, AND THE VEHICULAR CIRCULATION TO ENTER AND EXIT THE FACILITY MAY NOT IMPAIR THE GENERAL VEHICULAR CIRCULATION ON THE SITE OR THE PEDESTRIAN CIRCULATION ON AND OFF THE SITE.

OFF-STREET PARKING REQUIREMENTS

CODE SECTION	REQUIRED	PROPOSED
§ 5:19-1	CREDIT UNION MINIMUM: 1 SPACE PER 220 SF OF FLOOR AREA (3,803 SF)/(220 SF) = 18 SPACES CREDIT UNION MAXIMUM: 1 SPACE PER 180 SF OF FLOOR AREA (3,803 SF)/(180 SF) = 21 SPACES	21 SPACES
§ 5:19-2	90° PARKING SPACES: 9 FT X 18 FT WITH 22 FT DRIVE AISLE	9 FT X 18 FT WITH 22 FT DRIVE AISLE
§ 5:19-1	BICYCLE PARKING: 1 SPACE PER 2,000 SF OF FLOOR AREA (3,803 SF)/(2,000 SF) = 2 SPACES	4 CLASS C SPACES

(*) ONE-WAY DRIVE AISLE TO BE A MINIMUM 12 FT WIDE

PROJECT INFORMATION AND ANALYSIS

1. DEVELOPMENT PROGRAM:
   A. DESCRIPTION: THE PROPOSED DEVELOPMENT IS LOCATED WITHIN BOTH THE C3 - FRINGE COMMERCIAL DISTRICT AND C2B - BUSINESS SERVICE DISTRICT. C3 ZONING HAS BEEN USED FOR ALL ZONING REQUIREMENTS. THE SITE IS CURRENTLY A VACANT LOT WITH 140 LINEAR FEET OF FRONTAGE ALONG WEST STADIUM BOULEVARD. PROPOSED ON SITE IS A 3,803 SQUARE FOOT CREDIT UNION WITH ASSOCIATED DRIVE-THRU FACILITIES. 21 PARKING SPACES ARE PROPOSED ON SITE WHERE 18 ARE REQUIRED. BICYCLE PARKING IS PROPOSED AS REQUIRED. A SINGLE CURB CUT IS BEING PROPOSED ALONG WEST STADIUM BOULEVARD. THIS PLAN REQUIRES NO VARIANCE AS DESIGNED. THIS SITE CONTAINS CONTAMINATED SOILS WHICH WILL NOT ALLOW FOR INFILTRATION OF STORMWATER RUNOFF. STORMWATER WILL BE DETAINED AND ROUTED TO THE STORMWATER PIPE THAT RUNS ALONG WEST STADIUM BOULEVARD.
   B. CONSTRUCTION PHASING AND CONSTRUCTION COST:
   CONSTRUCTION WILL BE COMPLETED IN ONE PHASE BEGINNING IN APRIL OF 2020. CONSTRUCTION COST HAS NOT BEEN DETERMINED.

   ESTIMATED CONSTRUCTION COST: $1,000,000

2. COMMUNITY ANALYSIS:
   A. IMPACT ON PUBLIC SCHOOLS:
   THE PROPOSED DEVELOPMENT WILL NOT HAVE A SIGNIFICANT IMPACT ON ANY SURROUNDING PUBLIC SCHOOLS.
   B. RELATIONSHIP OF INTENDED USE TO NEIGHBORING USES:
   THIS DEVELOPMENT WILL FIT IN THE WITH THE CURRENT STYLE OF DESIGN ALONG WEST STADIUM BOULEVARD WHERE MANY BANKS AND FINANCIAL INSTITUTIONS ARE PRESENT.
   C. IMPACT OF ADJACENT USES ON PROPOSED DEVELOPMENT:
   PATRONS AT SURROUNDING DEVELOPMENTS MAY USE THE PROPOSED CREDIT UNION AND ASSOCIATED ATM FOR FINANCIAL SERVICES.
   D. IMPACT ON AIR, WATER QUALITY, AND EXISTING NATURAL FEATURES:
   THERE WILL BE NO SIGNIFICANT IMPACT ON THE AIR OR WATER QUALITY DUE TO THE DEVELOPMENT OF THIS SITE. THERE ARE NO LANDMARK TREES OF NATURAL FEATURES THAT ARE BEING DISTURBED ON SITE.
   E. IMPACT ON HISTORIC SITES OR STRUCTURES:
   THERE ARE NO HISTORIC SITES OR STRUCTURES LOCATED WITHIN THE PROPOSED SCOPE OF THE DEVELOPMENT.
   F. NATURAL FEATURES GENERAL DESCRIPTIONS AND IMPACTS:
   NO NATURAL FEATURES PRESENT ON SITE

3. PUBLIC SIDEWALK MAINTENANCE STATEMENT:
   ALL PUBLIC SIDEWALKS LOCATED WITHIN THE LIMIT OF DISTURBANCE SHOWN ARE TO BE PROTECTED AND REMAIN OPEN UNLESS OTHERWISE NOTED. CONTRACTOR IS TO ENSURE THAT SIDEWALKS ARE SAFE FOR USE BY PATRONS.

TRAFFIC IMPACT ANALYSIS

Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition
2151 W. Stadium Blvd.
10/10/2019

Proposed Drive-Thru Credit Union
Drive-In Bank – Land Use 912

	AM Peak Street Hour		PM Peak Street Hour	
	Enter	Exit	Enter	Exit
3,803 SF	21	15	39	39

Existing Restaurant
High Turnover (Sit-Down) Restaurant – Land Use 932

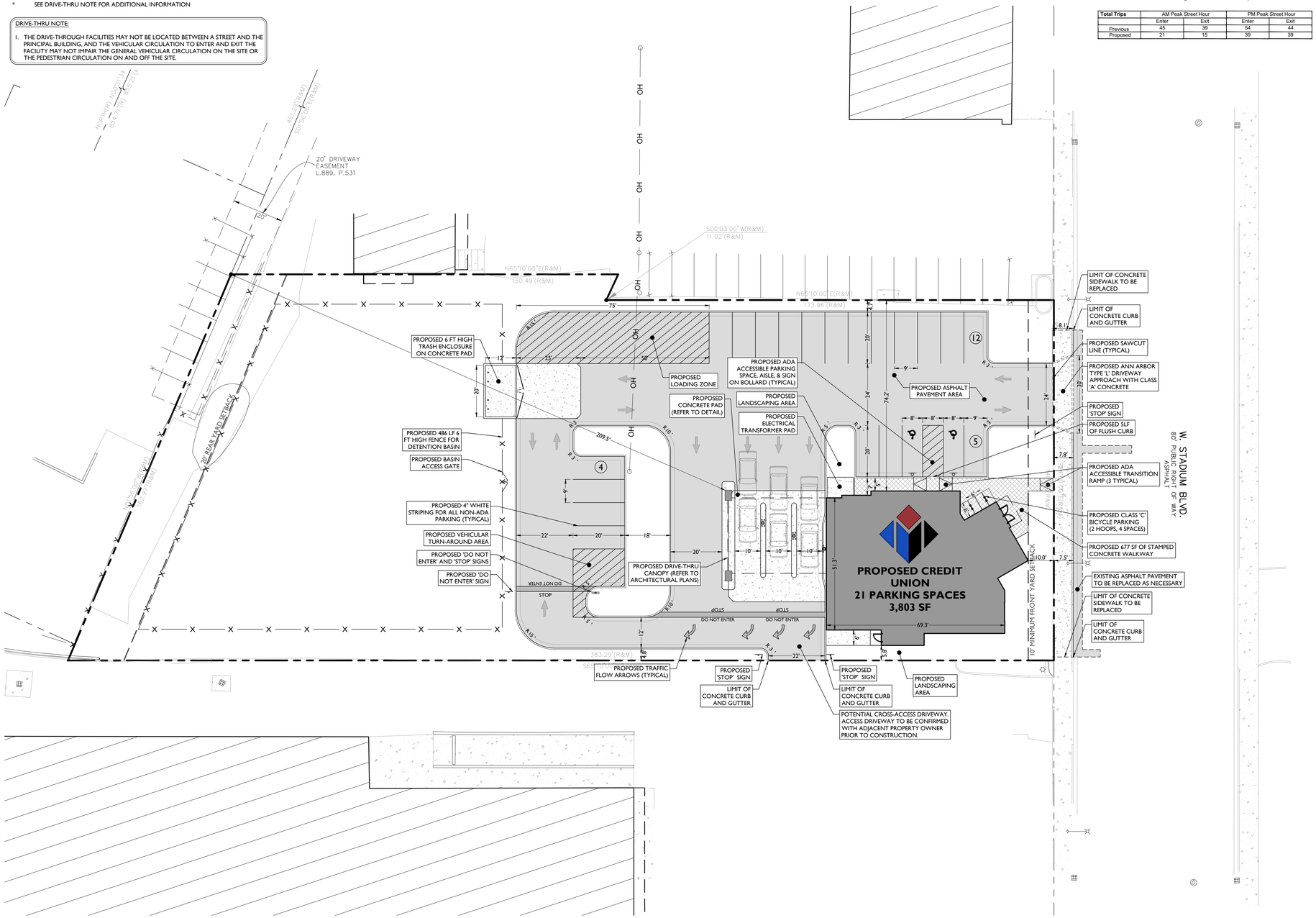
	AM Peak Street Hour		PM Peak Street Hour	
	Enter	Exit	Enter	Exit
4,300 SF	24	19	26	16

Existing Gas Station
Gasoline/Service Station – Land Use 944

	AM Peak Street Hour		PM Peak Street Hour	
	Enter	Exit	Enter	Exit
4 Pumps	21	20	28	28

*Description for Land Use 944 "Gasoline/Service Station" indicates that "A gasoline/service station may also have ancillary facilities for servicing and repairing motor vehicles and may have a car wash." As such, trip generation associated with the previous car wash use were included within the gasoline/service station component of the site.

Total Trips	AM Peak Street Hour		PM Peak Street Hour	
	Enter	Exit	Enter	Exit
Previous	45	39	54	44
Proposed	21	15	39	39



GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
3. ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC. AND IT'S SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.
4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN, LLC.
5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF CONSTRUCTION.
6. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.
7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTORS EXPENSE.
8. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.
9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
10. THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF STREET OPENING PERMITS.
11. THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.
12. SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC. BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.

FIRE DEPARTMENT NOTES:

1. STORAGE AREA FOR CONSTRUCTION MATERIALS SHALL NOT INTERFERE WITH FIRE / EMERGENCY SITE ACCESS.
2. FIRE HYDRANTS SHALL BE IN SERVICE DURING CONSTRUCTION

ALL SIDEWALKS SHALL BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME. PRIOR TO THE ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALKS IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH CITY STANDARDS.

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

SYMBOL	DESCRIPTION
	PROPERTY LINE
	SETBACK LINE
	SAWCUT LINE
	PROPOSED CURB & GUTTER
	PROPOSED FLUSH CURB
	PROPOSED SIGNS / BOLLARDS
	PROPOSED BUILDING
	PROPOSED ASPHALT PAVEMENT
	PROPOSED CONCRETE
	PROPOSED STAMPED CONCRETE
	PROPOSED AREA LIGHT
	PROPOSED BUILDING DOORS

ISSUE	DATE	BY	DESCRIPTION
5	10-28-2019	KHL	REVISIONS PER 3RD PLANNING REVIEW COMMENTS
4	10-11-2019	KHL	REVISIONS PER 2ND PLANNING REVIEW COMMENTS
3	08-22-2019	ADG	REVISIONS PER PLANNING REVIEW COMMENTS
2	08-08-2019	ADG	REVISIONS PER PLANNING REVIEW COMMENTS
1	05-30-2019	ADG	SUBMISSION FOR SITE PLAN APPROVAL

NOT APPROVED FOR CONSTRUCTION

STONEFIELD engineering & design
Detroit, MI · New York, NY
Princeton, NJ · Tampa, FL · Rutherford, N
www.stonefieldeng.com
607 Shelby Suite 200, Detroit, MI 48226
Phone 248.247.1115

SITE PLAN FOR CITY COUNCIL APPROVAL

MICHIGAN SCHOOLS & GOVERNMENT CREDIT UNION

PROPOSED CREDIT UNION
WITH DRIVE-THRU FACILITIES

PARCEL ID: 09-09-30-318-028
2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

STATE OF MICHIGAN
JAKE MIDDLESTON
ENGINEER
6201065338
LICENSE NO. 6201065338
LICENSED PROFESSIONAL ENGINEER

STONEFIELD engineering & design

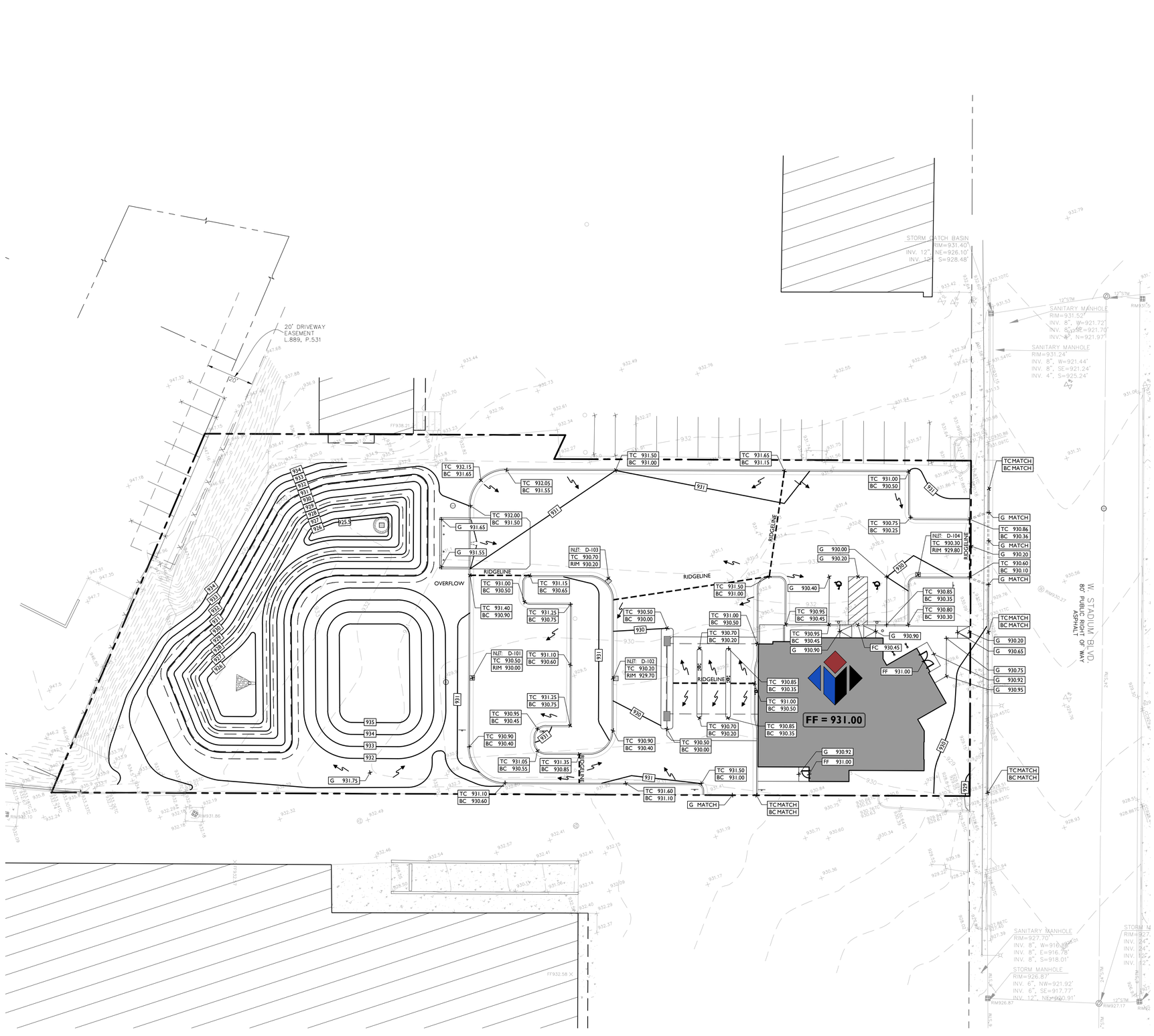
SCALE: 1" = 20' | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: SITE PLAN

DRAWING: C-3

V:\M\2019\M-19060\STUCKY VITALE 2151 WEST STADIUM BOULEVARD, ANN ARBOR, MI\CAD\PLOT\SDP-10-SITE.DWG



SYMBOL	DESCRIPTION
— — —	PROPERTY LINE
100	PROPOSED GRADING CONTOUR
RIDGELINE	PROPOSED GRADING RIDGELINE
←	PROPOSED DIRECTION OF DRAINAGE FLOW
G 100.00	PROPOSED GRADE SPOT SHOT
TC 100.50 BC 100.00	PROPOSED TOP OF CURB / BOTTOM OF CURB SPOT SHOT
FC 100.00	PROPOSED FLUSH CURB SPOT SHOT

GRADING NOTES

1. ALL SOIL AND MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. ANY GROUNDWATER DE-WATERING PRACTICES SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FOR THE DISCHARGE OF DE-WATERED GROUNDWATER. ALL SOIL IMPORTED TO THE SITE SHALL BE CERTIFIED CLEAN FILL. CONTRACTOR SHALL MAINTAIN RECORDS OF ALL FILL MATERIALS BROUGHT TO THE SITE.
2. THE CONTRACTOR IS REQUIRED TO PROVIDE TEMPORARY AND/OR PERMANENT SHORING WHERE REQUIRED DURING EXCAVATION ACTIVITIES, INCLUDING BUT NOT LIMITED TO UTILITY TRENCHES, TO ENSURE THE STRUCTURAL INTEGRITY OF NEARBY STRUCTURES AND STABILITY OF THE SURROUNDING SOILS.
3. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 4 INCHES TO 7 INCHES ABOVE EXISTING GRADES UNLESS OTHERWISE NOTED. THE CONTRACTOR WILL SUPPLY ALL STAKEOUT CURB GRADE SHEETS TO STONEFIELD ENGINEERING & DESIGN, LLC. FOR REVIEW AND APPROVAL PRIOR TO POURING CURBS.
4. THE CONTRACTOR IS RESPONSIBLE TO SET ALL PROPOSED UTILITY COVERS AND RESET ALL EXISTING UTILITY COVERS WITHIN THE PROJECT LIMITS TO PROPOSED GRADE IN ACCORDANCE WITH ANY APPLICABLE MUNICIPAL, COUNTY, STATE AND/OR UTILITY AUTHORITY REGULATIONS.
5. MINIMUM SLOPE REQUIREMENTS TO PREVENT PONDING SHALL BE AS FOLLOWS:

• CURB GUTTER:	0.50%
• CONCRETE SURFACES:	1.00%
• ASPHALT SURFACES:	1.00%

5. A MINIMUM SLOPE OF 1.00% SHALL BE PROVIDED AWAY FROM ALL BUILDINGS. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE BUILDING IS ACHIEVED AND SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IF THIS CONDITION CANNOT BE MET.
6. FOR PROJECTS WHERE BASEMENTS ARE PROPOSED, THE DEVELOPER IS RESPONSIBLE TO DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED STRUCTURE. IF GROUNDWATER IS ENCOUNTERED WITHIN THE BASEMENT AREA, SPECIAL CONSTRUCTION METHODS SHALL BE UTILIZED AND REVIEWED/APPROVED BY THE CONSTRUCTION CODE OFFICIAL. IF SUMP PUMPS ARE UTILIZED, ALL DISCHARGES SHALL BE CONNECTED DIRECTLY TO THE PUBLIC STORM SEWER SYSTEM WITH APPROVAL FROM THE GOVERNING STORM SEWER SYSTEM AUTHORITY.

ADA NOTES

1. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION WITHIN THE ADA PARKING SPACES AND ACCESS AISLES.
2. THE CONTRACTOR SHALL PROVIDE COMPLIANT SIGNAGE AT ALL ADA PARKING AREAS IN ACCORDANCE WITH STATE GUIDELINES.
3. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 5.00% RUNNING SLOPE AND A MAXIMUM OF 2.00% CROSS SLOPE ALONG WALKWAYS WITHIN THE ACCESSIBLE PATH OF TRAVEL (SEE THE SITE PLAN FOR THE LOCATION OF THE ACCESSIBLE PATH). THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE ACCESSIBLE PATH OF TRAVEL IS 36 INCHES WIDE OR GREATER UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
4. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION AT ALL LANDINGS. LANDINGS INCLUDE, BUT ARE NOT LIMITED TO, THE TOP AND BOTTOM OF AN ACCESSIBLE RAMP, AT ACCESSIBLE BUILDING ENTRANCES, AT AN AREA IN FRONT OF A WALK-UP ATM, AND AT TURNING SPACES ALONG THE ACCESSIBLE PATH OF TRAVEL. THE LANDING AREA SHALL HAVE A MINIMUM CLEAR AREA OF 60 INCHES BY 60 INCHES UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
5. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 8.33% RUNNING SLOPE AND A MAXIMUM 2.00% CROSS SLOPE ON ANY CURB RAMPS ALONG THE ACCESSIBLE PATH OF TRAVEL. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 10.00% IF A LANDING AREA IS PROVIDED AT THE TOP OF THE RAMP. FOR ALTERATIONS, A CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 8.33% IF A LANDING AREA IS NOT PROVIDED AT THE TOP OF THE RAMP. CURBS RAMPS SHALL NOT RISE MORE THAN 6 INCHES IN ELEVATION WITHOUT A HANDRAIL. THE CLEAR WIDTH OF A CURB RAMP SHALL BE NO LESS THAN 36 INCHES WIDE.
6. ACCESSIBLE RAMPS WITH A RISE GREATER THAN 6 INCHES SHALL CONTAIN COMPLIANT HANDRAILS ON BOTH SIDES OF THE RAMP AND SHALL NOT RISE MORE THAN 30" IN ELEVATION WITHOUT A LANDING AREA IN BETWEEN RAMP RUNS. LANDING AREAS SHALL ALSO BE PROVIDED AT THE TOP AND BOTTOM OF THE RAMP.
7. A SLIP RESISTANT SURFACE SHALL BE CONSTRUCTED ALONG THE ACCESSIBLE PATH AND WITHIN ADA PARKING AREAS.
8. THE CONTRACTOR SHALL ENSURE A MAXIMUM OF ¼ INCHES VERTICAL CHANGE IN LEVEL ALONG THE ACCESSIBLE PATH. WHERE A CHANGE IN LEVEL BETWEEN ¼ INCHES AND ½ INCHES EXISTS, CONTRACTOR SHALL ENSURE THAT THE TOP ¼ INCH CHANGE IN LEVEL IS BEVELED WITH A SLOPE NOT STEEPER THAN 1 UNIT VERTICAL AND 2 UNITS HORIZONTAL (2:1 SLOPE).
9. THE CONTRACTOR SHALL ENSURE THAT ANY OPENINGS (GAPS OR HORIZONTAL SEPARATION) ALONG THE ACCESSIBLE PATH SHALL NOT ALLOW PASSAGE OF A SPHERE GREATER THAN ½ INCH.

20' 0' 20' 40'

GRAPHIC SCALE IN FEET
1" = 20'

ISSUE	DATE	BY	DESCRIPTION
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4	10-11-2019	KML	REVISIONS PER 2ND PLANNING REVIEW COMMENTS
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SITE PLAN FOR CITY COUNCIL APPROVAL

MICHIGAN SCHOOLS & GOVERNMENT CREDIT UNION

PROPOSED CREDIT UNION WITH DRIVE-THRU FACILITIES

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2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

JAKE MODESTOW
6201065336
MICHIGAN LICENSE No.6201065336
LICENSED PROFESSIONAL ENGINEER

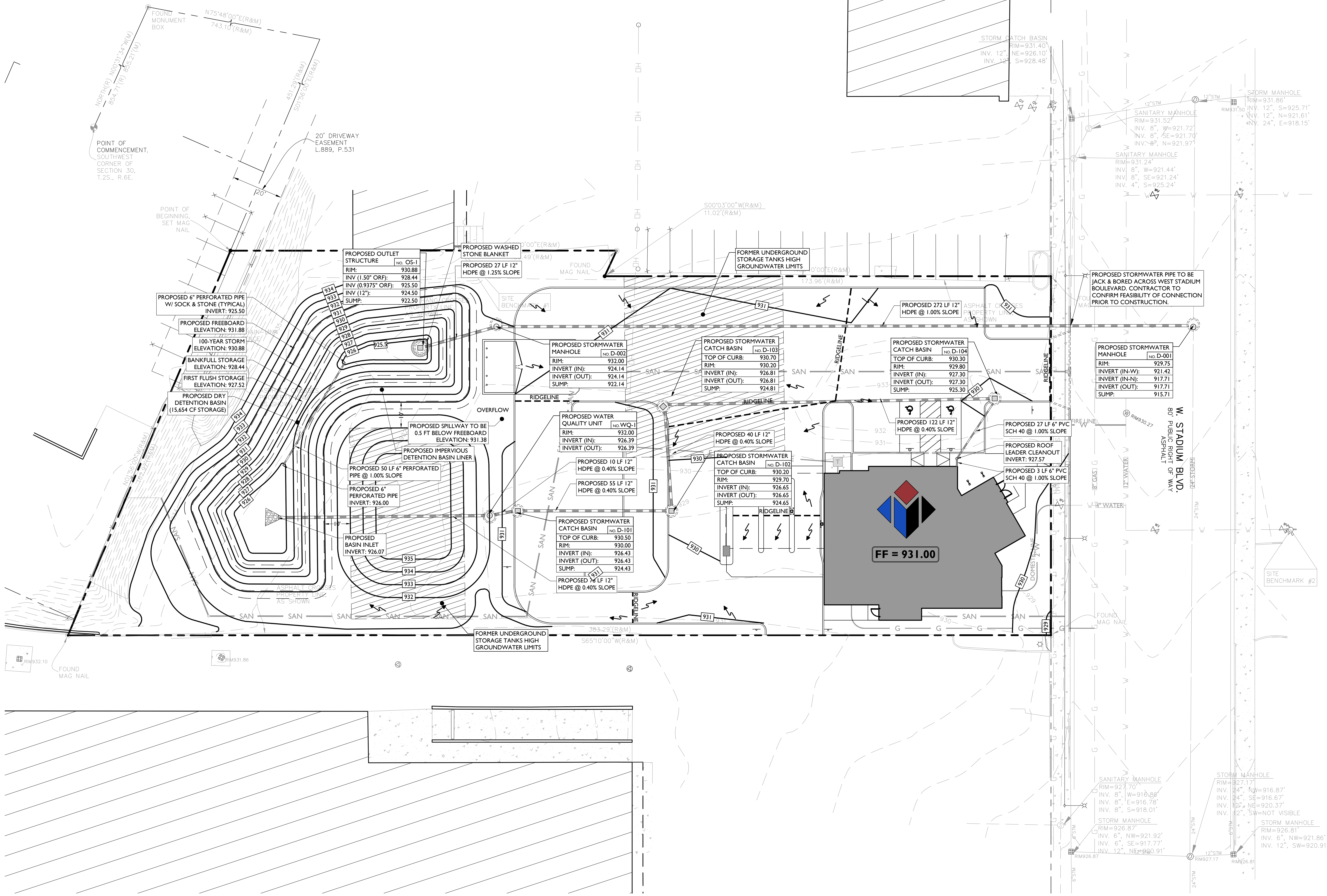
STONEFIELD
engineering & design

SCALE: 1" = 20'	PROJECT ID: M-19060
CITY OF ANN ARBOR PROJECT NUMBER: SP19-019	
TITLE: GRADING PLAN	
DRAWING: C-4	

V:\M\2019\M-19060-STUCKY VITALE-2151 WEST STADIUM BOULEVARD, ANN ARBOR, MI\CADD\PLOT\SDP-04-GRAD.DWG

STORM WATER NARRATIVE

A 3,803 SQUARE FOOT ONE-STORY STANDALONE CREDIT UNION IS BEING PROPOSED ON SITE. A DRIVE-THRU IS PROPOSED ALONG THE REAR OF THE BUILDING IN ACCORDANCE WITH THE SPECIAL USE STANDARDS FOR DRIVE-THRU FACILITIES. THE SITE STORMWATER WILL BE TREATED VIA A MECHANICAL TREATMENT UNIT, DETAINED WITHIN AN ABOVE GROUND BASIN AND OUTLET TO THE WEST STADIUM BOULEVARD STORMWATER SEWER. THE PROPOSED MEASURES WILL MEET ALL WASHTENAW COUNTY WATER RESOURCES COMMISSION REQUIREMENTS. THE REAR OF THE SITE WHERE THE PROPOSED ABOVE GROUND BASIN IS LOCATED CONTAINS CONTAMINATED SOILS. TO MAKE SURE THERE ARE NO PATHWAYS FOR CONTAMINATION TO GET INTO THE STORM SYSTEM, THE PROPOSED BASIN WILL HAVE A THERMOPLASTIC LINER. THE RECOMMENDED CONFIGURATION FOR THE LINER WOULD CONSIST OF A 30 MIL POLYVINYL CHLORIDE (PVC) WITH 8 OUNCE NON-WOVEN GEOTEXTILE UNDERLAYMENT AND OVERLAYMENT. PVC IS AN EFFECTIVE LINER MATERIAL AS IT OFFERS GREAT CHEMICAL RESISTANCE TO AREAS WITH HIGH CONTAMINANT CONCENTRATIONS, PROVIDES FLEXIBILITY AND VERSATILITY, AND CAN BE INSTALLED AND MAINTAINED BY A CONTRACTOR WITHOUT SPECIALITY CREWS NEEDING TO BE ON SITE. ENHANCED PUNCTURE RESISTANCE FROM AGGREGATE ON THE WATER SIDE AND PROTRUSIONS ON THE SOIL SIDE ARE ACHIEVED WITH THE PLACEMENT OF THE NON-WOVEN GEOTEXTILE ON EACH SIDE OF THE GEOMEMBRANE. SUFFICIENT TOPSOIL WILL BE PROVIDED ON TOP OF THE THERMOPLASTIC LINRE THAT WILL ALLOW FOR PLANTINGS AND SEEDING TO BE PLACED ON TOP OF IT, THEREFORE THE BASIN WILL BE AESTHETICALLY PLEASING WHILE EFFECTIVE. THE CURRENT DESIGN WILL PROVIDE A 100% SEALED SYSTEM AND NO DIRECT CONNECTION FOR CONTAMINANTS TO ENTER THE CITY STORM SEWER AND ULTIMATELY THE HURON RIVER.



SYMBOL	DESCRIPTION
	PROPERTY LINE
100	PROPOSED GRADING CONTOUR
RIDGELINE	PROPOSED GRADING RIDGELINE
	PROPOSED STORMWATER STRUCTURES
	PROPOSED STORMWATER PIPING
	HIGH GROUNDWATER LIMITS OF FORMER UNDERGROUND STORAGE TANKS

DRAINAGE AND UTILITY NOTES

1. THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR STORMWATER IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING.
2. CONTRACTOR SHALL START CONSTRUCTION OF STORM LINES AT THE LOWEST INVERT AND WORK UP-GRADIENT.
3. THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IMMEDIATELY IN WRITING.
4. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

EXCAVATION, SOIL PREPARATION, AND DEWATERING NOTES

1. THE CONTRACTOR IS REQUIRED TO REVIEW THE REFERENCED GEOTECHNICAL DOCUMENTS PRIOR TO CONSTRUCTION, THESE DOCUMENTS SHALL BE CONSIDERED A PART OF THE PLAN SET.
2. THE CONTRACTOR IS REQUIRED TO PREPARE SUBGRADE SOILS BENEATH ALL PROPOSED IMPROVEMENTS AND BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH RECOMMENDATIONS BY THE GEOTECHNICAL ENGINEER OF RECORD.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHORING FOR ALL EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL HAVE THE SHORING DESIGN PREPARED BY A QUALIFIED PROFESSIONAL. SHORING DESIGNS SHALL BE SUBMITTED TO STONEFIELD ENGINEERING & DESIGN, LLC. AND THE OWNER PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL OPEN EXCAVATIONS ARE PERFORMED AND PROTECTED IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING DESIGN AND OPERATIONS, AS REQUIRED, TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEWATERING OPERATIONS AND GROUNDWATER DISPOSAL.

STORMWATER INFILTRATION BMP CONSTRUCTION NOTES

1. PRIOR TO THE START OF CONSTRUCTION, ANY AREA DESIGNATED TO BE USED FOR AN INFILTRATION BMP (E.G. BASIN, BIORETENTION AREA, ETC.) SHALL BE FENCED OFF AND SHALL NOT BE UTILIZED AS STORAGE FOR CONSTRUCTION EQUIPMENT OR AS A STOCKPILE AREA FOR CONSTRUCTION MATERIALS. NO ACTIVITY SHALL BE PERMITTED WITHIN THE INFILTRATION BASIN AREA UNLESS RELATED TO THE CONSTRUCTION OF THE INFILTRATION BASIN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ALL SUBCONTRACTORS OF BASIN AREA RESTRICTIONS.
2. THE CONTRACTOR SHALL MAKE EVERY EFFORT, WHERE PRACTICAL, TO AVOID SUBGRADE SOIL COMPACTION IN THE AREAS DESIGNATED TO BE USED FOR AN INFILTRATION BMP.
3. ALL EXCAVATION WITHIN THE LIMITS OF ANY INFILTRATION BMP SHALL BE PERFORMED WITH THE LIGHTEST PRACTICAL EXCAVATION EQUIPMENT. ALL EXCAVATION EQUIPMENT SHALL BE PLACED OUTSIDE THE LIMITS OF THE BASIN WHERE FEASIBLE. THE USE OF LIGHT-WEIGHT, RUBBER-TIRED EQUIPMENT (LESS THAN 8 PSI APPLIED TO THE GROUND SURFACE) IS RECOMMENDED WITHIN THE BASIN LIMITS.
4. THE SEQUENCE OF SITE CONSTRUCTION SHALL BE COORDINATED WITH BASIN CONSTRUCTION TO ADHERE TO SEQUENCING LIMITATIONS.
5. DURING THE FINAL GRADING OF AN INFILTRATION BASIN, THE BOTTOM OF THE BASIN SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW AND THEN SMOOTHED OUT WITH A LEVELING DRAW OR EQUIVALENT GRADING EQUIPMENT. ALL GRADING EQUIPMENT SHALL BE LOCATED OUTSIDE OF THE BASIN BOTTOM WHERE FEASIBLE.
6. FOLLOWING CONSTRUCTION OF AN INFILTRATION BASIN, SOIL INFILTRATION TESTING BY A LICENSED GEOTECHNICAL ENGINEER IS REQUIRED TO CERTIFY COMPLIANCE WITH THE DESIGN INFILTRATION RATES IN ACCORDANCE WITH APPENDIX E OF THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BEST MANAGEMENT PRACTICES MANUAL, LATEST EDITION. IF THE FIELD INFILTRATION RATES ARE LOWER THAN THE RATE USED DURING DESIGN, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING IMMEDIATELY TO DETERMINE THE APPROPRIATE COURSE OF ACTION.
7. THE CONTRACTOR SHALL NOTIFY THE MUNICIPALITY TO DETERMINE IF WITNESS TESTING IS REQUIRED DURING INFILTRATION BASIN EXCAVATION AND/OR SOIL INFILTRATION TESTING.

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

ISSUE	DATE	BY	DESCRIPTION
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2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

STATE OF MICHIGAN JAKE MODESTOW PROFESSIONAL ENGINEER 6201065336

STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: STORMWATER MANAGEMENT PLAN

DRAWING: C-5

STORMWATER MANAGEMENT CALCULATIONS

(Based on Washtenaw County Stormwater Managements Regulations)

Project:	MSGCU Ann Arbor	Designer:	KML	Date:	10/28/19

RATIONAL METHOD VARIABLES

Landcover	Area (SF)		C-Value*		Weighted Value
Building / Roof	4,928	x	0.90	=	4,435
Pavement / Hardscape	18,398	x	0.90	=	16,558
Open Space	27,690	x	0.20	=	5,538
Subtotals	51,016				26,531

C-values obtained from Washtenaw County Water Resources Commissioner

Composite C Value, C: 0.52

FIRST FLUSH RUNOFF CALCULATION (V_{ff})

V_{ff} = (1 IN) * (1 FT / 12 IN) * (43,560 SF) * A * C

Site Area, A: 1.17 AC

First Flush Runoff Volume, V_{ff}: 2,210.95 CF

PRE-DEVELOPMENT BANKFULL RUNOFF CALCULATION ($V_{bf\text{-}pre}$)

Rainfall Value (2 Year / 24 Hour Storm Event), P: 2.35 IN

S = (1000 / CN) - 10 — Function of Watershed Soil & Conditions: 7.24 IN

$Q = (P-0.2*S)^2/(P+0.8*S)$ — Runoff, Q: 0.10 IN

*Site Area Excluding "Self Crediting" BMPs — *Total Site Area: 51,016.00 SF

$V_{bf\text{-}pre}$ = Q * (1/12) * Area — Pre-Development Bankfull Volume, $V_{bf\text{-}pre}$: 424.50 CF

POST-DEVELOPMENT PERVIOUS BANKFULL RUNOFF CALCULATION ($V_{bf\text{-}per\text{-}post}$)

Rainfall Value (2 Year / 24 Hour Storm Event), P: 2.35 IN

S = (1000 / CN) - 10 — Function of Watershed Soil & Conditions: 6.39 IN

$Q = (P-0.2*S)^2/(P+0.8*S)$ — Runoff, Q: 0.15 IN

Pervious Cover Area: 27,690 SF

$V_{bf\text{-}per\text{-}post}$ = Q * (1/12) * Area — Pervious Cover Post Development Bankfull Volume, $V_{bf\text{-}per\text{-}post}$: 354.78 CF

POST-DEVELOPMENT IMPERVIOUS BANKFULL RUNOFF CALCULATION ($V_{bf\text{-}imp\text{-}post}$)

Rainfall Value (2 Year / 24 Hour Storm Event), P: 2.35 IN

S = (1000 / CN) - 10 — Function of Watershed Soil & Conditions: 0.20 IN

$Q = (P-0.2*S)^2/(P+0.8*S)$ — Runoff, Q: 2.12 IN

Impervious Cover Area: 23,326 SF

$V_{bf\text{-}imp\text{-}post}$ = Q * (1/12) * Area — Impervious Cover Post Development Bankfull Volume, $V_{bf\text{-}imp\text{-}post}$: 4,124.18 CF

PERVIOUS COVER POST-DEVELOPMENT 100 YEAR STORM RUNOFF CALCULATION ($V_{100\text{-}per\text{-}post}$)

Rainfall Value (100 Year Storm Event), P: 5.11 IN

S = (1000 / CN) - 10 — Function of Watershed Soil & Conditions: 6.39 IN

$Q_{100\text{-}per} = (P-0.2*S)^2/(P+0.8*S)$ — Runoff, $Q_{100\text{-}per}$: 1.44 IN

Pervious Cover Area: 27,690 SF

$V_{100\text{-}per\text{-}post}$ = Q * (1/12) * Area — Pervious Cover Post Development 100-Year Volume, $V_{100\text{-}per\text{-}post}$: 3,312.71 CF

IMPERVIOUS COVER POST-DEVELOPMENT 100 YEAR STORM RUNOFF CALCULATION ($V_{100\text{-}imp\text{-}post}$)

Rainfall Value (100 Year Storm Event), P: 5.11 IN

S = (1000 / CN) - 10 — Function of Watershed Soil & Conditions: 0.20 IN

$Q_{100\text{-}imp} = (P-0.2*S)^2/(P+0.8*S)$ — Runoff, $Q_{100\text{-}imp}$: 4.87 IN

Impervious Cover Area: 23,326 SF

$V_{100\text{-}imp\text{-}post}$ = Q * (1/12) * Area — Impervious Cover Post Development 100-Yr Vol, $V_{100\text{-}imp\text{-}post}$: 9,472.30 CF

NRCS VARIABLES

Cover Type (Pre-Development)	Soil Type	Area (SF)		Curve Number (CN)		Weighted Value
Meadow	B	51,016	x	58.0	=	2,958,928
			x		=	
Subtotals		51,016				2,958,928

Composite CN Value, CN: 58.00

Pervious Cover Type (Post-Development)	Soil Type	Area (SF)		Curve Number (CN)		Weighted Value
Fully Developed Urban Area (Good Condition)	B	27,690	x	61.0	=	1,689,090
			x		=	
Subtotals		27,690				1,689,090

Composite CN Value, CN: 61.00

Impervious Cover Type (Post-Development)	Soil Type	Area (SF)		Curve Number (CN)		Weighted Value
Paved Parking Lots, Roofs, Driveways	B	23,326	x	98.0	=	2,285,948
			x		=	
			x		=	
Subtotals		23,326				2,285,948

Composite CN Value, CN: 98.00

TIME OF CONCENTRATION FOR APPLICABLE FLOW TYPES ($T_{c\text{-}hrs}$)

Total Time of Concentration ($T_{c\text{-}hrs}$): 0.25 HR

RUNOFF SUMMARY

First Flush Runoff Volume, V_{ff}: 2,210.95 CF

Pre-Development Bankfull Volume, $V_{bf\text{-}pre}$: 424.50 CF

Pervious Cover Post Development Bankfull Volume, $V_{bf\text{-}per\text{-}post}$: 354.78 CF

Impervious Cover Post Development Bankfull Volume, $V_{bf\text{-}imp\text{-}post}$: 4,124.18 CF

Total Bankfull Volume ($V_{bf\text{-}post}$): 4,478.96 CF

Pervious Cover Post Development 100-Year Storm Volume, $V_{100\text{-}per\text{-}post}$: 3,312.71 CF

Impervious Cover Post Development 100-Year Storm Volume, $V_{100\text{-}imp\text{-}post}$: 9,472.30 CF

Total 100 Year Volume (V_{100}): 12,785.01 CF

ONSITE INFILTRATION REQUIREMENTS

$V_{bf\text{-}diff} = V_{bf\text{-}post} - V_{bf\text{-}pre}$ — Bankfull Volume Difference, $V_{bf\text{-}diff}$: - CF

Basin to include additional 20% volume if required infiltration is not provided — Onsite Infiltration Requirement, V_{inf}: - CF

DETENTION REQUIREMENTS

$Q_p = 238.6*T_c^{-0.82}$ — Peak of the Unit Hydrograph, Q_p: 743.63 CFS / IN-MI²

Site Area Excluding "Self Crediting" BMPs — *Total Site Area: 1.17 AC

$Q_{100} = Q_{100\text{-}per} + Q_{100\text{-}imp}$ — 100 Year Storm Runoff, Q_{100}: 6.31 IN

PF = (Q_p * Q_{100} * Area) / 640 — Peak Flow, PF: 8.58 CFS

Δ = PF - (0.15 * Area) — Δ: 8.41 CFS

$V_{det} = (\Delta / PF) * V_{100} - V_{inf}$ — Required Detention Volume, V_{det}: 12,523.39 CF

$V_{det} = ((\Delta / PF) * V100 - V_{inf}) * 1.2$ — Required Detention Volume W/Out Infiltration, Vdet: 15,028.07 CF

ABOVEGROUND BASIN VOLUME PROVIDED

Elevation	Surface Area (SF)	Total Volume (CF)
926.00	809	0
927.00	1,542	1,176
928.00	2,458	3,176
929.00	3,445	6,127
930.00	5,000	10,350
931.00	5,609	15,654

Basin Height, H: 5.00 FT

Basin volume calculated based on a trapezoidal prism

DETENTION STAGED STORAGE VOLUME PROPOSED

FIRST FLUSH: X_{FF} — $\frac{928.00 - 927.00}{3,176 - 1,176} = \frac{FF - 927.00}{2,211 - 1,176}$ = 927.52

BANKFULL: X_{BF} — $\frac{929.00 - 928.00}{6,127 - 3,176} = \frac{BF - 928.00}{4,479 - 3,176}$ = 928.44

100 YEAR: X_{100YR} — $\frac{931.00 - 930.00}{15,654 - 10,350} = \frac{100yr - 930.00}{15,028 - 10,350}$ = 930.88

ALLOWABLE RELEASE RATE

Q_{allow} = (0.15 cfs/acre)(A)

Q_{allow} = (0.15 cfs/acre)(1.17 Acres)

Q_{allow} = 0.176 CFS

FIRST FLUSH REQUIRED CONTROL ORIFICE SIZE

$H = (2/3)(X_{FF} - X_{BOT})$: 1.01 FT

$A_{FF} = Q_A / (0.62 * (2 * 32.2 * H)^{0.5})$

$D_{FF} = 2 * (A_{FF} / \pi)^{0.5}$

Maximum $\#_{orif} = A_{FF} / A_{orif}$ 1.07

$Q_{FF} = (0.62)(\#_{ORIF})(A_{ORIF})(2 * 32.2 * H)^{0.5}$ 0.0240 cfs

$T_{FF} = V_{FF} / Q_{FF}$ 25.6 HR

Control Orifice Area, A_{FF}: 0.00511 FT

Control Orifice Diameter, D_O: 0.081 FT

Orifice Diameter Proposed: 0.9375 IN

Orifice Proposed: 1

Minimum Detention Time Criteria: 24 HR

BANK FULL REQUIRED CONTROL ORIFICE SIZE

Maximum $\#_{orif} = A_{BF} / A_{orif}$ 0.03

$Q^{ACT}_{BF} = (0.62)(\#_{ORIF})(A_{ORIF})(2*32.2*H^{BF}_{AVE})^{0.5}$ - cfs

$T_{BF}^{ACT} = T_{FF} + (V_{REM}/(Q_{FF+BF} + Q_{BF}^{ACT})$ 46.2 HR

Orifice Proposed: 0

Minimum Detention Time Criteria: 36 - 48 HR

100 YEAR STORM REQUIRED CONTROL ORIFICE SIZE

$Q_{FF}+Q_{BF} = 0.62(\#_{FForif})(A_{FForif})(2*32.2(X_{100}-X_{BOT})\text{^}0.5)+0.62(\#_{BForif})(A_{BForif})(2*32.2(X_{100}-X_{FF})^{0.5}$ 0.0462 cfs

$Q_{100}^{MAX} = Q_{allow} - (Q_{FF} + Q_{BF})$ 0.1298 cfs

$A_{100}^{MAX} = Q_{100}^{MAX}/(0.62*(2*32.2(X_{100}-X_{BF})^{0.5})$ 0.01670 sf

Maximum $\#_{orif} = A_{SF} / A_{orif}$ 1.36 — # Orifice Proposed: 1

$Q_{FF} + Q_{BF} + 0.62(\#_{ORIF})(A_{100})(2*32.2*H_{TOT})^{0.5} < Q_{allow}$ 0.089 cfs

$H_{all} = (2/3)(X_{100} - X_{BF}) + (X_{BF} - X_{BOT})$ 4.07 FT — $Q_{all} = (0.62)(\#_{FForif})(A_{FForif})(2*32.2*H_{all})^{0.5}$ 0.048 cfs

$H^{BF}_{ave} = (2/3)(X_{100} - X_{BF}) + (X_{BF} - X_{FF})$ 2.55 FT — $Q_{BF+100} = (0.62)(\#_{BForif})(A_{BForif})(2*32.2*H^{BF}_{ave})^{0.5}$ - cfs

$H^{100}_{ave} = (2/3)(X_{100} - X_{BF})$ 1.63 FT — $Q^{100}_{ave} = (0.62)(\#_{100orif})(A_{100orif})(2*32.2*H^{100}_{ave})^{0.5}$ 0.078 cfs

$V_{REM} = V_{100} - V_{BF}$ 10,549 CF — $T_{100} = T_{BF} + V_{REM} / (Q_{all}+Q_{BF+100}+Q^{100}_{ave})$ 69.88 HR

Minimum Detention Time Criteria: 72 HR

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SITE PLAN FOR CITY COUNCIL APPROVAL

MICHIGAN SCHOOLS & GOVERNMENT CREDIT UNION

PROPOSED CREDIT UNION WITH DRIVE-THRU FACILITIES

PARCEL ID: 09-09-30-318-028
2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

STATE OF MICHIGAN — JAKE MODESTOW — ENGINEER — 6201065336 — PROFESSIONAL ENGINEER

STONEFIELD engineering & design

SCALE: AS SHOWN | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: STORMWATER MANAGEMENT PLAN

DRAWING: C-6

SANITARY SEWER FLOW MITIGATION CALCULATIONS

(Based on City of Ann Arbor's Developer Offset-Mitigation Program Guidelines)

DESIGN POPULATION

2151 W. Stadium Blvd. will be a single story 3,803 SF Michigan Schools & Government Credit Union. Vehicular parking has been proposed as well as bicycle parking located near the front entrance.

PROPOSED FLOW

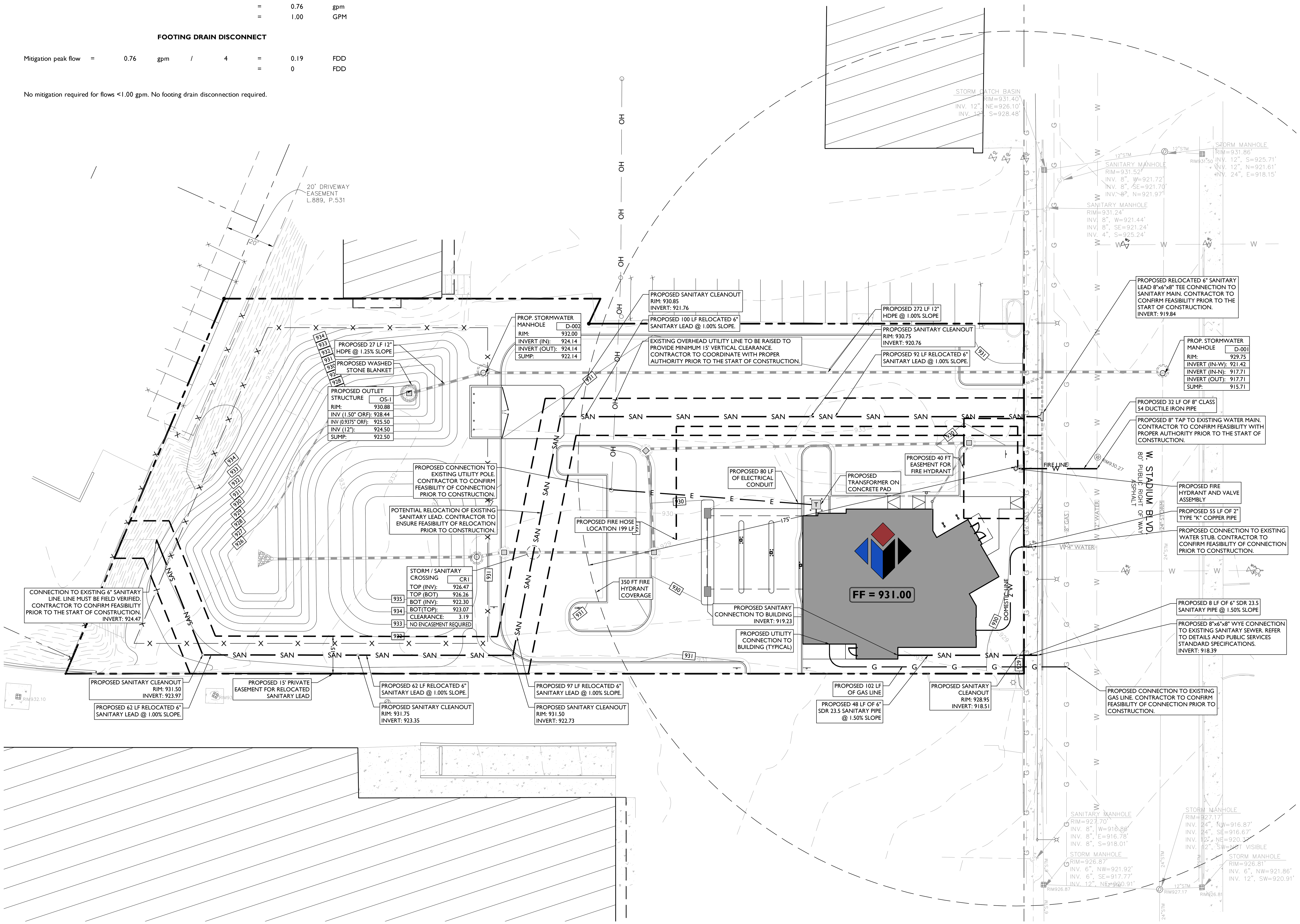
Based on the City of Ann Arbor's sanitary sewer flow evaluation Table 'A', the design dry weather flow rate for the development will be:

3,803	SF	Non-medical Office	0.06	gpd/gfa		=	228.18	gpd
Peak Flow =		228.18	x	4	x 1.2	=	1095.26	gpd
						=	0.76	gpm
						=	1.00	GPM

FOOTING DRAIN DISCONNECT

Mitigation peak flow	=	0.76	gpm	/	4	= 0.19	FDD
						= 0	FDD

No mitigation required for flows <1.00 gpm. No footing drain disconnection required.



SYMBOL	DESCRIPTION
	PROPERTY LINE
SAN	PROPOSED SANITARY LATERAL
W	PROPOSED DOMESTIC WATER SERVICE
E	PROPOSED ELECTRIC CONDUITS
G	PROPOSED GAS LINE
	PROPOSED VALVE
	PROPOSED FIRE HYDRANT
S	PROPOSED SANITARY MANHOLE / CLEANOUT
T	PROPOSED TRANSFORMER ON CONCRETE PAD WITH BOLLARDS

DRAINAGE AND UTILITY NOTES

1. THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IMMEDIATELY IN WRITING.
2. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN IN OPERATION ALL UTILITIES NOT DESIGNATED TO BE REMOVED.
3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY EXISTING UTILITY IDENTIFIED TO REMAIN WITHIN THE LIMITS OF THE PROPOSED WORK DURING CONSTRUCTION.
4. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET IS REQUIRED BETWEEN ANY SANITARY SEWER SERVICE AND ANY WATER LINES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
5. ALL WATER LINES SHALL BE VERTICALLY SEPARATED ABOVE SANITARY SEWER LINES BY A MINIMUM DISTANCE OF 18 INCHES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
6. THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR WATER AND SANITARY SEWER CONNECTION IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING.
7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRIC AND TELECOMMUNICATION CONNECTIONS WITH THE APPROPRIATE GOVERNING AUTHORITY.
8. CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY SEWER AT THE LOWEST INVERT AND WORK UP-GRADIENT.
9. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD SET OF PLANS REFLECTING THE LOCATION OF EXISTING UTILITIES THAT HAVE BEEN CAPPED, ABANDONED, OR RELOCATED BASED ON THE DEMOLITION/REMOVAL ACTIVITIES REQUIRED IN THIS PLAN SET. THIS DOCUMENT SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
10. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
11. THE CONTRACTOR SHALL INSTALL THE FIRE HYDRANT WITH THE OUTLETS DIRECTED TOWARDS WEST STADIUM BOULEVARD.

KNOX BOX TO BE PROVIDED. LOCATION TO BE PROVIDED PER ARCHITECTURAL DRAWINGS AND APPROVED BY THE FIRE MARSHAL.

NO FIREWALL IS REQUIRED AND WILL NOT BE PROVIDED WITHIN THE PROPOSED BUILDING

NO BOOSTER PUMP NEEDED FOR DOMESTIC WATER CONNECTION

NO FIRE SUPPRESSION SYSTEM REQUIRED

GRAPHIC SCALE IN FEET
1" = 20'

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MICHIGAN SCHOOLS & GOVERNMENT CREDIT UNION

PROPOSED CREDIT UNION WITH DRIVE-THRU FACILITIES

PARCEL ID: 09-09-30-318-028
2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

STATE OF MICHIGAN JAKE MODESTOW ENGINEER No. 6201065336 LICENSED PROFESSIONAL ENGINEER

STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

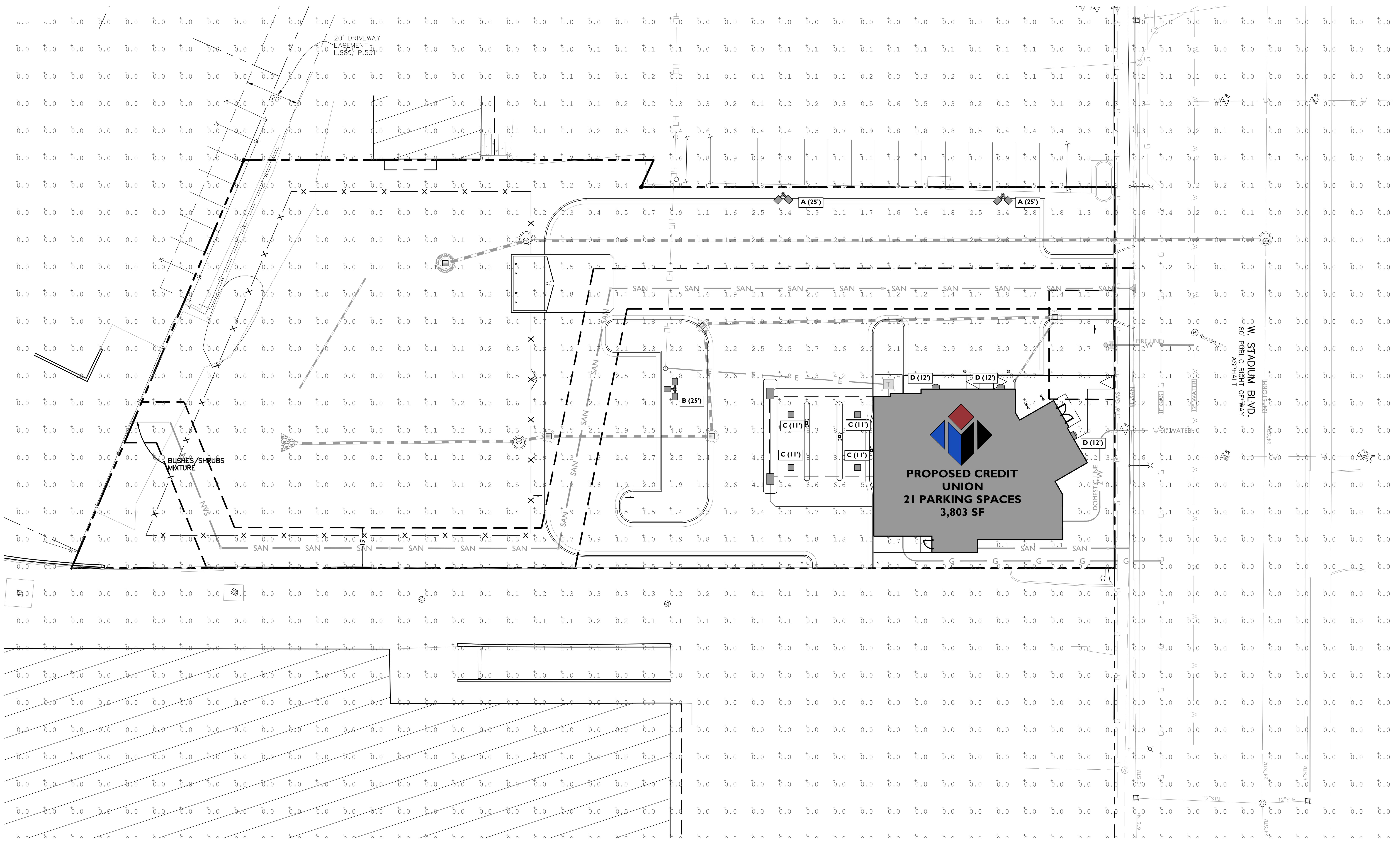
TITLE: **UTILITY PLAN**

DRAWING: **C-7**

PROPOSED LUMINARIES SCHEDULE								
SYMBOL	LABEL	QUANTITY	SECURITY LIGHTING	DISTRIBUTION	LLF	WATTS	MANUFACTURER	IES FILE
	A	2	D-SERIES SIZE 1 LED AREA LUMINAIRE	II	0.90	70	LITHONIA LIGHTING	DSX1_LED_P2_40K_T4M_MVOLT_HS
	B	1	D-SERIES SIZE 1 LED AREA LUMINAIRE	IV	0.90	70	LITHONIA LIGHTING	DSX1_LED_P2_40K_T4M_MVOLT_HS
	C	4	KACM LED SURFACE LUMINAIRE	V	0.90	46	LITHONIA LIGHTING	KACM_LED_20C_700_40K_R5_MVOLT
	D	3	WST LED ARCHITECTURAL WALL SCONCE	VW	0.90	30	LITHONIA LIGHTING	WST_LED_P2_40K_VW_MVOLT_VG

LIGHTING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 5.25.2	ALL EXTERIOR LIGHTING SHALL BE ADEQUATELY SHIELDED SO THAT LIGHT IS DIRECTED AWAY FROM PUBLIC RIGHT-OF-WAYS AND ADJACENT PROPERTIES.	COMPLIES
§ 5.24.3	MINIMUM ILLUMINATION LEVELS: PARKING LOTS - 0.6 FOOTCANDLES BICYCLE PARKING - 0.4 FOOTCANDLES MAX UNIFORMITY RATIO - 10:1	COMPLIES

SYMBOL	DESCRIPTION
	PROPOSED CALCULATION AREA
A (XX')	PROPOSED LIGHTING FIXTURE (MOUNTING HEIGHT)
+XX	PROPOSED LIGHTING INTENSITY (FOOTCANDLES)
	PROPOSED AREA LIGHT
	PROPOSED BUILDING MOUNTED LIGHT



GRAPHIC SCALE IN FEET
1" = 20'

GENERAL LIGHTING NOTES

1. THE LIGHTING LEVELS DEPICTED WITHIN THE PLAN SET ARE CALCULATED UTILIZING DATA OBTAINED FROM THE LISTED MANUFACTURER. ACTUAL ILLUMINATION LEVELS AND PERFORMANCE OF ANY PROPOSED LIGHTING FIXTURE MAY VARY DUE TO UNCONTROLLABLE VARIABLES SUCH ARE WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE LIFE AND OTHER VARIABLE FIELD CONDITIONS.
2. WHERE APPLICABLE, THE EXISTING LIGHT LEVELS DEPICTED WITHIN THE PLAN SET SHALL BE CONSIDERED APPROXIMATE. THE EXISTING LIGHT LEVELS ARE BASED ON FIELD OBSERVATIONS AND THE MANUFACTURER'S DATA OF THE ASSUMED OR MOST SIMILAR LIGHTING FIXTURE MODEL.
3. UNLESS NOTED ELSEWHERE WITHIN THIS PLAN SET, THE LIGHT LOSS FACTORS USED IN THE LIGHTING ANALYSIS ARE AS FOLLOWS:
   - LIGHT EMITTING DIODES (LED): 0.90
   - HIGH PRESSURE SODIUM: 0.72
   - METAL HALIDE: 0.72
4. THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY PROPOSED LIGHTING LOCATIONS THAT CONFLICT WITH EXISTING/ PROPOSED DRAINAGE, UTILITY, OR OTHER IMPROVEMENTS.
5. THE CONTRACTOR IS RESPONSIBLE TO PREPARE A WIRING PLAN AND PROVIDE ELECTRIC SERVICE TO ALL PROPOSED LIGHTING FIXTURES. THE CONTRACTOR IS REQUIRED TO PREPARE AN AS-BUILT PLAN OF WIRING AND PROVIDE COPIES TO THE OWNER AND STONEFIELD ENGINEERING & DESIGN, LLC.

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STATE OF MICHIGAN
JAKE MODESTOW
ENGINEER
6201065336
MICHIGAN LICENSE No.6201065336
LICENSED PROFESSIONAL ENGINEER

STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: **LIGHTING PLAN**

DRAWING: **C-8**

PLANT SCHEDULE

PLANT KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
DECIDUOUS TREES (TOTAL 11)					
QUE. RUB.	7	QUERCUS RUBRA	NORTHERN RED OAK	2.5" CAL	B&B
MAL. RED.	4	MALUS 'RED BARON'	RED BARON CRAB APPLE	2.5" CAL	B&B
EVERGREEN SHRUBS (TOTAL 72)					
TAX. DEN.	16	TAXUS MEDIA 'DENSIFORMIS'	DENSE YEW	2'-0"	CONT.
TAX. MOO.	56	TAXUS MEDIA 'MOON'	MOON YEW	2'-6"	B&B
DECIDUOUS SHRUBS (TOTAL 91)					
RED. SPR.	48	ILEX VERTICILLATA 'RED SPRITE'	RED SPRITE WINTERBERRY	30"	B&B
ARO. MEL.	43	ARONIA MELANOCARPA	BLACK CHOKEBERRY	30"	B&B
PERENNIALS (TOTAL 159)					
SCI. ACU.	84	SCIRPUS ACUTUS	HARD STEM BULRUSH	4'	BARE ROOT
SPI. JAP.	74	SPIREA JAPONICA 'LITTLE PRINCESS'	LITTLE PRINCESS SPIREA	1'-6"	CONT.
HYD. PAN.	1	HYDRANGEA PANICULATA 'LIMELIGHT'	LIMELIGHT HARDY HYDRANGEA	5 GAL	CONT.
GROUND COVER (TOTAL 65)					
FES. GLA.	21	FESTUCA GLAUCA 'ELIJAH BLUE'	ELIJAH BLUE FESCUE	1 GAL	CONT.
SCH. SCO.	44	SCHIZACHYRIOM SCOPARIOM	LITTLE BLUESTEM	1 GAL	CONT.

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

LANDSCAPING AND BUFFER REQUIREMENTS

CODE SECTION	REQUIRED	PROPOSED
§ 5.20.3-A.1	PARKING AREA BUFFER WIDTH: MINIMUM 10 FT BUFFER STRIP BETWEEN PARKING AREA AND RIGHT-OF-WAY	10 FT
§ 5.20.3-A.2	PARKING AREA BUFFER: 1 DECIDUOUS SHADE TREE OR EVERGREEN TREE PER 30 FT OF PUBLIC RIGHT-OF-WAY (140 LF)(1/30 LF) = 5 TREES	5 TREES
§ 5.20.3-A.3	PARKING AREA SCREENING: A 30 INCH HIGH SCREENING WALL OR HEDGE ROW SHALL BE PLACED WITHIN THE FRONT LANDSCAPE AREA ALONG THE PARKING AREA	PROVIDED
§ 5.20.3-B.1 § 5.20.3-B.2	INTERIOR LANDSCAPE ISLANDS: 1 SF PER 20 SF OF PARKING AREA MINIMUM 165 SF PER ISLAND (15,934 SF) X (1/20 SF) = 797 SF REQUIRED	COMPLIES 1,791 SF
§ 5.20.3-B.5	1 DECIDUOUS SHADE TREE PER 250 SF REQUIRED (797 SF) X (1/250 SF) = 4 TREES	4 TREES

TREE KEY

PLANT KEY	PLANT KEY	COMMON NAME
DECIDUOUS TREES		
(symbol)	QUE. RUB.	NORTHERN RED OAK
(symbol)	MAL. RED.	RED BARON CRAB APPLE

IRRIGATION NOTES:

IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

LANDSCAPING NOTES:

1. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
2. THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
3. THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH .
4. THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
5. THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
6. THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.
7. ALL DISEASED, DAMAGED OR DEAD MATERIAL TO BE REPLACED ACCORDING TO THE STANDARDS OUTLINED WITHIN CHAPTER 55 OF THE ANN ARBOR UNIFIED DEVELOPMENT CODE FOR THE DURATION OF THE SITE PLAN.
8. ALL PLANT SPECIES DEVIATIONS FROM THE APPROVED SITE PLAN MUST BE APPROVED BY THE CITY OF ANN ARBOR PRIOR TO INSTALLATION.

SNOW REMOVAL NOTES:

1. SNOW SHALL NOT BE STORED WITHIN ANY INTERIOR LANDSCAPED ISLAND OR WITHIN ANY AREA DESIGNATED FOR PARKING OR LOADING.

FERTILIZATION NOTE:

1. APPLICATIONS OF FERTILIZER BEYOND THE INITIAL TOPSOIL AND SEEDING SHALL BE FERTILIZER WITH NO PHOSPHOROUS.

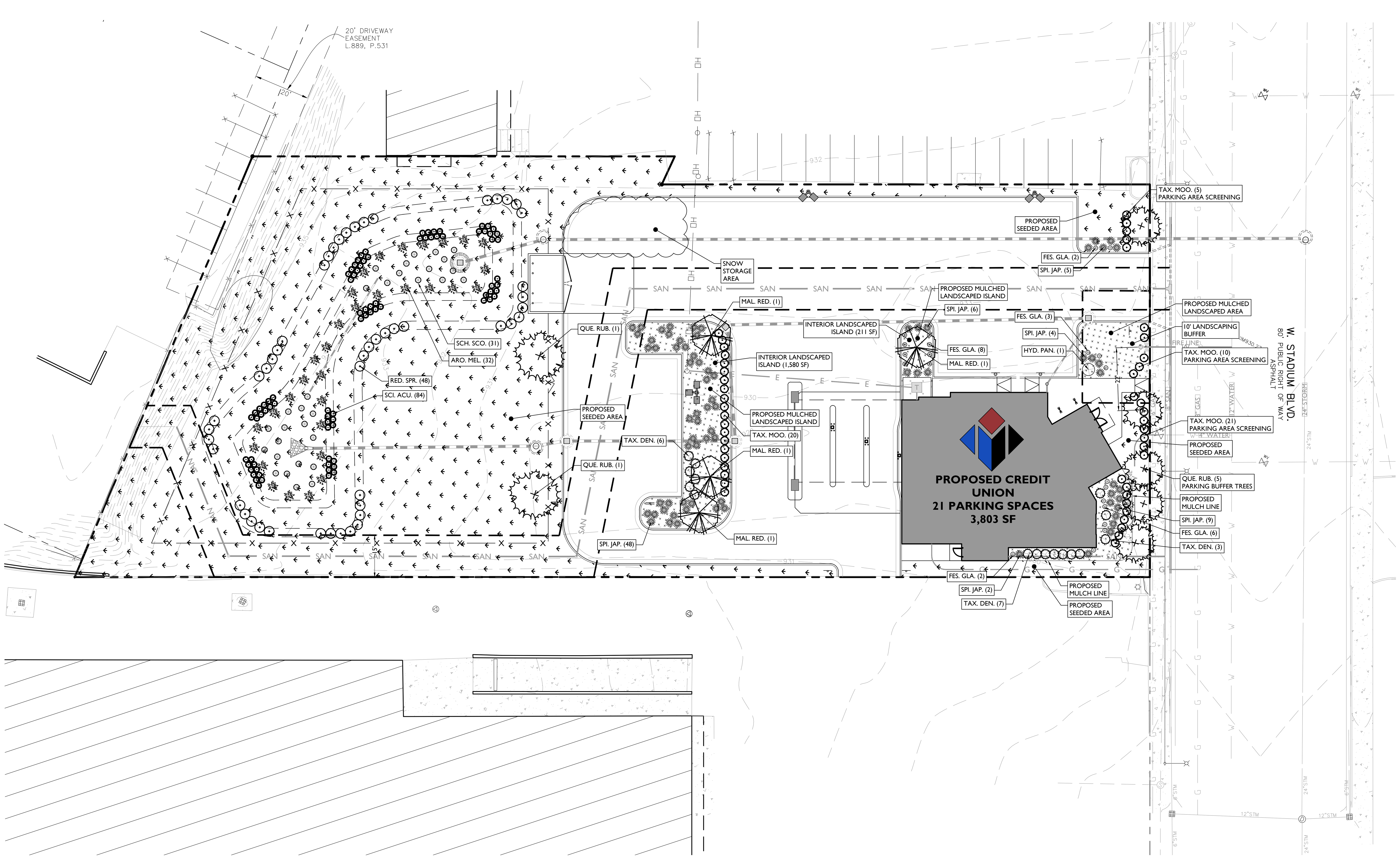
SOIL COMPACTION NOTE:

1. ONCE FINE GRADING HAS BEEN COMPLETED, HEAVY MACHINERY SHALL NOT BE USED WITHIN PLANTING AREAS TO PREVENT COMPACTION. IN ALL PLANTING AREAS WHERE SOIL COMPACTION HAS OCCURRED DURING CONSTRUCTION, SOIL SHALL BE TILLED TO THE DEPTH OF THE PROPOSED ROOT BALL OF THE PLANTINGS OR 4" DEPTH FOR SEEDED AREAS PRIOR TO THE PLANING.
2. OVER EXCAVATE SIDES OF PLANTING PITS IN COMPACTED SOIL AREAS.

STORMWATER DETENTION POND TOPSOIL TO BE AMENDED WITH ORGANIC MATERIAL SOILS AND MUST BE FREE OF CONSTRUCTION DEBRIS AND SUBSOILS. THE SOIL SHALL CONTAIN BETWEEN 20-30 PERCENT COMPOST.

PROPOSED MULCH

PROPOSED SEEDED AREA



20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

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1	05-30-2019	ADG	SUBMISSION FOR SITE PLAN APPROVAL

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SITE PLAN FOR CITY COUNCIL APPROVAL

MICHIGAN SCHOOLS & GOVERNMENT CREDIT UNION

PROPOSED CREDIT UNION WITH DRIVE-THRU FACILITIES

PARCEL ID: 09-09-30-318-028
2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

STATE OF MICHIGAN
JAKE MODESTOW
PROFESSIONAL ENGINEER

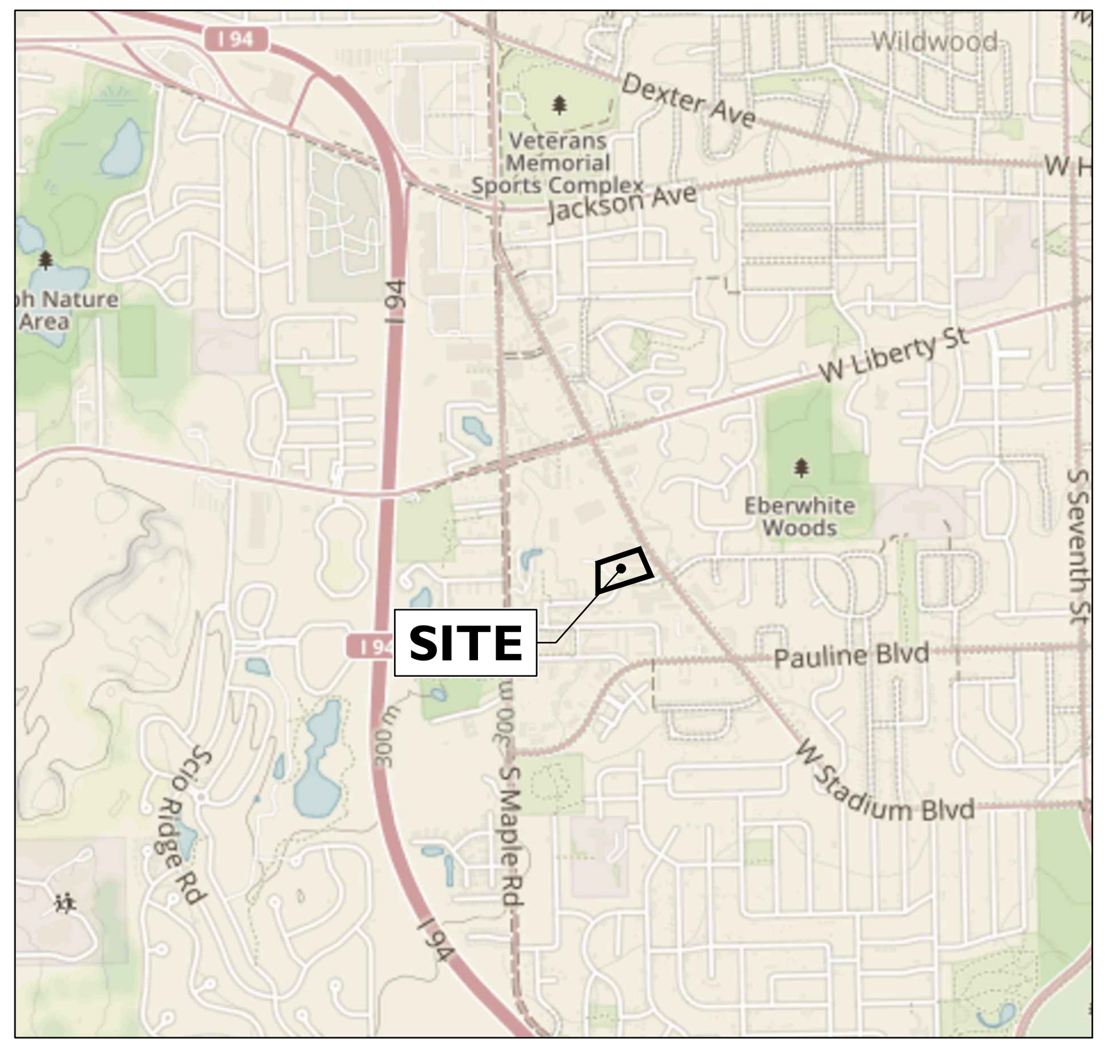
STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: LANDSCAPING PLAN

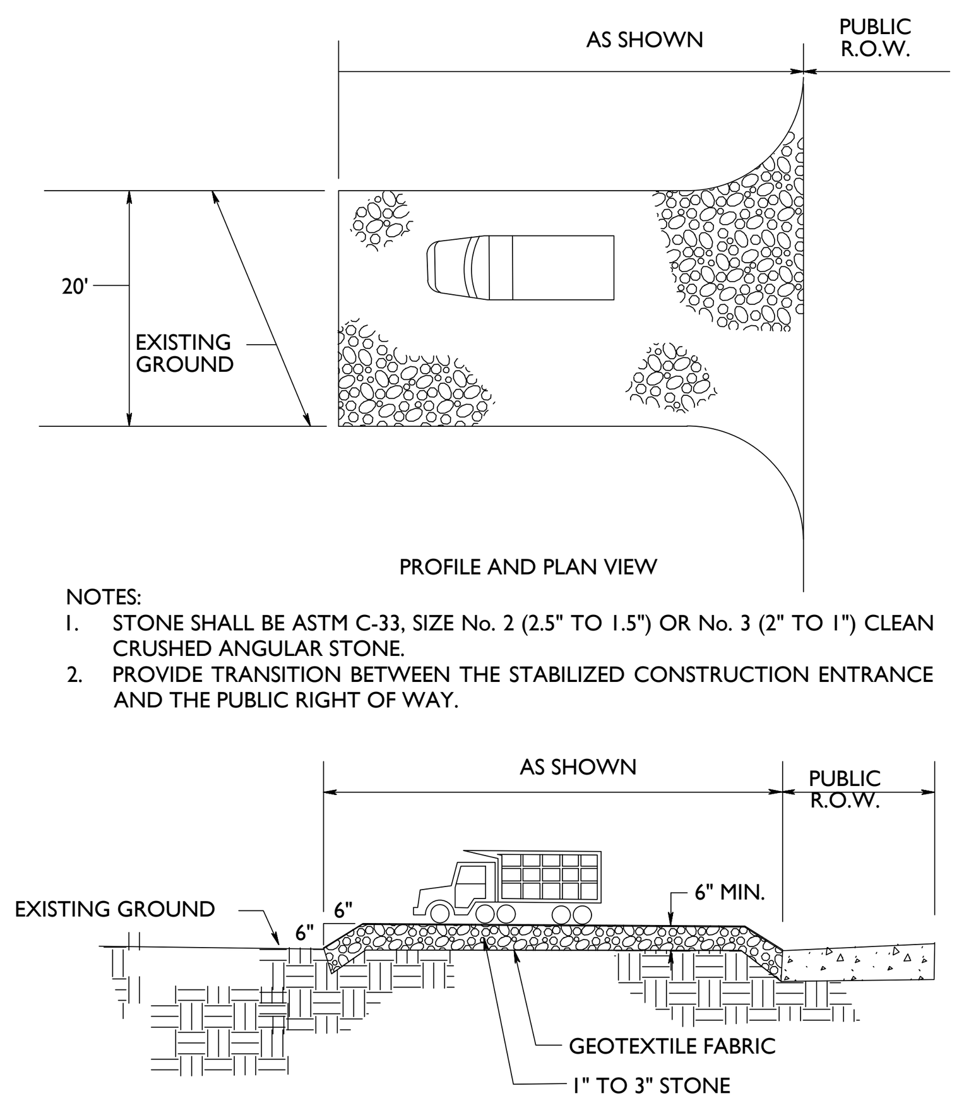
DRAWING: C-9



SOURCE: USGS ONLINE MAPS

LOCATION MAP

SCALE: 1" = 2,000'±



NOTES:

1. STONE SHALL BE ASTM C-33, SIZE No. 2 (2.5" TO 1.5") OR No. 3 (2" TO 1") CLEAN CRUSHED ANGULAR STONE.
2. PROVIDE TRANSITION BETWEEN THE STABILIZED CONSTRUCTION ENTRANCE AND THE PUBLIC RIGHT OF WAY.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

PERMANENT MAINTENANCE TASKS AND SCHEDULE

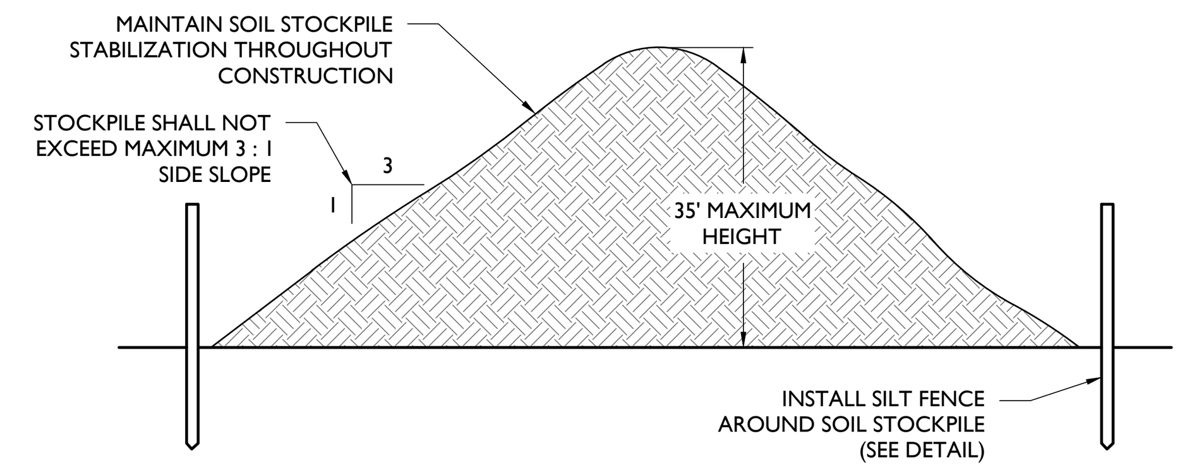
COMPONENTS	Streets	Storm Sewer System	Catch Basin Sumps	Catch Basin Inlets	Detention Basin	Outflow Control Structure	Schedule
Inspect for sediment accumulation	X	X	X		X	X	Annually
Removal of sediment accumulation		X	X		X	X	As needed
Inspect for floatables & debris		X	X	X	X	X	Annually
Cleaning of floatables & debris		X	X	X	X	X	Annually
Inspect for erosion					X		Annually
Re-establish permanent vegeatation on eroded slopes					X		As needed
Clean streets	X						Semi-Annually

SEQUENCE OF CONSTRUCTION

1. INSTALL AND MAINTAIN SOIL EROSION CONTROL MEASURES AS REQUIRED (90 DAYS).
2. ROUGH GRADING AND TEMPORARY SEEDING (30 DAYS).
3. EXCAVATE AND INSTALL UTILITIES (30 DAYS).
4. CONSTRUCT RIGHT OF WAY IMPROVEMENTS (7 DAYS).
5. BUILDING CONSTRUCTION AND SITE IMPROVEMENTS (120 DAYS).
6. LANDSCAPING IMPROVEMENTS AND FINAL SEEDING (7 DAYS).
7. REMOVE SOIL EROSION MEASURES AND CLEANUP SITE (1 DAY).

NOTE: TIME DURATIONS ARE APPROXIMATE AND ARE INTENDED TO ACT AS A GENERAL GUIDE TO THE CONSTRUCTION TIMELINE. ALL DURATIONS ARE SUBJECT TO CHANGE BY CONTRACTOR. CONTRACTOR SHALL SUBMIT CONSTRUCTION SCHEDULE TO TOWNSHIP AND ENGINEER. CONTRACTOR SHALL PHASE CONSTRUCTION ACCORDINGLY.

NOTE: STORMWATER MANAGEMENT SYSTEM TO BE INSTALLED AND APPROVED PRIOR TO RELEASE OF BUILDING PERMIT.



NOTES:

1. STOCKPILES SHALL BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.
2. STOCKPILES SHALL BE STABILIZED IN ACCORDANCE WITH THE STANDARDS FOR PERMANENT OR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, AS APPROPRIATE (SEE SOIL EROSION NOTES).

SOIL STOCKPILE DETAIL

NOT TO SCALE

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL AND COMPLIANCE WITH LOCAL, STATE, AND FEDERAL AIR QUALITY STANDARDS.
3. THE CONTRACTOR IS RESPONSIBLE TO INSPECT ALL SOIL EROSION MEASURES WEEKLY AND AFTER A PRECIPITATION EVENT GREATER THAN 1 INCH. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG ON SITE AND DOCUMENT CORRECTIVE ACTION AS REQUIRED TAKEN THROUGHOUT THE COURSE OF CONSTRUCTION.
4. THE CONTRACTOR SHALL NOT ALLOW BUILD-UP OF DIRT OR SEDIMENT ON WEST STADIUM BOULEVARD. THE CONTRACTOR SHALL PROVIDE SWEEPING OF THE ROADWAY ON WEST STADIUM BOULEVARD AS NECESSARY.
5. THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY THE CONTRACTOR.

EARTHWORK ESTIMATE

THE EARTHWORK ESTIMATE ON SITE WILL CONSIST OF 16,000 CF OF EXCAVATION FOR THE DETENTION BASIN. ALL EXCAVATION SOILS WILL REMAIN ON SITE.

SOIL CHARACTERISTICS CHART

TYPE OF SOIL	WawabB -- WAWASEE LOAM
PERCENT OF SITE COVERAGE	74.6%
HYDROLOGIC SOIL GROUP	B
DEPTH TO RESTRICTIVE LAYER	MORE THAN 80 INCHES
SOIL PERMEABILITY	0.60 TO 2.00 IN / HR
DEPTH TO WATER TABLE	MORE THAN 80 INCHES

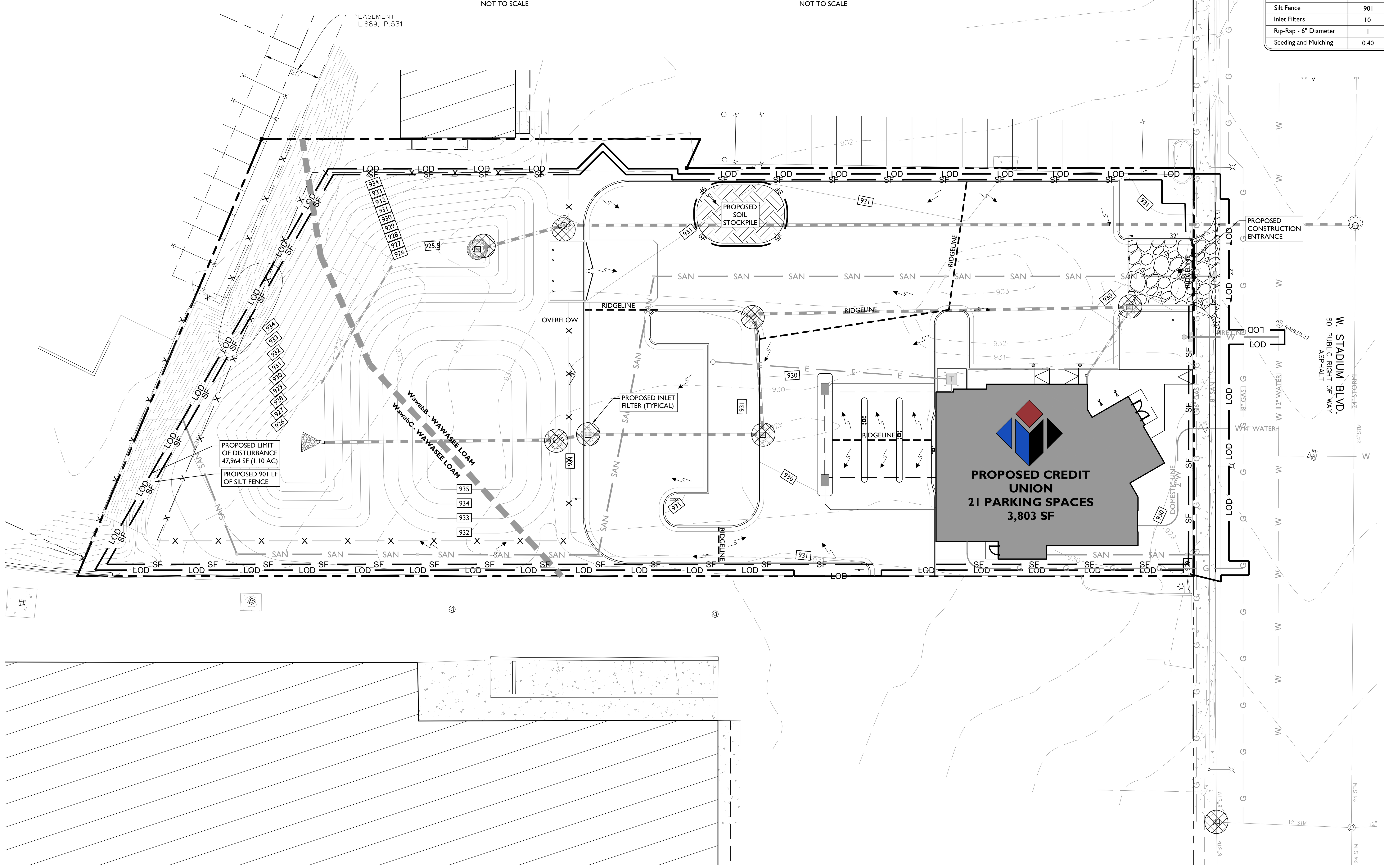
SOIL CHARACTERISTICS CHART

TYPE OF SOIL	WawabC -- WAWASEE LOAM
PERCENT OF SITE COVERAGE	25.4%
HYDROLOGIC SOIL GROUP	B
DEPTH TO RESTRICTIVE LAYER	MORE THAN 80 INCHES
SOIL PERMEABILITY	0.60 TO 2.00 IN / HR
DEPTH TO WATER TABLE	MORE THAN 80 INCHES

SOIL EROSION CONTROL COST ESTIMATE

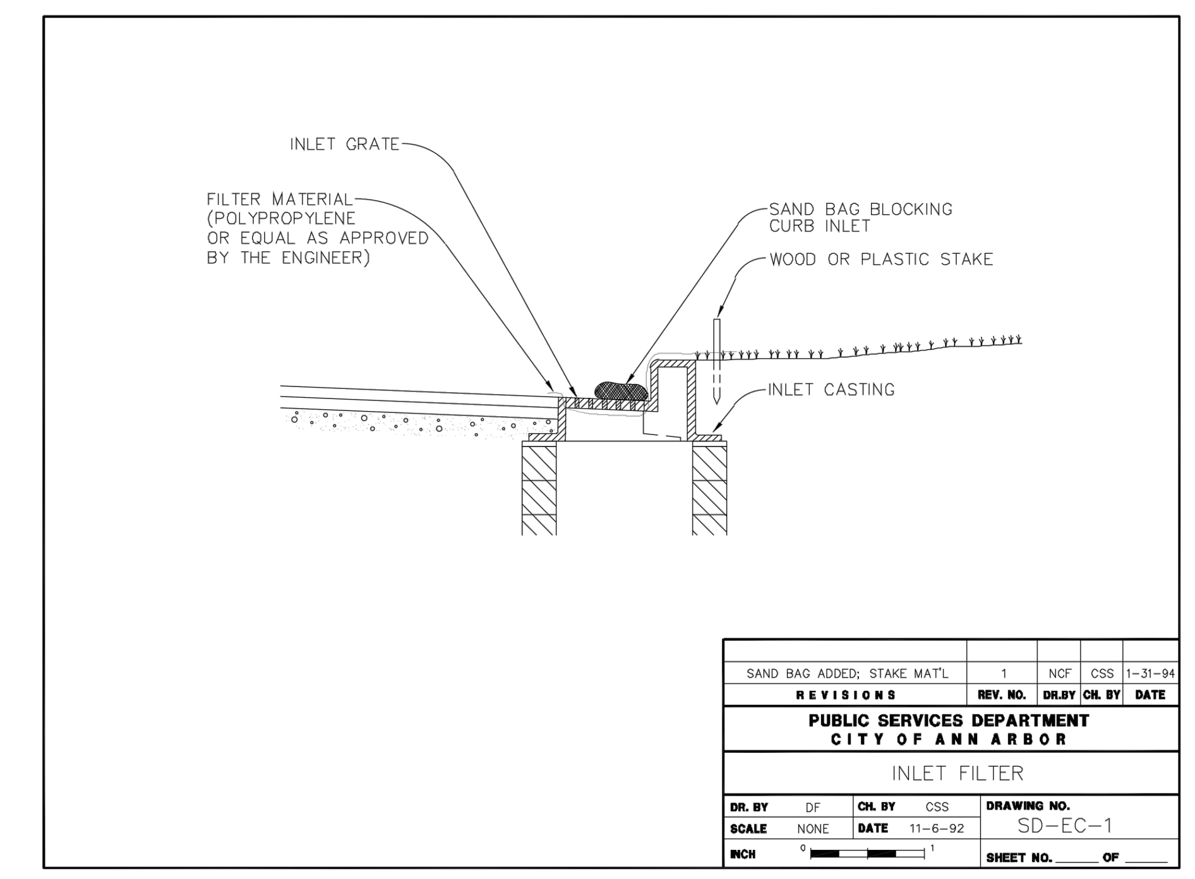
Description	Quantity	Unit	Unit Price	Total
Silt Fence	901	LF	$2.00	$1,802
Inlet Filters	10	EA	$150.00	$1,500
Rip-Rap - 6" Diameter	1	EA	$350.00	$350
Seeding and Mulching	0.40	AC	$3,500.00	$1,400

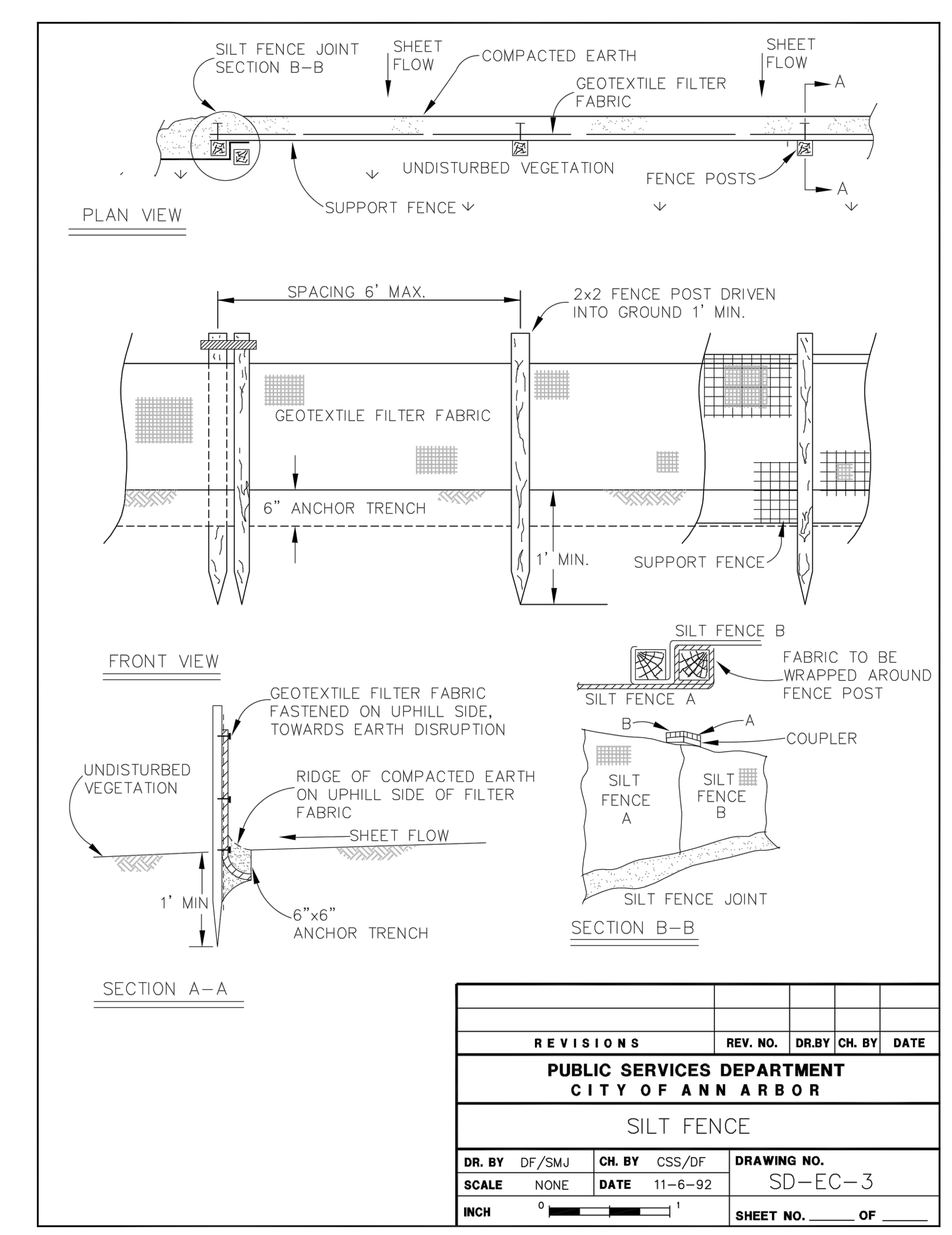
SYMBOL	DESCRIPTION
	PROPERTY BOUNDARY
	ADJACENT PROPERTY BOUNDARY
LOD	PROPOSED LIMIT OF DISTURBANCE
SF	PROPOSED SILT FENCE
	PROPOSED STOCKPILE & EQUIPMENT STORAGE
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED INLET PROTECTION FILTER



GRAPHIC SCALE IN FEET

1" = 20'





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WASHTENAW COUNTY, MICHIGAN

STATE OF MICHIGAN JAKE MODESTOW ENGINEER 6201065336
MICHIGAN LICENSE No.6201065336
LICENSED PROFESSIONAL ENGINEER

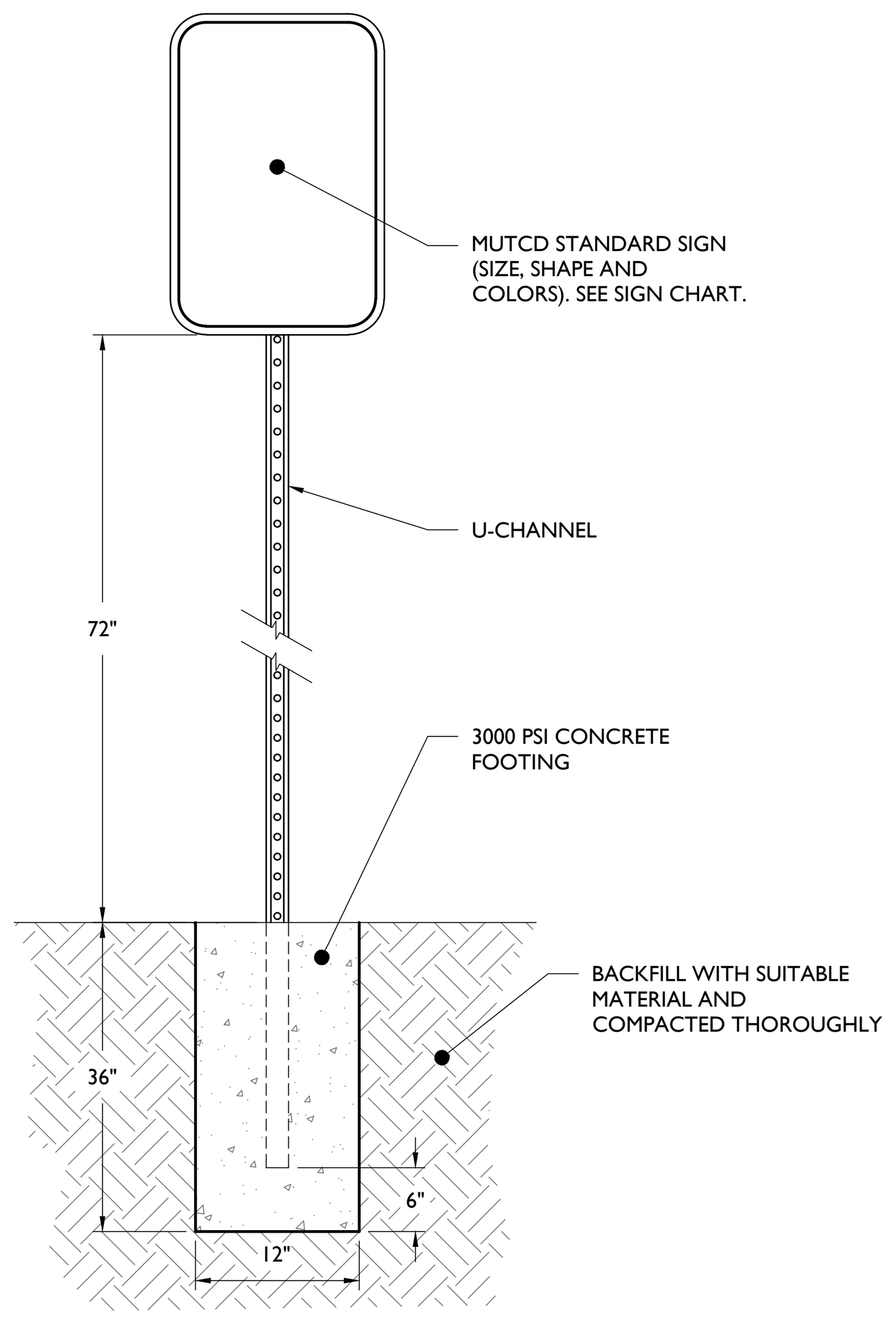
STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: SOIL EROSION & SEDIMENT CONTROL PLAN

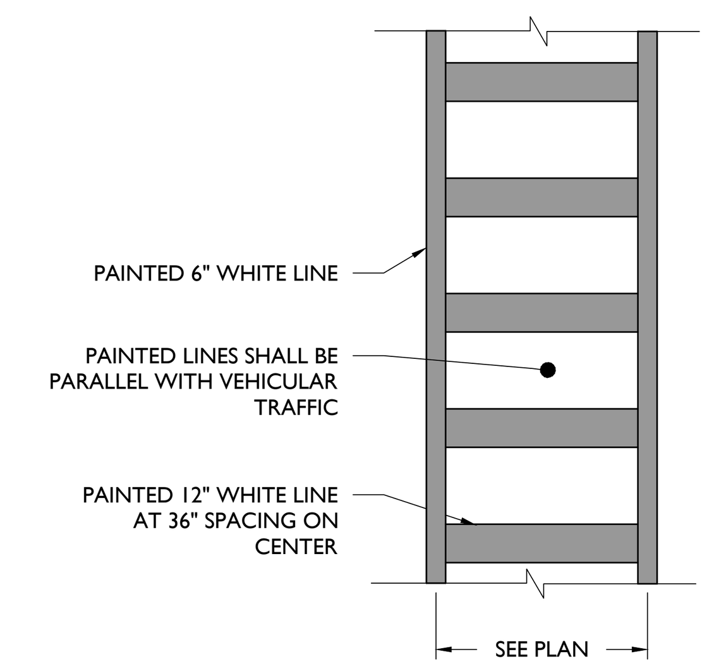
DRAWING: C-10



SIGN POST DETAIL

NOT TO SCALE

1



CROSSWALK DETAIL

NOT TO SCALE

2

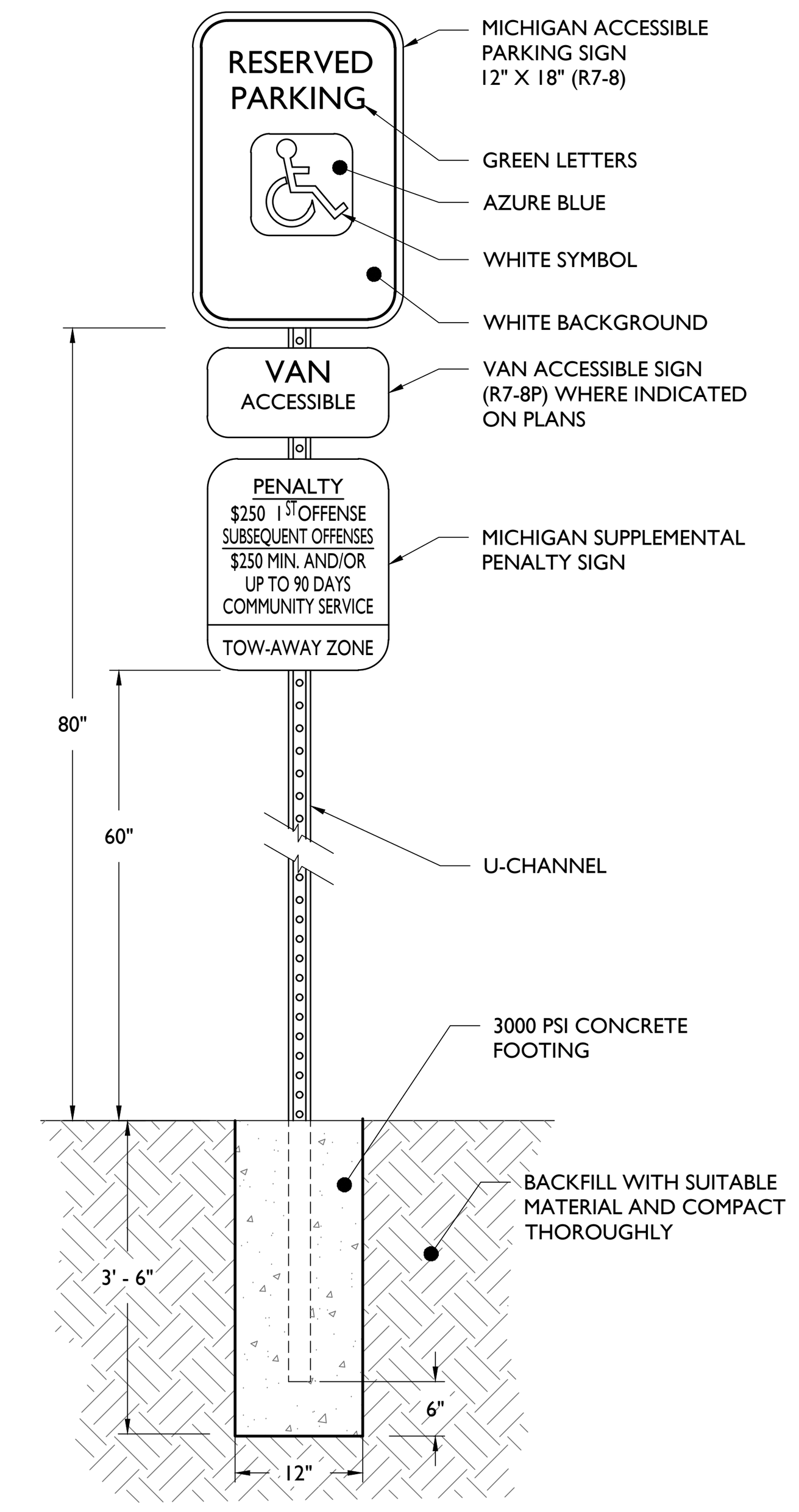
M.U.T.C.D. NUMBER	TEXT	COLOR: LEGEND	COLOR: BACKGROUND	SIZE OF SIGN (WIDTH X HEIGHT)	TYPE OF MOUNT
DO NOT ENTER (R5-1)	DO NOT ENTER	RED	WHITE	30"x30"	GROUND
STOP SIGN (R1-1)	STOP	RED	WHITE	36"x36"	GROUND
PEDESTRIAN TRAFFIC (W11-2)		BLACK	YELLOW	30"x30"	GROUND

NOTE:
1. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), EXCEPT AS NOTED.
2. ALL SIGNS SHALL BE MOUNTED AS TO NOT OBSTRUCT THE SHAPE OF "STOP" (R1-1) AND "YIELD" (R1-2) SIGNS.

SIGN DATA TABLE

NOT TO SCALE

3



ACCESSIBLE PARKING SIGN DETAIL

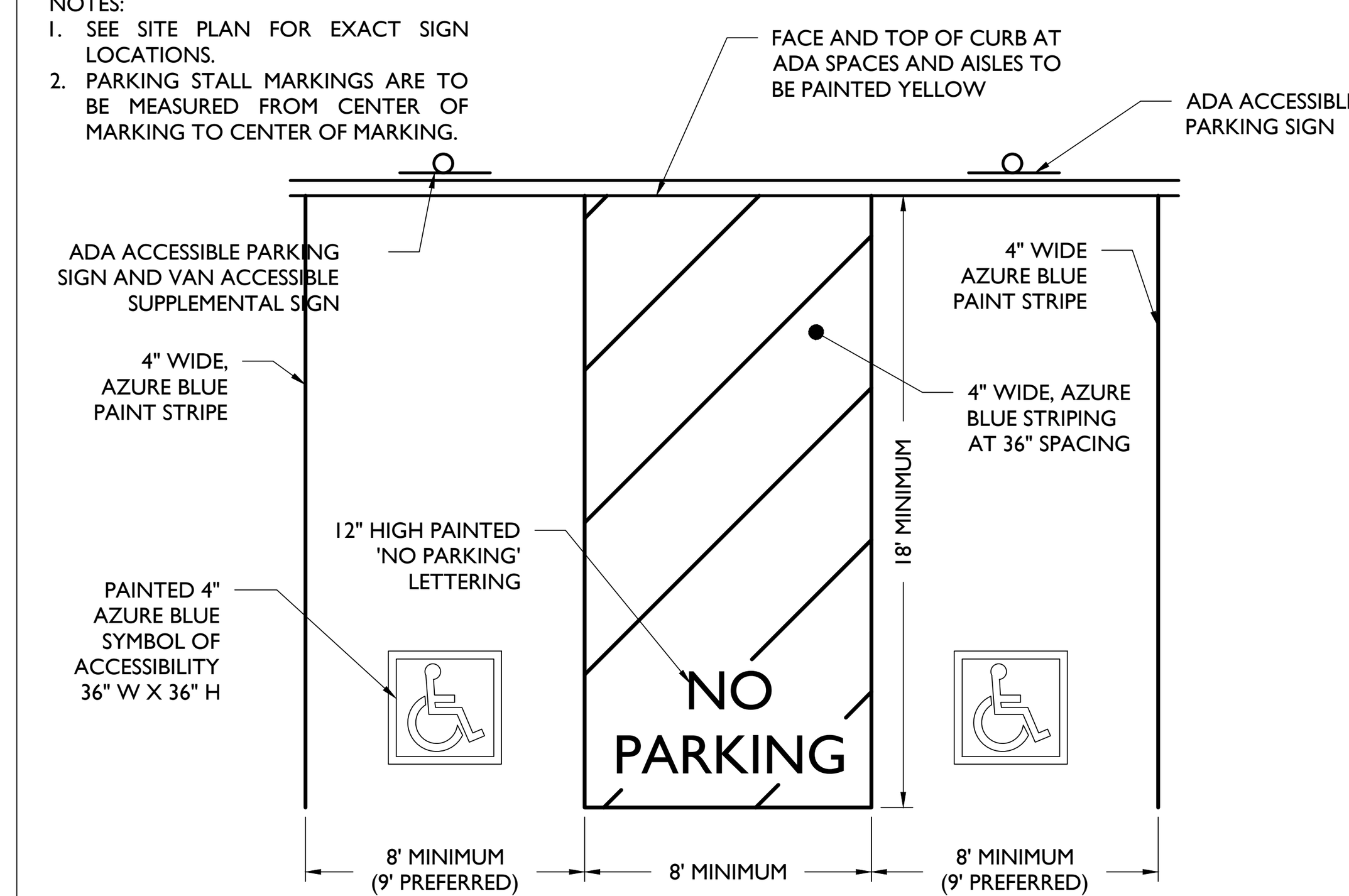
NOT TO SCALE

4

PAVEMENT STRIPING & MARKINGS NOTES:
1. ALL SIGNING AND STRIPING IN EXISTING CONDITION IN CONFLICT WITH THE PROPOSED DESIGN PLAN SHALL BE REMOVED.
2. ALL PROPOSED SIGNING AND STRIPING SHALL CONFORM TO THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
3. PAVEMENT STRIPING AND MARKINGS SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE LOCAL, COUNTY AND STATE REQUIREMENTS.
4. UNLESS OTHERWISE SPECIFIED, ALL STRIPING AND MARKINGS IN THE PUBLIC RIGHT-OF-WAY SHALL BE OF THERMOPLASTIC PAINT OR PREFORMED THERMOPLASTIC MARKINGS.
5. UNLESS OTHERWISE SPECIFIED, ON SITE PARKING STALL STRIPING, FIRE LANE STRIPING AND DIRECTIONAL ARROWS SHALL BE EPOXY PAINT. ON SITE STOP BARS, "DO NOT ENTER" BARS, AND ASSOCIATED LETTERING SHALL BE THERMOPLASTIC PAINT OR PREFORMED THERMOPLASTIC MARKINGS.

11

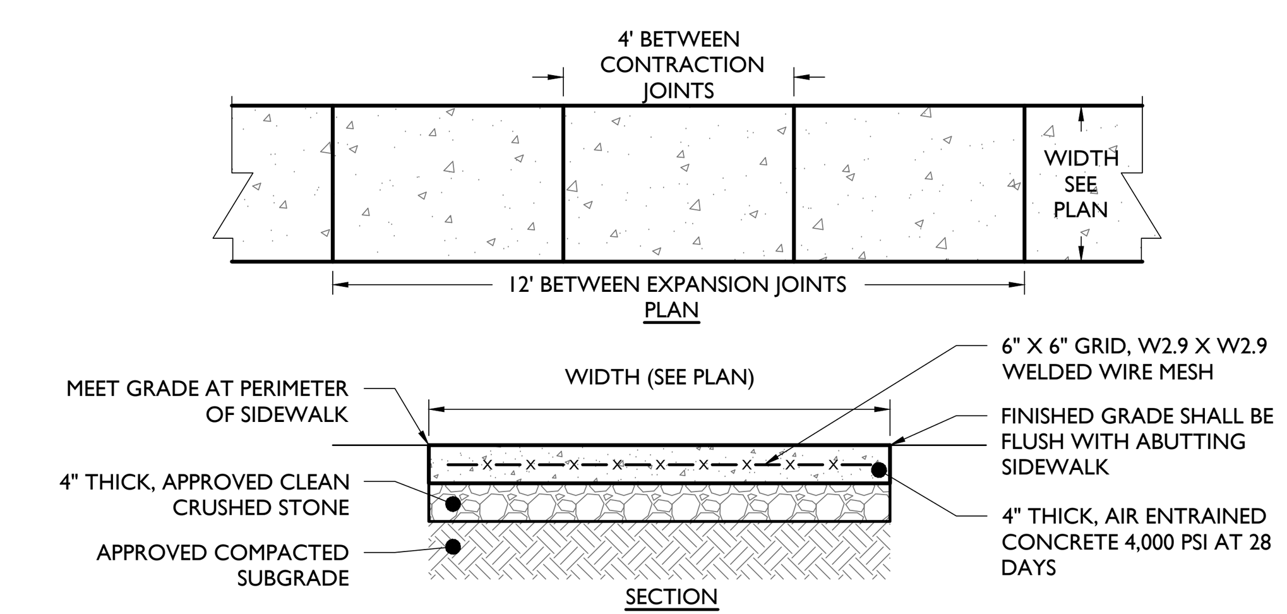
NOTES:
1. SEE SITE PLAN FOR EXACT SIGN LOCATIONS.
2. PARKING STALL MARKINGS ARE TO BE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING.



ACCESSIBLE PARKING STALL MARKINGS

NOT TO SCALE

12

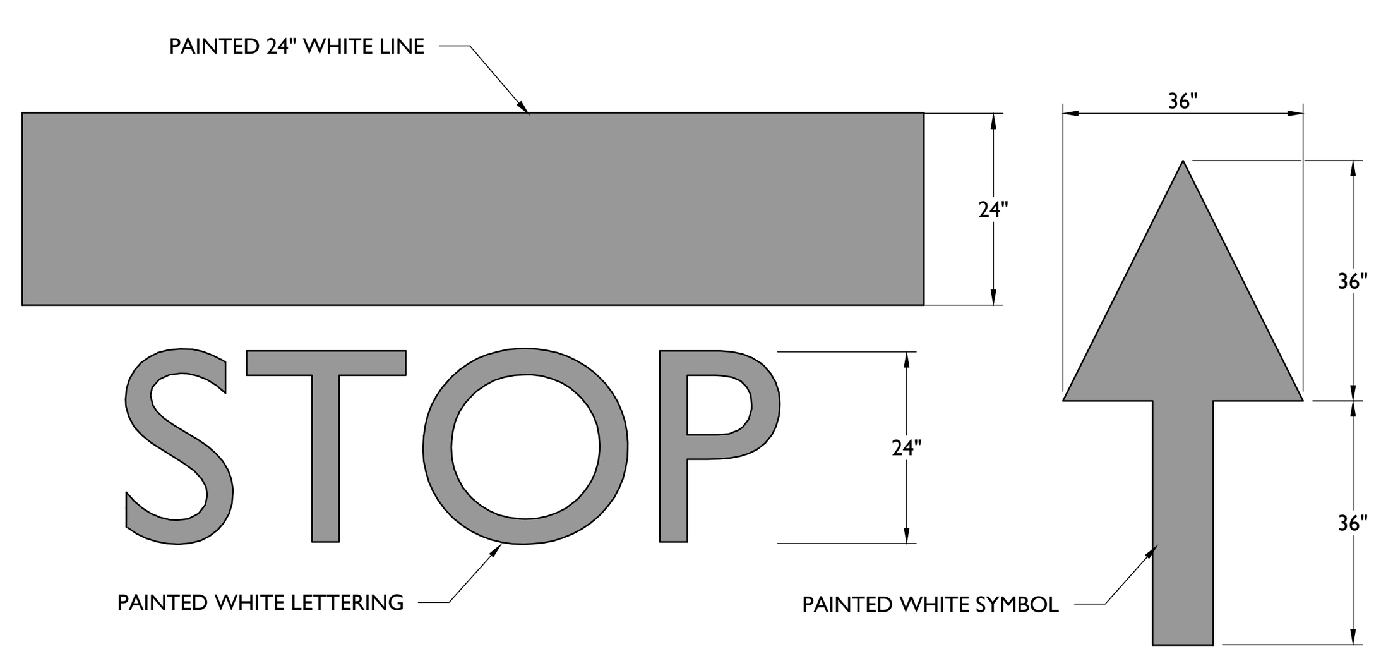


REINFORCED CONCRETE WALKWAY DETAIL

NOT TO SCALE

NOTES:
1. MAXIMUM CROSS SLOPE SHALL BE ¼" PER FOOT.
2. ½" EXPANSION JOINTS SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ¼" FROM THE SURFACE.
3. 1" DEEP BY ⅛" WIDE, TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT 4' INTERVALS.
4. EXPANSION JOIN SHALL BE PROVIDED WHERE ADJACENT TO A BUILDING.

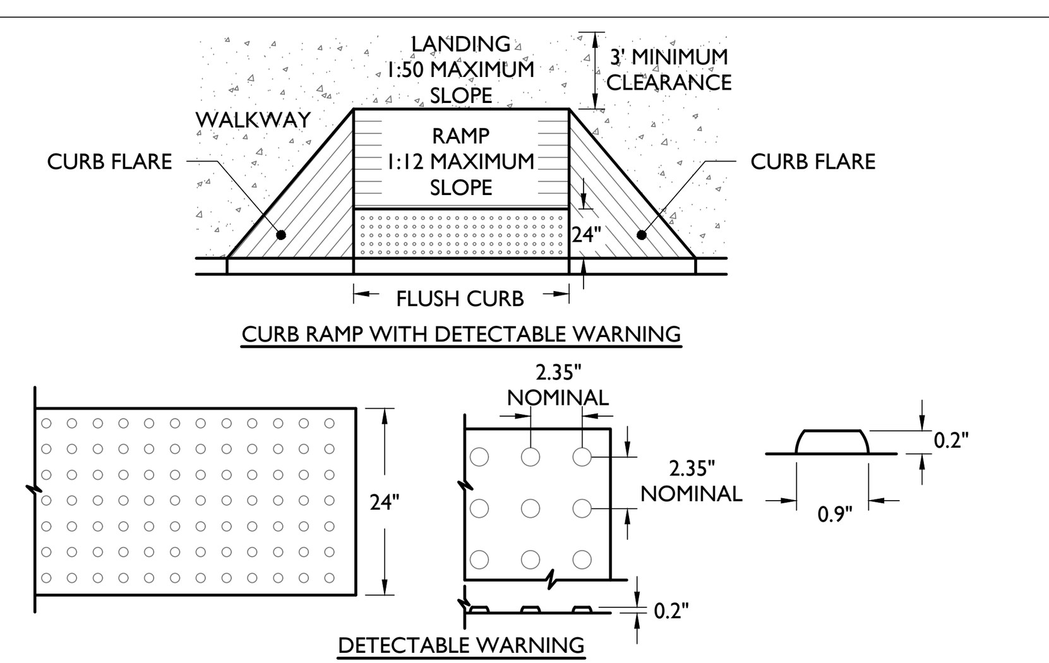
13



STOP BAR & ARROW DETAILS

NOT TO SCALE

5

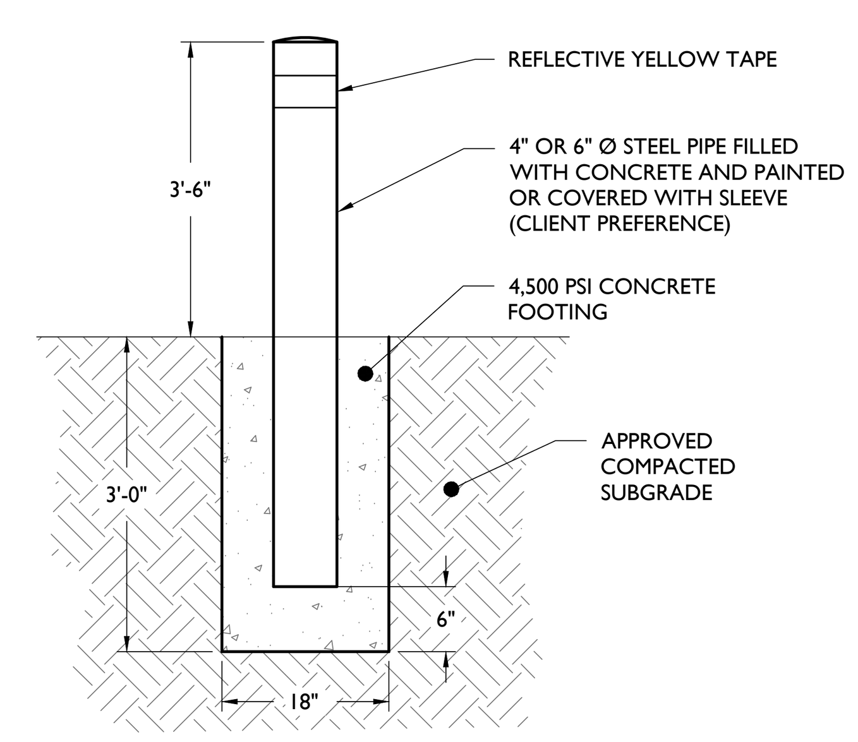


CURB RAMP WITH FLARES DETAIL

NOT TO SCALE

NOTES:
1. CROSS SLOPE ON RAMP SHALL NOT EXCEED 1:50 SLOPE.
2. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
3. VISUAL CONTRAST: THERE SHALL BE A MINIMUM OF 70% CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE.
4. DETECTABLE WARNING STRIP REQUIRED WHERE RAMP DIRECTS PEDESTRIAN TRAFFIC TOWARDS VEHICLE TRAVEL WAY. WARNING STRIP SHALL BE CAST-IN-PLACE.
5. WHERE A 60" X 60" LANDING EXISTS AT THE TOP OF RAMP, RAMP FLARE SHALL NOT EXCEED 1:10 SLOPE. WHERE LANDING IS NOT PROVIDED RAMP FLARE SHALL NOT EXCEED 1:12 SLOPE.
6. A FLUSH CURB SHALL HAVE A MINIMUM WIDTH OF 36". SEE PLAN FOR EXACT WIDTH.
7. RAMP SHALL HAVE A MAXIMUM RISE OF 6" WITHOUT A HANDRAIL.

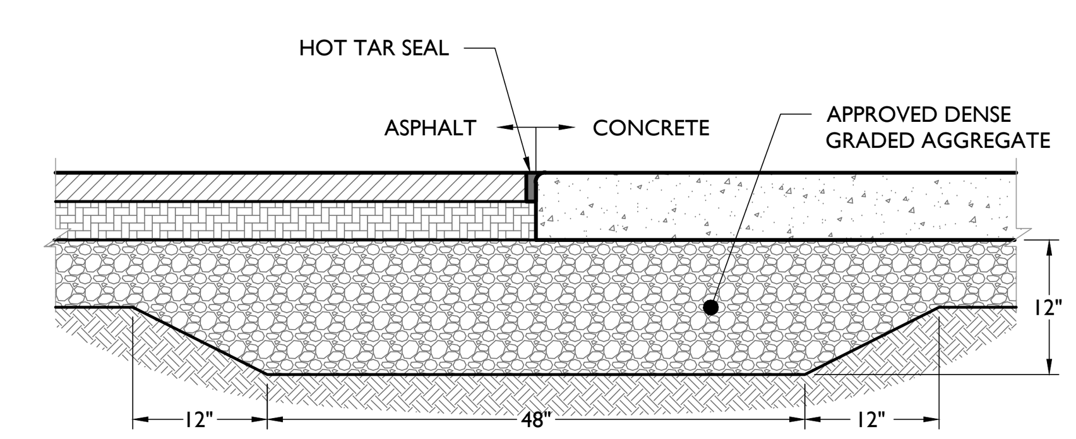
6



CONCRETE BOLLARD DETAIL

NOT TO SCALE

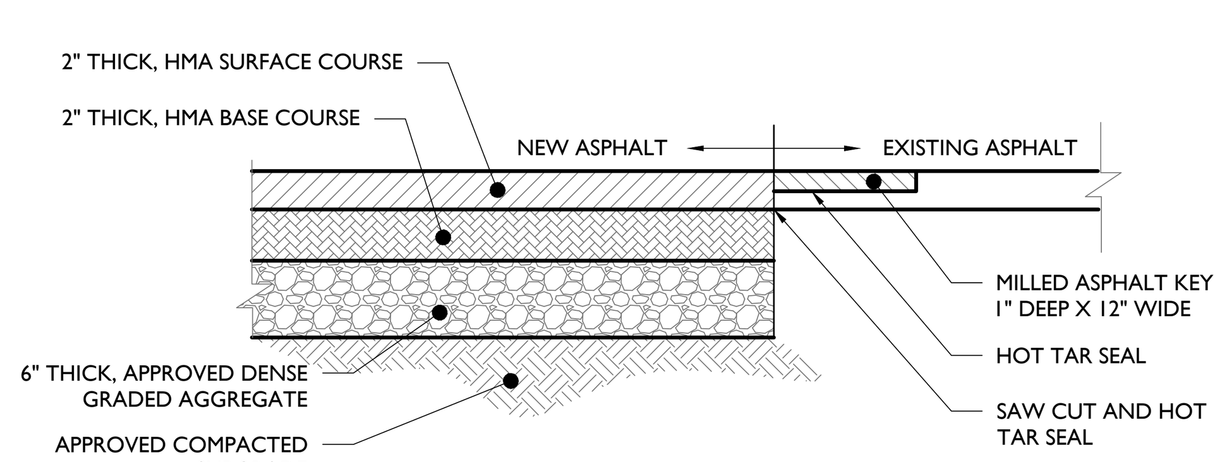
7



CONCRETE TO ASPHALT TRANSITION DETAIL

NOT TO SCALE

14

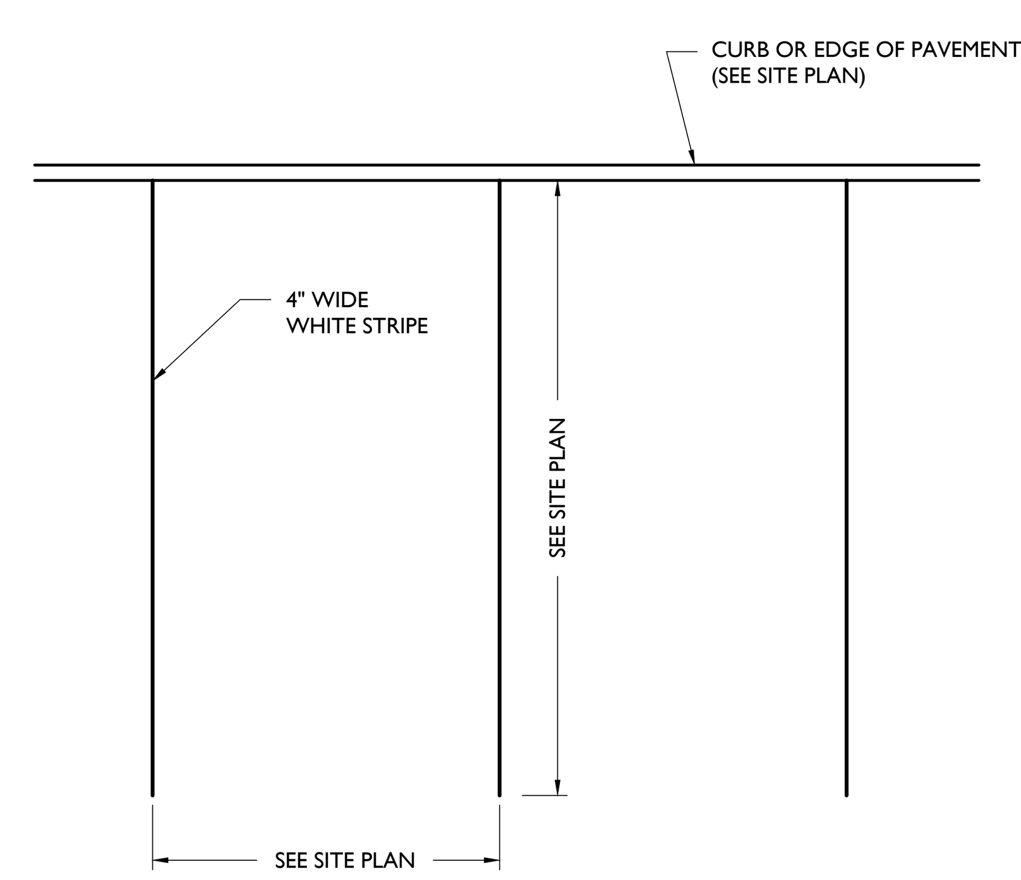


FULL DEPTH ASPHALT PAVEMENT DETAIL

NOT TO SCALE

NOTE:
1. HMA MIX AND DENSE GRADED AGGREGATE SHALL CONFORM TO STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
2. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION.

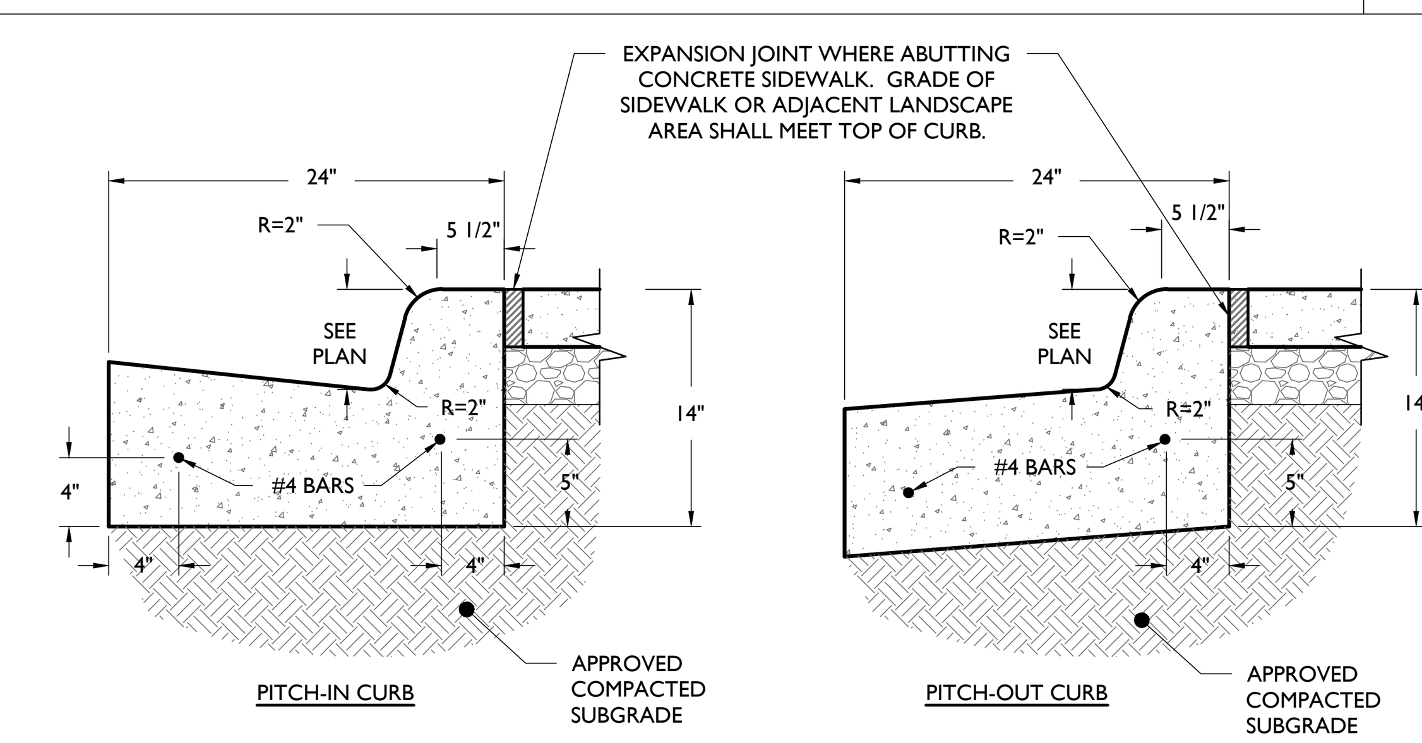
8



PARKING STALL MARKINGS

NOT TO SCALE

9

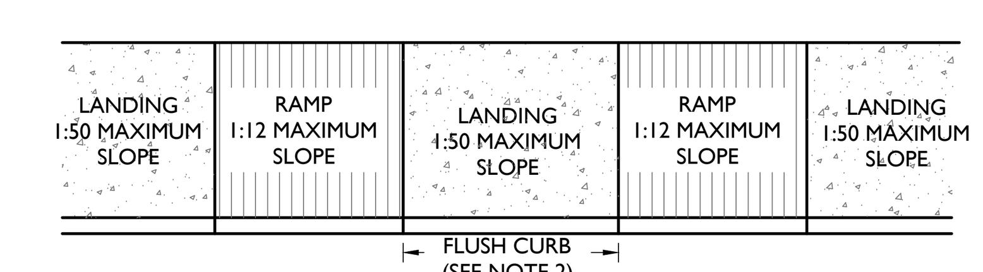


CONCRETE CURB AND GUTTER DETAIL

NOT TO SCALE

NOTES:
1. CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
2. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ½" FROM SURFACE.
3. HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
4. 14" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

10



TRANSITION RAMP DETAIL

NOT TO SCALE

NOTES:
1. CROSS SLOPE ON RAMP SHALL NOT EXCEED 2%
2. A FLUSH CURB SHALL HAVE A MINIMUM WIDTH OF 36". SEE PLAN FOR EXACT WIDTH.
3. RAMP SHALL HAVE A MAXIMUM RISE OF 6" WITHOUT A HANDRAIL

15

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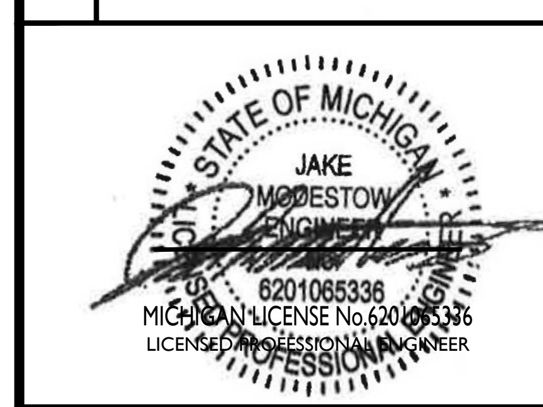


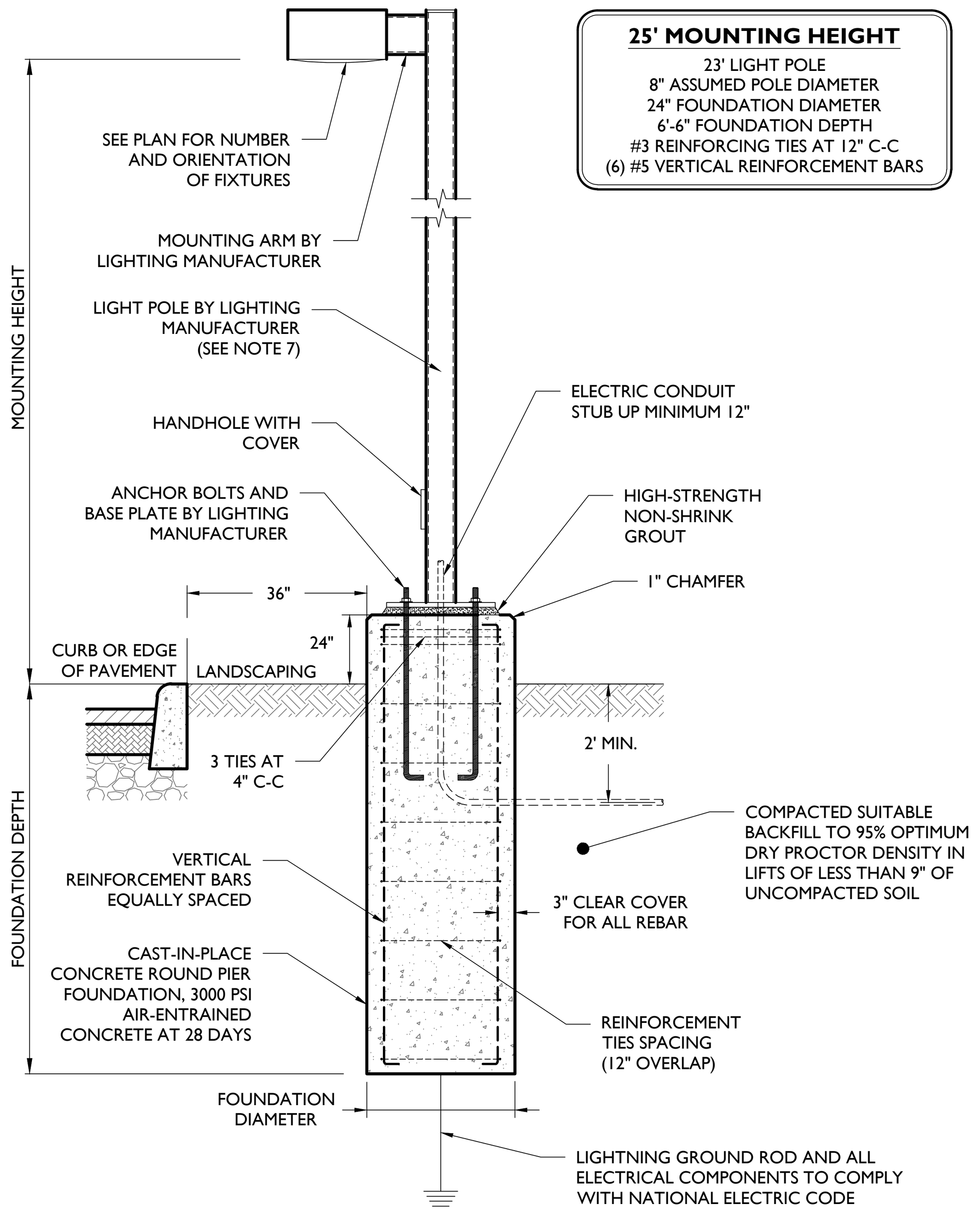
STONEFIELD engineering & design

SCALE: AS SHOWN | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: CONSTRUCTION DETAILS

DRAWING: C-11

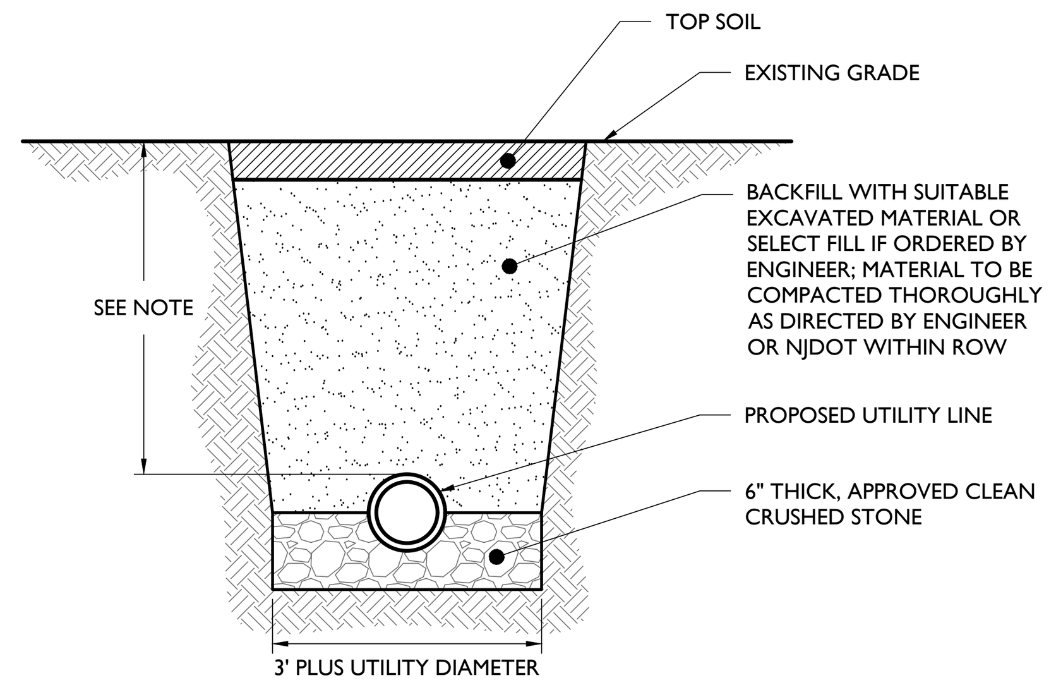


LIGHT POLE INSTALLATION DETAIL

NOT TO SCALE

NOTES:
1. MINIMUM SOIL BEARING PRESSURE OF 1500 PSF, SOIL FRICTION ANGLE OF 30 DEGREES, AND SOIL DRY UNIT WEIGHT OF 120 PCF SHALL BE CONFIRMED IN THE FIELD BY A QUALIFIED PROFESSIONAL.
2. CAST-IN-PLACE CONCRETE SHALL BE CONSOLIDATED USING VIBRATOR.
3. ALL REBAR TO BE NEW GRADE 60 STEEL.
4. PRE-CAST PIERS ACCEPTABLE UPON WRITTEN APPROVAL OF SHOP DRAWING BY ENGINEER.
5. CONCRETE TO BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO INSTALLING LIGHT POLE. POURED CONCRETE MIX REQUIRED TO OBTAIN 80% OF DESIGN STRENGTH PRIOR TO INSTALLING LIGHT POLE.
6. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" (WITHIN 1" TOLERANCE).
7. POLE SHALL BE RATED FOR 10 MPH HIGHER THAN MAXIMUM WIND SPEED 33FT ABOVE GROUND FOR THE AREA BASED ON ANSI/ASCE 7-93.
8. POUR TO BE TERMINATED AT A FORM.
9. WORK SHALL CONFORM TO ACI BEST PRACTICES FOR APPROPRIATE TEMPERATURE AND WEATHER CONDITIONS.
10. CONTRACTOR TO TEMPORARILY SUPPORT ADJACENT SOIL AND STRUCTURES DURING EXCAVATION IF REQUIRED.

1

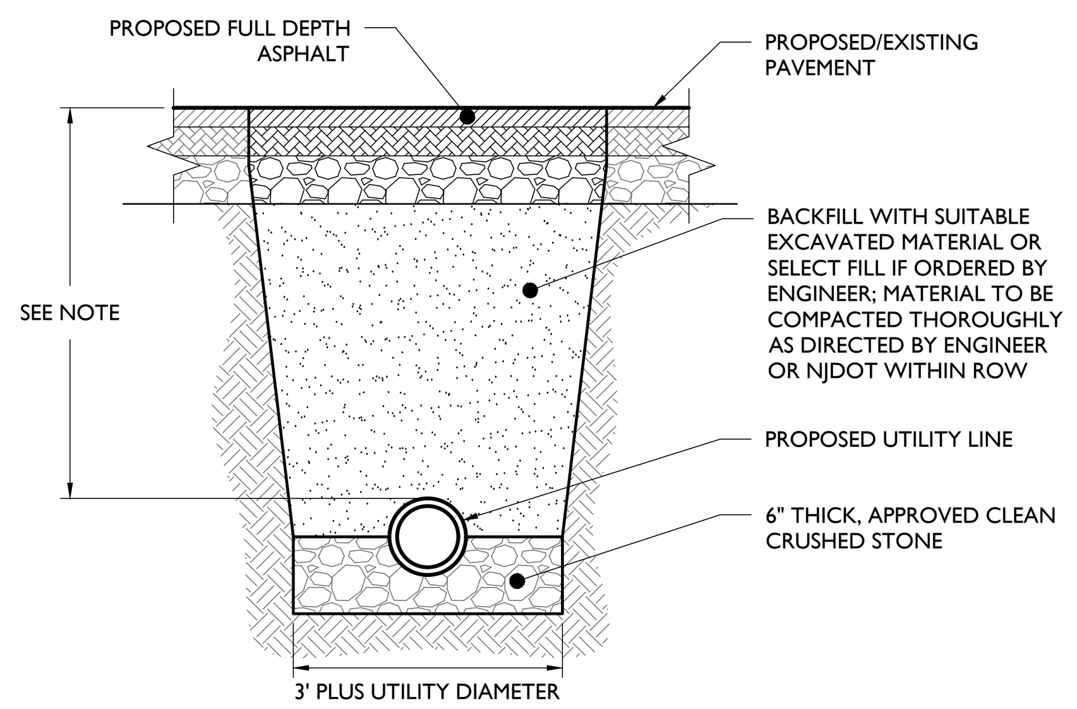


UTILITY TRENCH DETAIL (LANDSCAPED AREA)

NOT TO SCALE

NOTE:
MINIMUM PIPE COVER SHALL BE AS FOLLOW:
- WATER - 48" MIN.
- STORM DRAIN - SEE DRAINAGE PLAN

2

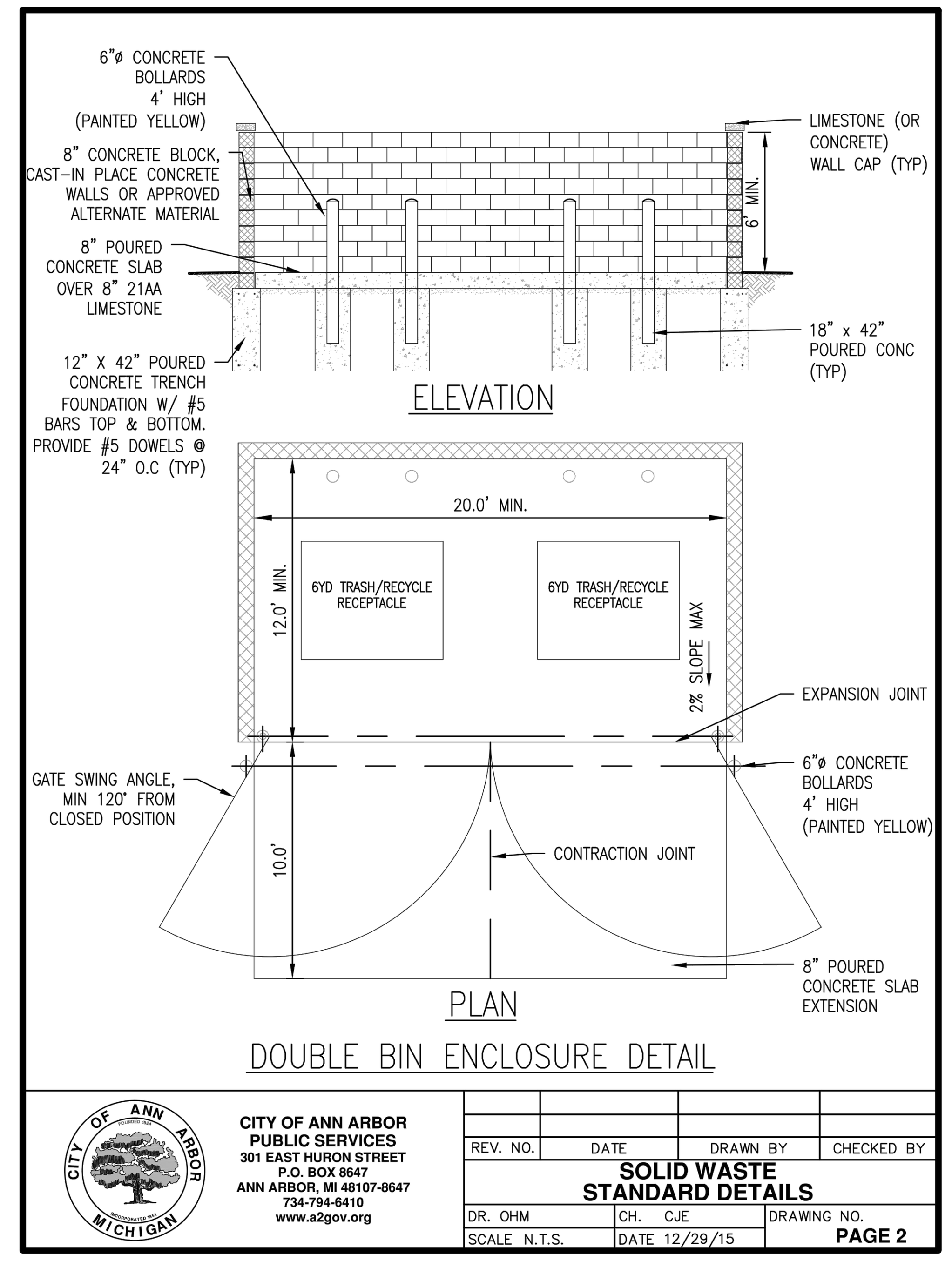


UTILITY TRENCH DETAIL (PAVED AREA)

NOT TO SCALE

NOTE:
MINIMUM PIPE COVER SHALL BE AS FOLLOW:
- WATER - 48" MIN.
- STORM DRAIN - SEE DRAINAGE PLAN

3



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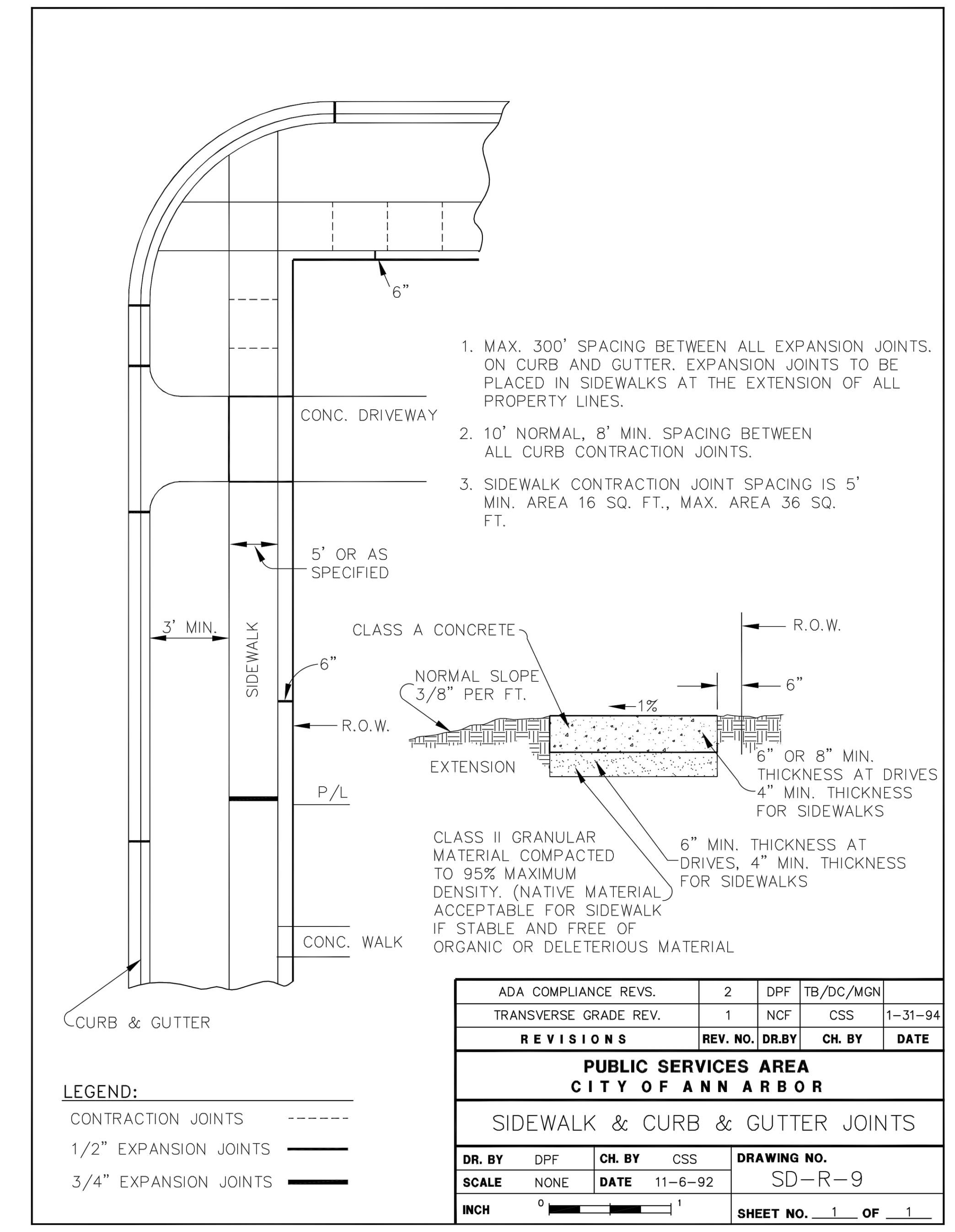

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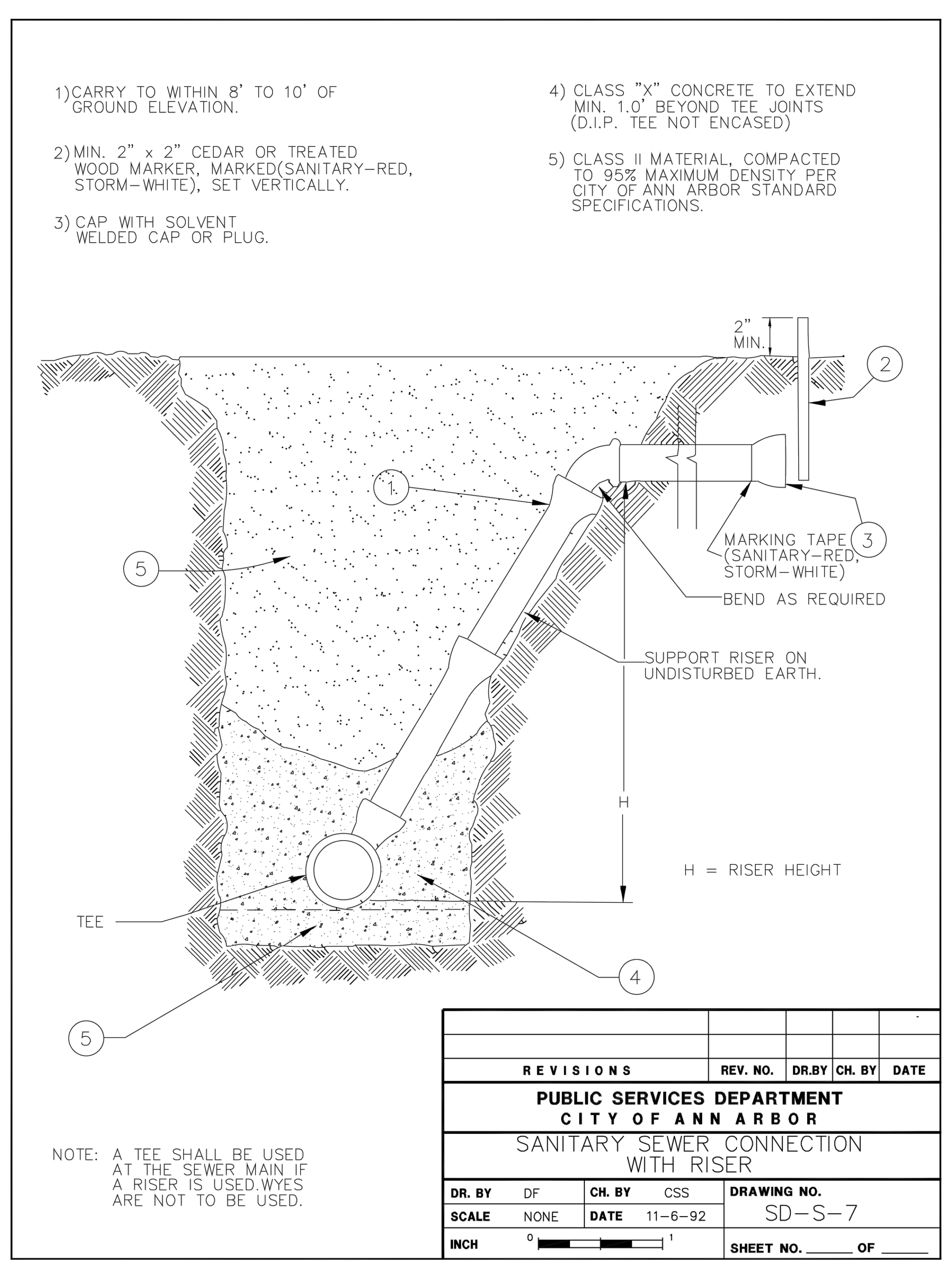

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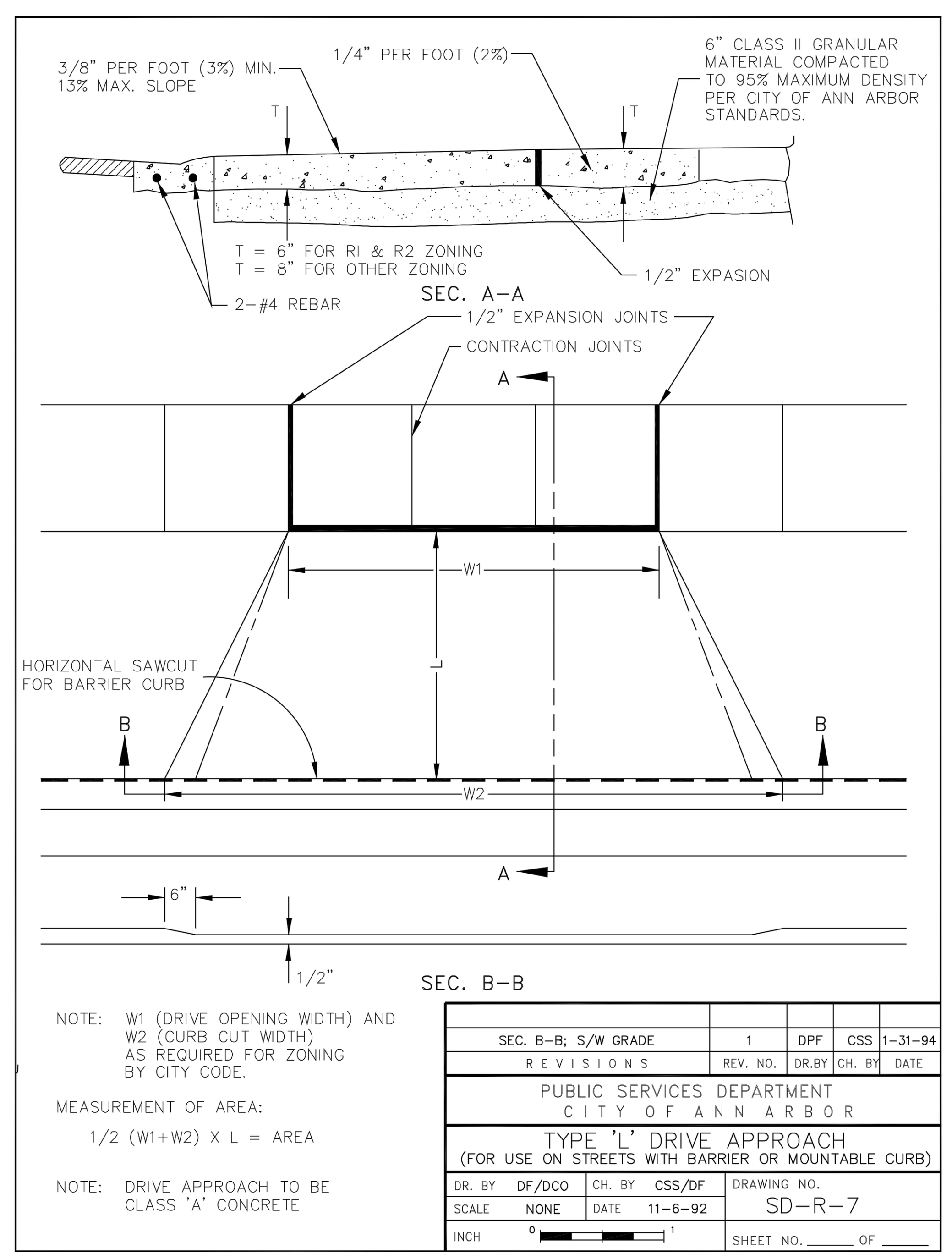

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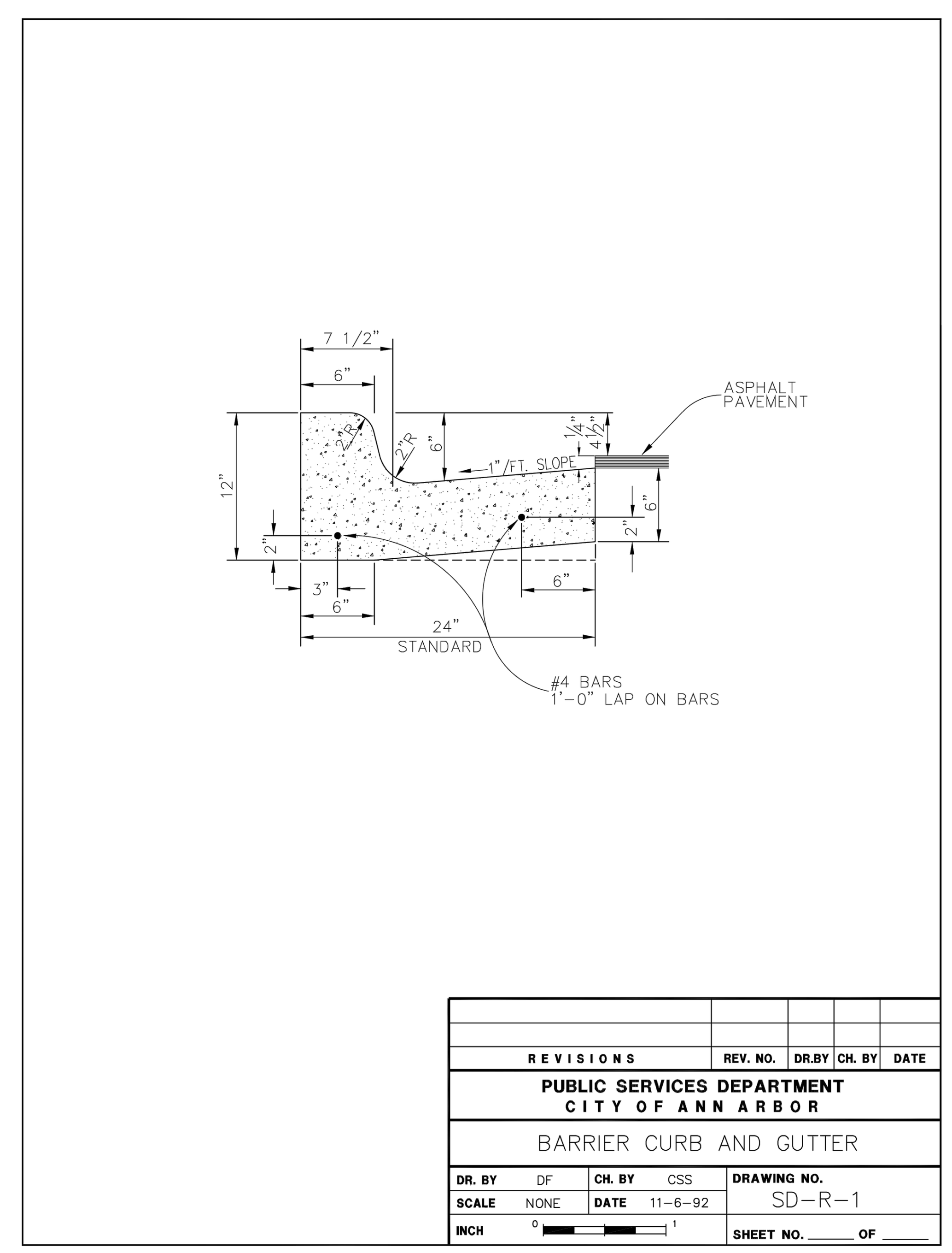

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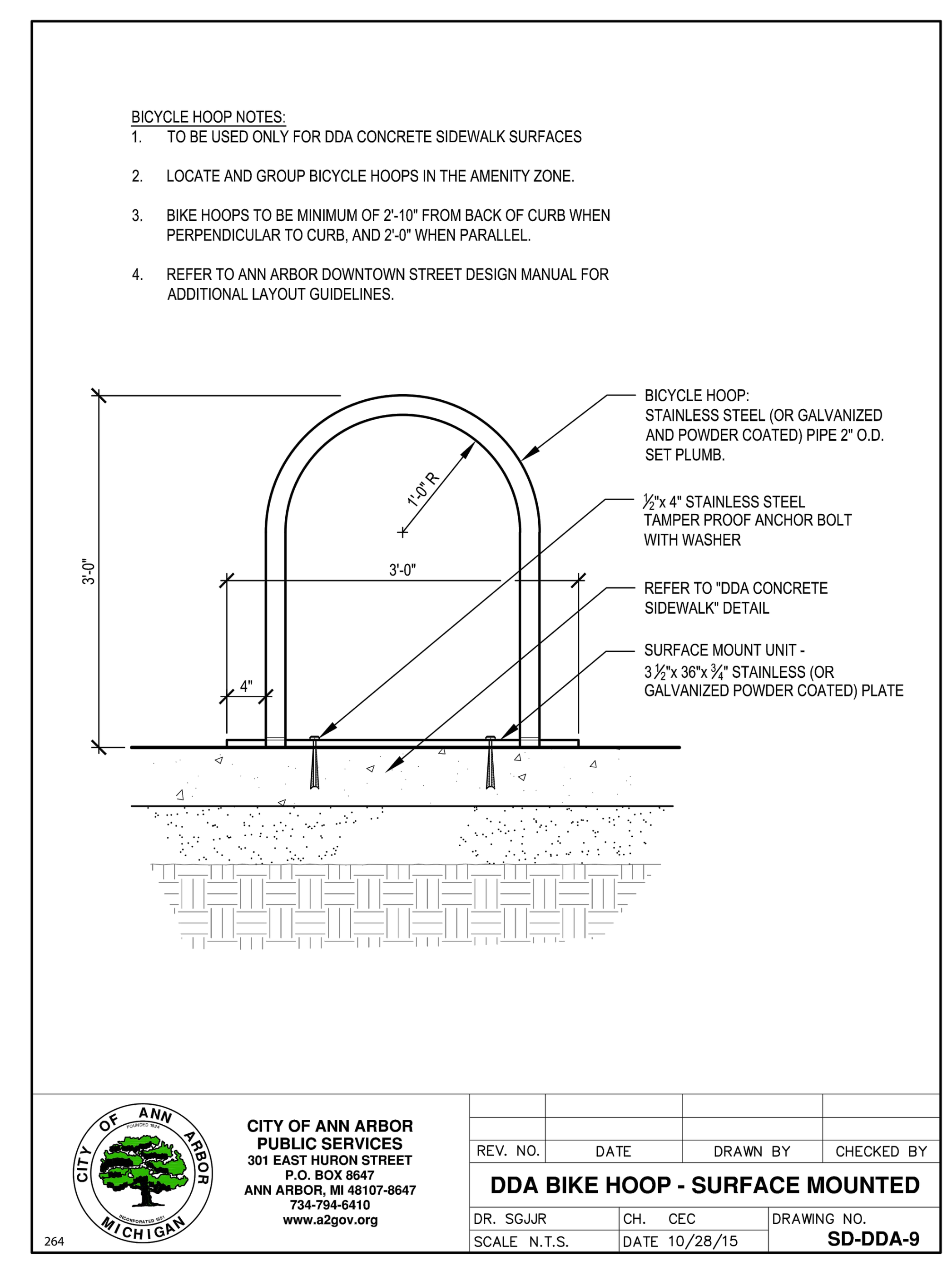

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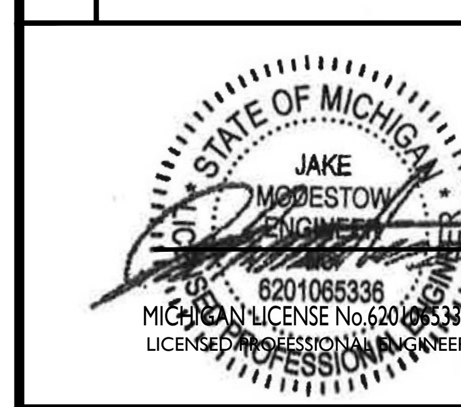
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN



STONEFIELD engineering & design

SCALE: AS SHOWN | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: CONSTRUCTION DETAILS

DRAWING: C-12

D-Series Size 1
LED Area Luminaire

Catalog Number

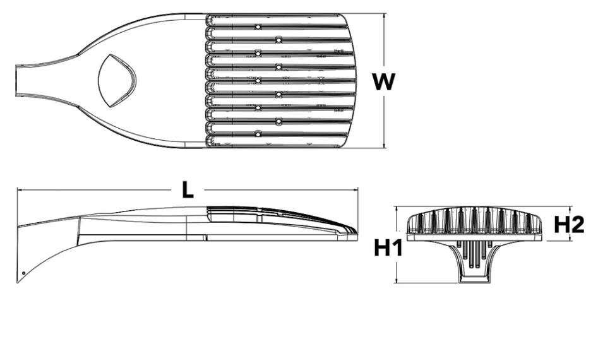
Notes

Type

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

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction
The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

A+ Capable options indicated by this color background.

Ordering Information
EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4 P7 / P2 P5 P8 / P3 P6 P9 **Rotated optics** P10[1] P12[1] / P11[1] P13[1]	30K 3000 K / 40K 4000 K / 50K 5000 K	T1S Type I short; T2S Type II short; T2M Type II medium; T3S Type III short; T3M Type III medium; T4M Type IV medium; TFTM Forward throw medium; T5VS Type V very short; T5S Type V short; T5M Type V medium; T5W Type V wide; BLC Backlight control[2]; LCCO Left corner cutoff[2]; RCCO Right corner cutoff[2]	MVOLT[3]; 120[4]; 208[4]; 240[4]; 277[4]; 347[4,5]; 480[4,5]	**Shipped included** SPA Square pole mounting; RPA Round pole mounting; WBA Wall bracket; SPUMBA Square pole universal mounting adaptor[6]; RPUMBA Round pole universal mounting adaptor[6]; **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[7]

Control options		Other options	Finish (required)
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[8]; PIRHN Network, high/low motion/ambient sensor[9]; PER NEMA twist-lock receptacle only (controls ordered separate)[10]; PER5 Five-pin receptacle only (controls ordered separate)[10,11]; PER7 Seven-pin receptacle only (controls ordered separate)[10,11]; DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[12]; DS Dual switching[12,13,14]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[15,16]; PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[15,16]; PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[15,16]; PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[15,16]; FAO Field adjustable output[14]	**Shipped installed** HS House-side shield[17]; SF Single fuse (120, 277, 347V)[4]; DF Double fuse (208, 240, 480V)[4]; L90 Left rotated optics[1]; R90 Right rotated optics[1]; **Shipped separately** BS Bird spikes[18]; EGS External glare shield[18]	DDBXD Dark bronze; DBLXD Black; DNAXD Natural aluminum; DWHXD White; DDBTXD Textured dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white

CONTRACTOR TO CONFIRM

PROPOSED SPECIFICATION FOR LIGHT FIXTURE 'A'
1

D-Series Size 1
LED Area Luminaire

Catalog Number

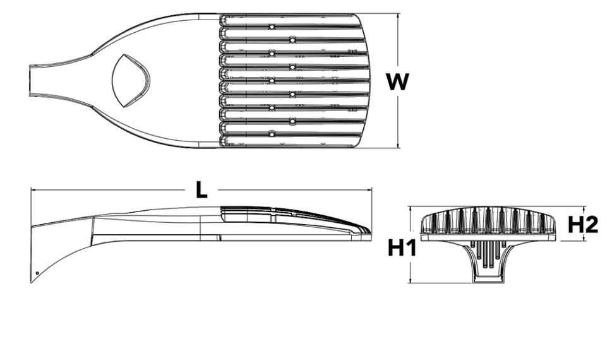
Notes

Type

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

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction
The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

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A+ Capable options indicated by this color background.

Ordering Information
EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4 P7 / P2 P5 P8 / P3 P6 P9 **Rotated optics** P10[1] P12[1] / P11[1] P13[1]	30K 3000 K / 40K 4000 K / 50K 5000 K	T1S Type I short; T2S Type II short; T2M Type II medium; T3S Type III short; T3M Type III medium; T4M Type IV medium; TFTM Forward throw medium; T5VS Type V very short; T5S Type V short; T5M Type V medium; T5W Type V wide; BLC Backlight control[2]; LCCO Left corner cutoff[2]; RCCO Right corner cutoff[2]	MVOLT[3]; 120[4]; 208[4]; 240[4]; 277[4]; 347[4,5]; 480[4,5]	**Shipped included** SPA Square pole mounting; RPA Round pole mounting; WBA Wall bracket; SPUMBA Square pole universal mounting adaptor[6]; RPUMBA Round pole universal mounting adaptor[6]; **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[7]

Control options		Other options	Finish (required)
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[8]; PIRHN Network, high/low motion/ambient sensor[9]; PER NEMA twist-lock receptacle only (controls ordered separate)[10]; PER5 Five-pin receptacle only (controls ordered separate)[10,11]; PER7 Seven-pin receptacle only (controls ordered separate)[10,11]; DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[12]; DS Dual switching[12,13,14]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[15,16]; PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[15,16]; PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[15,16]; PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[15,16]; FAO Field adjustable output[14]	**Shipped installed** HS House-side shield[17]; SF Single fuse (120, 277, 347V)[4]; DF Double fuse (208, 240, 480V)[4]; L90 Left rotated optics[1]; R90 Right rotated optics[1]; **Shipped separately** BS Bird spikes[18]; EGS External glare shield[18]	DDBXD Dark bronze; DBLXD Black; DNAXD Natural aluminum; DWHXD White; DDBTXD Textured dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white

CONTRACTOR TO CONFIRM

PROPOSED SPECIFICATION FOR LIGHT FIXTURE 'B'
2

D-Series Size 1
LED Area Luminaire

Catalog Number

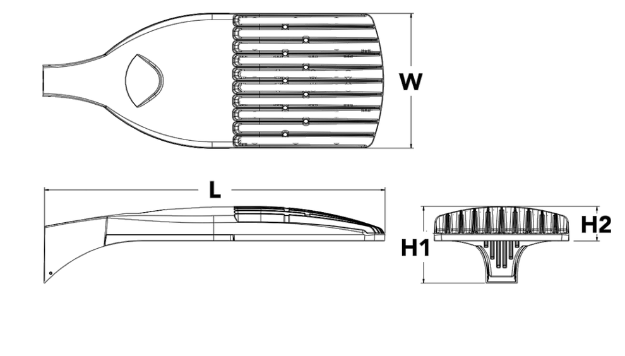
Notes

Type

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

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction
The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

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A+ Capable options indicated by this color background.

Ordering Information
EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4 P7 / P2 P5 P8 / P3 P6 P9 **Rotated optics** P10[1] P12[1] / P11[1] P13[1]	30K 3000 K / 40K 4000 K / 50K 5000 K	T1S Type I short; T2S Type II short; T2M Type II medium; T3S Type III short; T3M Type III medium; T4M Type IV medium; TFTM Forward throw medium; T5VS Type V very short; T5S Type V short; T5M Type V medium; T5W Type V wide; BLC Backlight control[2]; LCCO Left corner cutoff[2]; RCCO Right corner cutoff[2]	MVOLT[3]; 120[4]; 208[4]; 240[4]; 277[4]; 347[4,5]; 480[4,5]	**Shipped included** SPA Square pole mounting; RPA Round pole mounting; WBA Wall bracket; SPUMBA Square pole universal mounting adaptor[6]; RPUMBA Round pole universal mounting adaptor[6]; **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[7]

Control options		Other options	Finish (required)
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[8]; PIRHN Network, high/low motion/ambient sensor[9]; PER NEMA twist-lock receptacle only (controls ordered separate)[10]; PER5 Five-pin receptacle only (controls ordered separate)[10,11]; PER7 Seven-pin receptacle only (controls ordered separate)[10,11]; DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[12]; DS Dual switching[12,13,14]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[15,16]; PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[15,16]; PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[15,16]; PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[15,16]; FAO Field adjustable output[14]	**Shipped installed** HS House-side shield[17]; SF Single fuse (120, 277, 347V)[4]; DF Double fuse (208, 240, 480V)[4]; L90 Left rotated optics[1]; R90 Right rotated optics[1]; **Shipped separately** BS Bird spikes[18]; EGS External glare shield[18]	DDBXD Dark bronze; DBLXD Black; DNAXD Natural aluminum; DWHXD White; DDBTXD Textured dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white

CONTRACTOR TO CONFIRM

PROPOSED SPECIFICATION FOR LIGHT FIXTURE 'C'
3

WST LED
Architectural Wall Sconce

Catalog Number

Notes

Type

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

A+ Capable options indicated by this color background.

Ordering Information
EXAMPLE: WST LED P1 40K VF MVOLT DDBTXD

WST LED

Series	Performance Package	Color temperature	Distribution	Voltage	Mounting
WST LED	P1 1,500 Lumen package; P2 3,000 Lumen package; P3 6,000 Lumen package	27K 2700 K; 30K 3000 K; 40K 4000 K; 50K 5000 K	VF Visual comfort forward throw; VW Visual comfort wide	MVOLT[1]; 120[2]; 208[2]; 240[2]; 277[2]; 347[2]; 480[2]	**Shipped included** (blank) Surface mounting bracket; **Shipped separately** BBW Surface-mounted back box[3]; PBBW Premium surface-mounted back box[3,4]

Options		Finish (required)
NLTAIR2 PIR nLIGHT AIR Wireless enabled motion/ambient sensor for 8'-15' mounting heights[5,6]; NLTAIR2 PIRH nLIGHT AIR Wireless enabled motion/ambient sensor for 15'-30' mounting heights[5,6]; PE Photoelectric cell, button type[7]; PER NEMA twist-lock receptacle only (controls ordered separate)[8]; PER5 Five-wire receptacle only (controls ordered separate)[8]; PER7 Seven-wire receptacle only (controls ordered separate)[8]; PIR Motion/Ambient Light Sensor, 8-15' mounting height[7,8]; PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[5,6]; PIRH 180° motion/ambient light sensor, 15-30' mounting height[5,6]; PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[5,6]; SF Single fuse (120, 277, 347V)[2]; DF Double fuse (208, 240, 480V)[2]; DS Dual switching[9]; E7WH Emergency battery backup, Non CEC compliant (7W)[10]	E7WC Emergency battery backup, CA Title 20 Noncompliant (cold, 7W)[10,11]; E7WHR Remote emergency battery backup, CA Title 20 Noncompliant (remote 7W)[10,12]; E20WH Emergency battery pack 18W constant power, Certified in CA Title 20 MAEDBS[10]; E20WC Emergency battery pack -20°C 18W constant power, Certified in CA Title 20 MAEDBS[10,11]; E23WHR Remote emergency battery backup, CA Title 20 Noncompliant (remote 20W)[10,11,13]; LCE Left side conduit entry[14]; RCE Right side conduit entry[14]; **Shipped separately** RBPW Retrofit back plate[3]; VG Vandal guard[15]; WG Wire guard[15]	DDBXD Dark bronze; DBLXD Black; DNAXD Natural aluminum; DWHXD White; DSSXD Sandstone; DDBTXD Textured dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white; DSSTXD Textured sandstone

CONTRACTOR TO CONFIRM

Accessories

Ordered and shipped separately.

WSTVCPBBW DDBXD U	Premium Surface - mounted back box
WSBBW DDBTX U	Surface - mounted back box
RBPW DDBXD U	Retrofit back plate

NOTES
1 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
2 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
3 Also available as a separate accessory; see accessories information.
4 Top conduit entry standard.
5 Not available with VG or WG. See PER Table.
6 Reference Motion Sensor table.
7 Need to specify 120, 208, 240 or 277 voltage.
8 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. Shorting Cap included.
9 Not available with Emergency options, PE or PER options.
10 Not available with 347/480V.
11 Battery pack rated for -20° to 40°C.
12 Comes with PBBW.
13 Warranty period is 3-years.
14 Not available with BBW.
15 Must order with fixture; not an accessory.

PROPOSED SPECIFICATION FOR LIGHT FIXTURE 'D'
4

WST LED
Architectural Wall Sconce

Catalog Number

Notes

Type

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

A+ Capable options indicated by this color background.

Ordering Information
EXAMPLE: WST LED P1 40K VF MVOLT DDBTXD

WST LED

Series	Performance Package	Color temperature	Distribution	Voltage	Mounting
WST LED	P1 1,500 Lumen package; P2 3,000 Lumen package; P3 6,000 Lumen package	27K 2700 K; 30K 3000 K; 40K 4000 K; 50K 5000 K	VF Visual comfort forward throw; VW Visual comfort wide	MVOLT[1]; 120[2]; 208[2]; 240[2]; 277[2]; 347[2]; 480[2]	**Shipped included** (blank) Surface mounting bracket; **Shipped separately** BBW Surface-mounted back box[3]; PBBW Premium surface-mounted back box[3,4]

Options		Finish (required)
NLTAIR2 PIR nLIGHT AIR Wireless enabled motion/ambient sensor for 8'-15' mounting heights[5,6]; NLTAIR2 PIRH nLIGHT AIR Wireless enabled motion/ambient sensor for 15'-30' mounting heights[5,6]; PE Photoelectric cell, button type[7]; PER NEMA twist-lock receptacle only (controls ordered separate)[8]; PER5 Five-wire receptacle only (controls ordered separate)[8]; PER7 Seven-wire receptacle only (controls ordered separate)[8]; PIR Motion/Ambient Light Sensor, 8-15' mounting height[7,8]; PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[5,6]; PIRH 180° motion/ambient light sensor, 15-30' mounting height[5,6]; PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[5,6]; SF Single fuse (120, 277, 347V)[2]; DF Double fuse (208, 240, 480V)[2]; DS Dual switching[9]; E7WH Emergency battery backup, Non CEC compliant (7W)[10]	E7WC Emergency battery backup, CA Title 20 Noncompliant (cold, 7W)[10,11]; E7WHR Remote emergency battery backup, CA Title 20 Noncompliant (remote 7W)[10,12]; E20WH Emergency battery pack 18W constant power, Certified in CA Title 20 MAEDBS[10]; E20WC Emergency battery pack -20°C 18W constant power, Certified in CA Title 20 MAEDBS[10,11]; E23WHR Remote emergency battery backup, CA Title 20 Noncompliant (remote 20W)[10,11,13]; LCE Left side conduit entry[14]; RCE Right side conduit entry[14]; **Shipped separately** RBPW Retrofit back plate[3]; VG Vandal guard[15]; WG Wire guard[15]	DDBXD Dark bronze; DBLXD Black; DNAXD Natural aluminum; DWHXD White; DSSXD Sandstone; DDBTXD Textured dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white; DSSTXD Textured sandstone

CONTRACTOR TO CONFIRM

Accessories

Ordered and shipped separately.

WSTVCPBBW DDBXD U	Premium Surface - mounted back box
WSBBW DDBTX U	Surface - mounted back box
RBPW DDBXD U	Retrofit back plate

NOTES
1 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
2 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
3 Also available as a separate accessory; see accessories information.
4 Top conduit entry standard.
5 Not available with VG or WG. See PER Table.
6 Reference Motion Sensor table.
7 Need to specify 120, 208, 240 or 277 voltage.
8 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. Shorting Cap included.
9 Not available with Emergency options, PE or PER options.
10 Not available with 347/480V.
11 Battery pack rated for -20° to 40°C.
12 Comes with PBBW.
13 Warranty period is 3-years.
14 Not available with BBW.
15 Must order with fixture; not an accessory.

PROPOSED SPECIFICATION FOR LIGHT FIXTURE 'E'
5

KACM LED
LED Surface Luminaire

Catalog Number

Notes

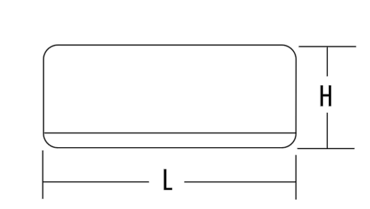
Type

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

CONTOUR

Specifications

Length:	17-1/2" (44.5 cm)
Width:	17-1/2" (44.5 cm)
Height:	7-1/8" (18.1 cm)
Weight (max):	36 lbs. (16.4 kg)



Introduction
The Contour® Series luminaires offer traditional square dayforms with softened edges for a versatile look that complements many applications.

The KACM LED combines the latest in LED technology with the familiar aesthetic of the Contour® Series for stylish, high-performance illumination that lasts. It is ideal for replacing 100-400W metal halide in surface/canopy lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information
EXAMPLE: KACM LED 60C 700 50K R5 MVOLT SRM DDBXD

KACM LED

Series	LEDs	Drive current	Color Temp[1]	Distribution	Voltage	Mounting
KACM LED	20C[1]; 30C[1]; 40C; 60C	530[1] 530 mA; 700 700 mA	30K 3000K; 40K 4000K; 50K 5000K	R2 Type II; R3 Type III; R4 Type IV; R5 Type V; R5VS Type V very short	MVOLT[2,3]; 120[2,3]; 208[2,3]; 240[2,3]; 277[2]; 347[1,3]; 480[1,3]	**Shipped installed** SRM Surface mount; TC Through-wire condulet tee (Provided by others); **Shipped separately[4]** YK Yoke/trunnion mount

Options			Finish (required)
Shipped installed SF Single fuse (120, 277, 347V)[2]; DF Double fuse (208, 240, 480V)[2]; PIR Ambient/motion sensor, 8-15' mounting height[3,5,6]; PIRH Ambient/motionsensor, 15-30' mounting height[3,5,6]; PIR3FC3V Motion/ambient sensor for 8-15' mounting heights and for typical applications requiring daylight harvesting and Title 24 compliance[3,5,6,7]; PIRH3FC3V Motion/ambient sensor for 15-30' mounting heights and typical applications requiring daylight harvesting and Title 24 compliance[3,5,6,7]	BL30 Bi-level switched dimming, 30%[3,8,9,10]; BL50 Bi-level switched dimming, 50%[3,8,9,10]; HS Houseside shield	**Shipped separately[4]** WG Wire guard	DDBXD Dark bronze; DBLXD Black; DNAXD Natural aluminum; DWHXD White; DDBTXD Textured dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white

CONTRACTOR TO CONFIRM

Accessories

Ordered and shipped separately.

KACMYK DDBXD U	Yoke/trunnion accessory (specify finish)
KACWG U	Wire guard accessory

NOTES
1 20C or 30C LED are not available with 530 Drive current and 347V or 480V.
2 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
3 Any PIRx with BL30, BL50 or PNMT, is not available with 208V, 240V, 347V, 480V or MVOLT. It is only available in 120V or 277V specified.
4 Also available as a separate accessory; see Accessories information at left.
5 PIR & PIR3FC3V specifies the Acuity Controls SBGR 10 ODP motion/ambient sensor, the PIRH & PIRH3FC3V specifies the Acuity Controls SBGR 6 ODP motion/ambient sensor.
6 Reference Motion Sensor table.
7 PIR3FC3V and PIRH3FC3V are not available with bi-level, PN, or DCR. They all use the "DCM" module which requires the low voltage OEX motion sensor that only senses motion.
8 Requires an additional switched circuit.
9 Dimming driver standard. MVOLT only.
10 Not available with PIR3FC3V and PIRH3FC3V.

PROPOSED SPECIFICATION FOR LIGHT FIXTURE 'F'
6

ISSUE	DATE	BY	DESCRIPTION
5	10-28-2019	KML	REVISIONS PER 3RD PLANNING REVIEW COMMENTS
4	10-11-2019	KML	REVISIONS PER 2ND PLANNING REVIEW COMMENTS
3	08-22-2019	ADG	REVISIONS PER PLANNING REVIEW COMMENTS
2	08-08-2019	ADG	REVISIONS PER PLANNING REVIEW COMMENTS
1	05-30-2019	ADG	SUBMISSION FOR SITE PLAN APPROVAL

NOT APPROVED FOR CONSTRUCTION

STONEFIELD
engineering & design
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Princeton, NJ · Tampa, FL · Rutherford, NJ
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607 Shelby Suite 200, Detroit, MI 48226
Phone 248.247.1115

SITE PLAN FOR CITY COUNCIL APPROVAL

MICHIGAN SCHOOLS & GOVERNMENT CREDIT UNION

PROPOSED CREDIT UNION WITH DRIVE-THRU FACILITIES

PARCEL ID: 09-09-30-318-028
2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

STATE OF MICHIGAN · JAKE MODESTOW · ENGINEER · 6201065336 · LICENSED PROFESSIONAL ENGINEER
MICHIGAN LICENSE No.6201065336
LICENSED PROFESSIONAL ENGINEER

STONEFIELD
engineering & design

SCALE: AS SHOWN | PROJECT ID: M-19060

CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: CONSTRUCTION DETAILS

DRAWING: C-13

GENERAL TREE PLANTING NOTES:

1. FOR CONTAINER GROWN TREES USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL, THEN CUT OR PULL APART ANY ROOT CIRCLING THE PERIMETER OF THE CONTAINER.
2. INCORPORATE COMMERCIALLY PREPARED MYCORRHIZAE SPORES AND FERTILIZER TABLETS IN THE SOIL IMMEDIATELY AROUND THE ROOT BALL AT RATE SPECIFIED BY THE MANUFACTURER.
3. THOROUGHLY SOAK THE ROOT BALL AND THE ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO GROWING SEASONS. WHEN IRRIGATION IS NOT PROVIDED SPECIFICALLY FOR THE TREE, IT IS RECOMMENDED THAT GATOR BAGS ARE USED TO HELP FACILITATE THE PROPER AMOUNT AND RATE OF WATER ARE ACHIEVED. GATOR BAGS SHALL BE INSTALLED AT THE BEGINNING OF EACH GROWING SEASON AND REMOVED EACH FALL. THIS WILL ALLOW FOR THE AREA BENEATH THE GATOR BAG TO DRY OUT REDUCING THE GROWTH OF FUNGUS AND REMOVE POSSIBLE HIDING SPOTS FOR RODENTS. THE GATOR BAGS WILL BE REMOVED AT THE END OF THE SECOND GROWING SEASON UNLESS OTHERWISE ADVISED.
4. PRIOR TO DIGGING HOLE, REMOVE ALL EXCESS SOIL FROM ROOT FLARE TO DETERMINE DEPTH OF HOLE. REFER TO THE ROOT FLARE DETAIL.
5. WHEN PLANTING IN WINTER OR ON WINDY SITES APPLY ANTI-DESSICANT AS PER MANUFACTURER'S SPECIFICATIONS.

PLANT MATERIAL SELECTION AND HANDLING NOTES:

1. PLANTS WITH UNDERSIZED OR BROKEN ROOT BALLS, EXCESSIVE CURLING AND/OR GIRDLING OF ROOTS, INJURY FROM ROUGH TREATMENT, OR DROUGHT STRESS WILL BE REJECTED.
2. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO GUARANTEE THAT THE ROOT BALLS ARE PROPERLY SIZED. PLEASE BE AWARE THAT FOR PROPER SIZING, UNSUITABLE SOIL MATERIAL SHALL BE REMOVED PRIOR TO DIGGING. REFER TO THE TREE ROOT FLARE DETAIL.
3. ROOT BALLS SHALL BE KEPT MOIST AT ALL TIMES.
4. PLANTS SHALL BE COVERED DURING TRANSPORT TO PREVENT EXCESSIVE DRYING FROM WIND. IN WARM WEATHER PLANTS SHALL BE COVERED JUST PRIOR TO TRAVEL AND UNCOVERED IMMEDIATELY UPON REACHING DESTINATION TO AVOID HEAT BUILD UP UNDER THE TARP. PLANT MATERIAL SHALL NOT BE LEFT IN DIRECT SUNLIGHT OR ON HIGH HEAT ABSORPTION MATERIALS, SUCH AS BUT NOT LIMITED TO, ASPHALT AND/ OR METAL TRUCK BEDS TO PREVENT THE WILTING OF MATERIAL.
5. TREES SHALL BE MOVED BY THEIR ROOT BALL NOT THEIR TRUNK. TREES LARGER THAN 6" SHALL BE MOVED WITH PROPER STRAPPING SECURING ROOT BALL TO EQUIPMENT. WEAVE STRAPPING THROUGH THE LACING, NOT AROUND THE TRUNK. TREE TRUNK SHALL BE PROTECTED AT ALL TIME FROM COMPRESSION AND SEARING.
6. IF PLANTS ARE NOT PLANTED IMMEDIATELY ON SITE, PROPER CARE SHALL BE TAKEN:
   a. PLACE IN PARTIAL SHADE WHEN POSSIBLE.
   b. COVER ROOT BALL WITH MOISTENED MULCH OR AGED WOODCHIPS.
   c. SUPPLY PROPER IRRIGATION AS NOT TO ALLOW THE ROOT BALL TO DRY OUT.
   d. UNTIE PLANT MATERIAL AND ALLOW PROPER SPACING OF PLANTS FOR AIR CIRCULATION TO PREVENT DISEASE, WILTING, LEAF LOSS AND GENERAL HEATH OF PLANTS.

BARE ROOT TREE PLANTING NOTES:

1. SUBMERGE ROOTS IN ROOT DIP GEL- BARE ROOT PLANTING AID WITH MYCORRHIZEA OR APPROVED EQUAL.

   MIXING DIRECTIONS:
   a. EMPTY THE CONTENTS OF THIS PACKAGE IN FOUR GALLONS OF WATER.
   b. LET MIX STAND FOR TEN MINUTES, STIRRING OCCASIONALLY. THE PRODUCT WILL FORM A SLURRY OR THICK MIXTURE, SO THE ACTIVE INGREDIENTS WILL ADHERE TO THE ROOTS.
   c. DIP EACH PLANT FOR ABOUT 5 SECONDS. PLANT IMMEDIATELY. THERE IS NO HARM IN LEAVING THE PLANT IN THE MIX, FOUR GALLONS OF MIX WILL TREAT 100-500 PLANTS. THE NUMBER OF PLANTS DEPENDS ON ROOT MASS AND HOW MUCH OF THE MIXTURE THE ROOTS OF YOUR PLANTS ABSORB. THE ENDO AND ECTOMYCORRHIZA WILL BE USEFUL ON ALMOST ALL PLANTS. THE MAJOR EXCEPTIONS ARE RHODODENDRONS AND AZALEAS BUT THE ROOTS2® BIOSTIMULANT AND THE WATER HOLDING GEL WILL STILL BE BENEFICIAL.
2. CUT OFF ALL BROKEN ROOTS.
3. MAKE FRESH CUTS AT ENDS OF ROOTS.
4. DIG PLANT HOLES AT LEAST 3 X THE WIDTH AND DEPTH OF THE ROOT MASS.
5. PLANT ROOT FLARE AT GRADE OR GRAFT JUST ABOVE GRADE.
6. BACK FILL ALL HOLES WITH PLANTING MIX APPROVED BY THE ENGINEER.

PLANT MATERIAL GUARANTEE NOTES:

1. LANDSCAPE CONTRACTOR SHALL SUPPLY A TWO YEAR PLANT MATERIAL GUARANTEE.
2. CONTRACTOR SHALL NOT BE RESPONSIBLE FOR THE PLANTINGS IF OWNER FAILS TO PROVIDE PROPER CARE AND WATERING AS INSTRUCTED BY THE LANDSCAPE CONTRACTOR DURING GUARANTEE PERIOD.
3. CONTRACTOR SHALL INSTRUCT OWNER AS TO PROPER CARE OF MATERIAL.
4. THE LANDSCAPE PLAN DRAWING SET SHALL BE CONSIDERED AN INTEGRAL PART OF THE SITE PLAN APPROVAL AND SHALL BE MAINTAINED IN PERPETUITY.

SOIL PREPARATION NOTES:

1. THE QUALITY OF SOIL AVAILABLE FOR PLANTING VARIES WIDELY FROM SITE TO SITE, ESPECIALLY AFTER CONSTRUCTION ACTIVITY HAS OCCURRED. THE NATURE OF CONSTRUCTION RESULTS IN COMPACTION, FILLING, CONTAMINATION, AND GRADING OF THE ORIGINAL SOIL ON A SITE, RAPIDLY MAKING IT USELESS FOR PLANTING. PREVIOUS HUMAN ACTIVITY AT A SITE CAN ALSO AFFECT THE ABILITY OF THE SOIL TO SUPPORT PLANTS.
2. WHENEVER POSSIBLE THE SOIL IMPROVEMENT AREA SHOULD BE CONNECTED FROM TREE TO TREE.
3. ALWAYS TEST SOIL FOR PH, NUTRIENT LEVELS, AND TEXTURAL CLASS AND ADJUST THESE AS REQUIRED. SUBMIT TEST RESULTS TO THE ENGINEER PRIOR TO PLANTING ALONG WITH SOIL IMPROVEMENT SUGGESTIONS. SOIL TESTS CAN BE ACQUIRED FROM YOUR LOCAL COUNTY AGRICULTURAL EXTENSION OR AT RUTGERS COOPERATIVE EXTENSION 732-932-9295.
4. LOOSEN SOIL WITH A BACK HOE OR OTHER LARGE COARSE-TILING EQUIPMENT WHEN POSSIBLE, THIS SHOULD NOT BE PERFORMED WHEN SOIL IS FROZEN OR EXCESSIVELY WET. TILING THAT PRODUCES LARGE, COARSE CHUNKS OF SOIL IS PREFERABLE TO TILING THAT RESULTS IN FINE GRAINS UNIFORM IN TEXTURE. AFTER AREA IS LOOSEN IT SHALL NOT BE DRIVEN BY ANY VEHICLE.
5. ANY OVER BY APPLY PRE-EMERGENT WEED CONTROL TO ALL PLANT BEDS PRIOR TO MULCHING. ENSURE COMPATIBILITY BETWEEN PRODUCT AND PLANT MATERIAL.
6. PLANT BED/TREE PIT DRAINAGE: LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SURFACE AND SUBSURFACE PLANT BED DRAINAGE PRIOR TO INSTALLATION OF PLANTS. IF POOR DRAINAGE CONDITIONS EXIST, CORRECTIVE ACTION SHALL BE TAKEN PRIOR TO PLANTING.
7. ALL PLANTING SOIL SHALL BE AMENDED WITH THE FOLLOWING:

   a. MYCRO® TREE SAVER - IS A DRY GRANULAR MYCORRHIZAL FUNGI INOCULANT THAT IS MIXED IN THE BACKFILL WHEN PLANTING TREES AND SHRUBS. IT CONTAINS SPORES OF BOTH ECTOMYCORRHIZAL AND VA MYCORRHIZAL FUNGI (VAM), BENEFICIAL RHIZOSPHERE BACTERIA, TERRA-SORB SUPERABSORBENT HYDROGEL TO REDUCE WATER LEACHING, AND SELECTED ORGANIC MICROBIAL NUTRIENTS.
   DIRECTIONS FOR USE: USE 3-OZ PER EACH FOOT DIAMETER OF THE ROOT BALL, OR 3-OZ PER INCH CALIPER. MIX INTO THE BACKFILL WHEN RANSPLANTING TREES AND SHRUBS. MIX PRODUCT IN A RING-SHAPED VOLUME OF SOIL AROUND THE UPPER PORTION OF THE ROOT BALL, EXTENDING FROM THE SOIL SURFACE TO A DEPTH OF ABOUT 8-INCHES (20-CM), AND EXTENDING OUT FROM THE ROOT BALL ABOUT 8-INCHES (20-CM) INTO THE BACKFILL. APPLY WATER TO SOIL SATURATION.
   COMPATIBILITY: SPECIES: MYCOR® TREE SAVER® IS EFFECTIVE FOR ALL TREE AND SHRUB SPECIES EXCEPT RHODODENDRONS, AZALEAS, AND MOUNTAIN LAUREL, WHICH REQUIRE ERICOID MYCORRHIZAE. USE OF TREE SAVER® WITH THESE SPECIES WILL NOT HARM THEM. SOIL PH: THE FUNGI IN THIS PRODUCT WERE CHOSEN BASED ON THEIR ABILITY TO SURVIVE AND COLONIZE PLANT ROOTS IN A PH RANGE OF 3 TO 9.
   FUNGICIDES: THE USE OF CERTAIN FUNGICIDES CAN HAVE A DETRIMENTAL EFFECT ON YOUR INOCULATION PROGRAM. SOIL APPLICATION OF ANY FUNGICIDE IS NOT RECOMMENDED FOR TWO WEEKS AFTER APPLICATION.
   OTHER PESTICIDES: HERBICIDES AND INSECTICIDES DO NOT NORMALLY INTERFERE WITH MYCORRHIZAL FUNGAL DEVELOPMENT, BUT MAY INHIBIT THE GROWTH OF SOME TREE AND SHRUB SPECIES IF NOT USED PROPERLY.

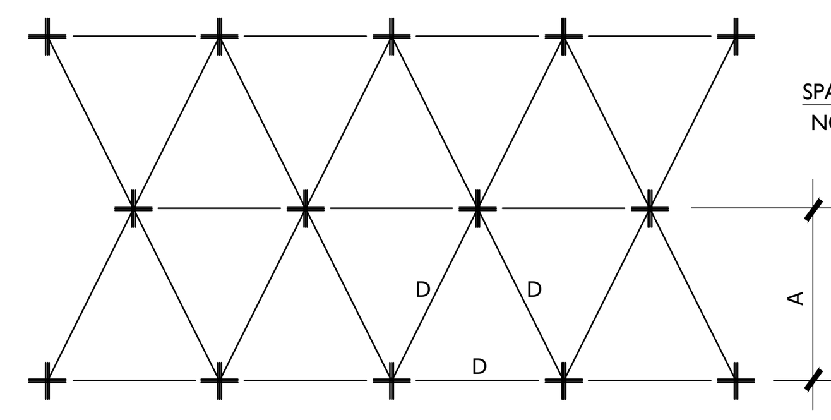
   b. HEALTHY START MACRO TABS 12-8-8
   FERTILIZER TABLETS ARE PLACED IN THE UPPER 4 INCHES OF BACKFILL SOIL WHEN PLANTING TREES AND SHRUBS. TABLETS ARE FORMULATED FOR LONG-TERM RELEASE BY SLOW BIODEGRADATION, AND LAST UP TO 2 YEARS AFTER PLANTING. TABLETS CONTAIN 12-8-8 NPK FERTILIZER, AS WELL AS A MINIMUM OF SEVEN PERCENT (7%) HUMIC ACID BY WEIGHT, MICROBIAL NUTRIENTS DERIVED FROM SEA KELP, PROTEIN BYPRODUCTS, AND YUCCA SCHIDIGERA, AND A COMPLEMENT OF BENEFICIAL RHIZOSPHERE BACTERIA. THE STANDARD 21 GRAM TABLET IS SPECIFIED HERE.
   DIRECTIONS FOR USE: FOR PLANTING BALLED & BURLAPPED (B&B) TREES AND SHRUBS, MEASURE THE THICKNESS OF THE TRUNK, AND USE ABOUT 1 TABLET (21-G) PER HALF-INCH. PLACE THE TABLETS DIRECTLY NEXT TO THE ROOT BALL, EVENLY DISTRIBUTED AROUND ITS PERIMETER, AT A DEPTH OF ABOUT 4 INCHES.
   PROOF OF COMPLIANCE WITH SPECIFICATIONS: THE CONTRACTOR WILL DEMONSTRATE COMPLIANCE BY SHOWING INVOICES TO PROVE PURCHASE OF PRODUCT IN SUFFICIENT QUANTITY TO COVER THE PROJECT AT THE RATES RECOMMENDED BY THE MANUFACTURER. INCLUDE PROJECT NAME, DATE OF PURCHASE OF PRODUCT, AND NAME OF CONTACT.

1

V:\M-19060-STUCKY VITALE-2151 WEST STADIUM BOULEVARD, ANN ARBOR, MI\CADD\PLOT\SDP-11-14-DETL.DWG

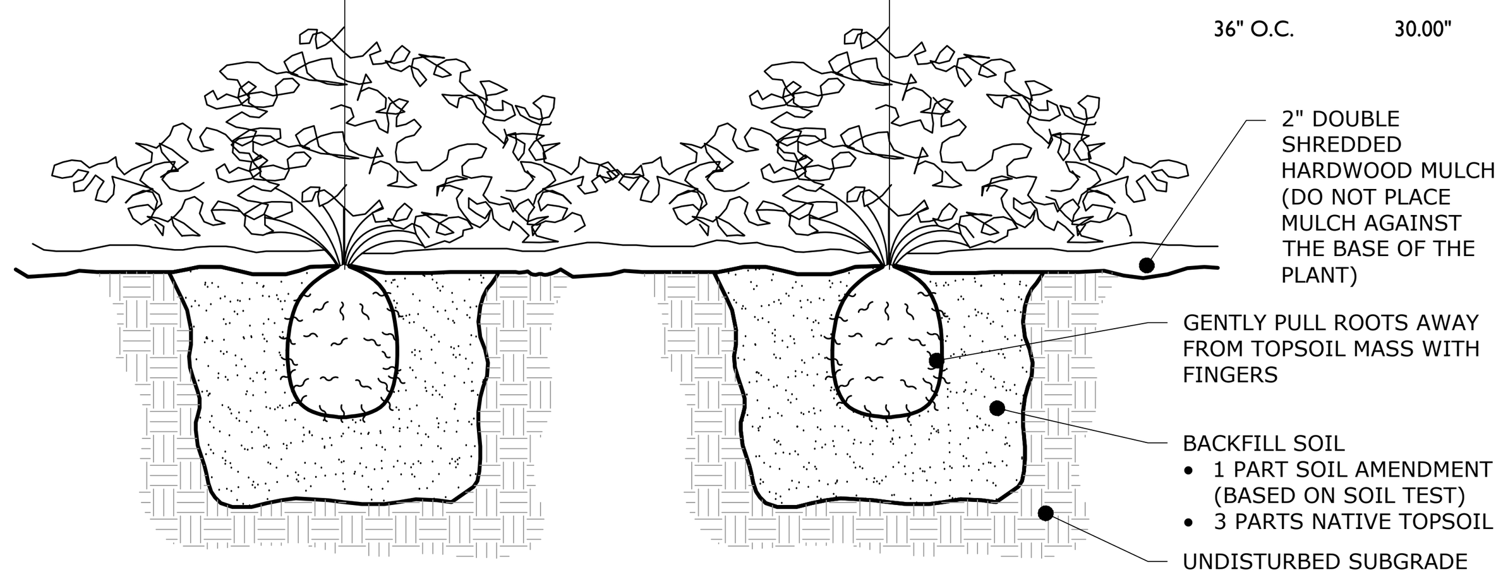
NOTES:

1. THOROUGHLY SOAK THE GROUND COVER ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
2. SOIL AMENDMENTS:
   - MODIFY HEAVY CLAY OR SILT SOILDS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILDS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX
3. ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT PER MANUFACTURER'S SPECIFICATIONS



SPACING CHART
NOT TO SCALE

SPACING "D"	ROW "A"
6" O.C.	5.20"
8" O.C.	6.93"
10" O.C.	8.66"
12" O.C.	10.40"
15" O.C	13.00"
18" O.C.	15.60"
24" O.C.	20.80"
30" O.C.	26.00"
36" O.C.	30.00"



GROUND COVER/PERENNIAL/ANNUAL PLANTING DETAIL

NOT TO SCALE

2

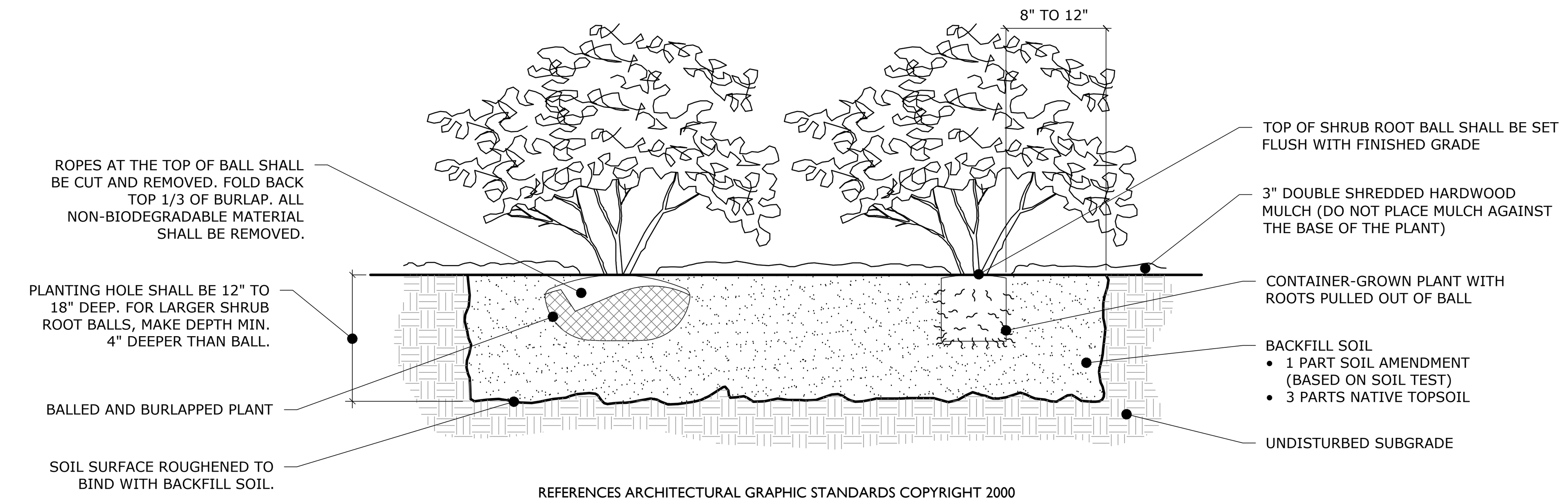
GENERAL SOIL PREPARATION REQUIREMENTS TABLE

SOIL CONDITION	MIN. WIDTH OF PREPARED SOIL (X)	TYPE OF PREPARATION
GOOD SOIL (NOT PREVIOUSLY GRADED OR COMPACTED, TOPSOIL LAYER INTACT)	6 FT. OR TWICE THE WIDTH OF THE ROOT BALL, WHICHEVER IS GREATER.	LOOSEN THE EXISTING SOILS TO THE WIDTHS AND DEPTHS SHOWN ON PLANTING DETAILS.
COMPACTED SOIL (NOT PREVIOUSLY GRADED, TOPSOIL LAYER DISTURBED BUT NOT ELIMINATED)	15 FT.	LOOSEN THE EXISTING SOILS TO THE WIDTHS AND DEPTHS SHOWN ON PLANTING DETAILS; ADD COMPOSTED ORGANIC MATTER TO BRING THE CONTENT UP TO 5% DRY WEIGHT.
GRADED SUBSOILS AND CLEAN FILLS WITH CLAY CONTENT BETWEEN 5 AND 35 %	20 FT.	MINIMUM TREATMENT: LOOSEN EXISTING SOILS TO WIDTHS AND DEPTHS SHOWN, ADD COMPOSTED ORGANIC MATTER TO BRING ORGANIC CONTENT UP TO 5 % DRY WEIGHT. OPTIMUM TREATMENT: REMOVE TOP 8 TO 10 IN. OR THE EXISTING MATERIAL. LOOSEN EXISTING SOILS TO THE WIDTHS AND DEPTHS SHOWN IN THE PLANTING DETAILS, ADD 8 -10 IN. OF LOAM TOPSOIL.
POOR QUALITY FILLS, HEAVY CLAY SOILS, SOILS CONTAMINATED WITH RUBBLE OR TOXIC MATERIAL	20 FT.	REMOVE EXISTING SOILS TO THE WIDTHS AND DEPTHS SHOWN, REPLACE WITH LOAM AND TOPSOIL.

4

NOTES:

1. FOR THE CONTAINER-GROWN SHRUBS, USE FINGERS OR SMALL HAND TOOL TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
2. THOROUGHLY SOAK THE SHRUB ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL

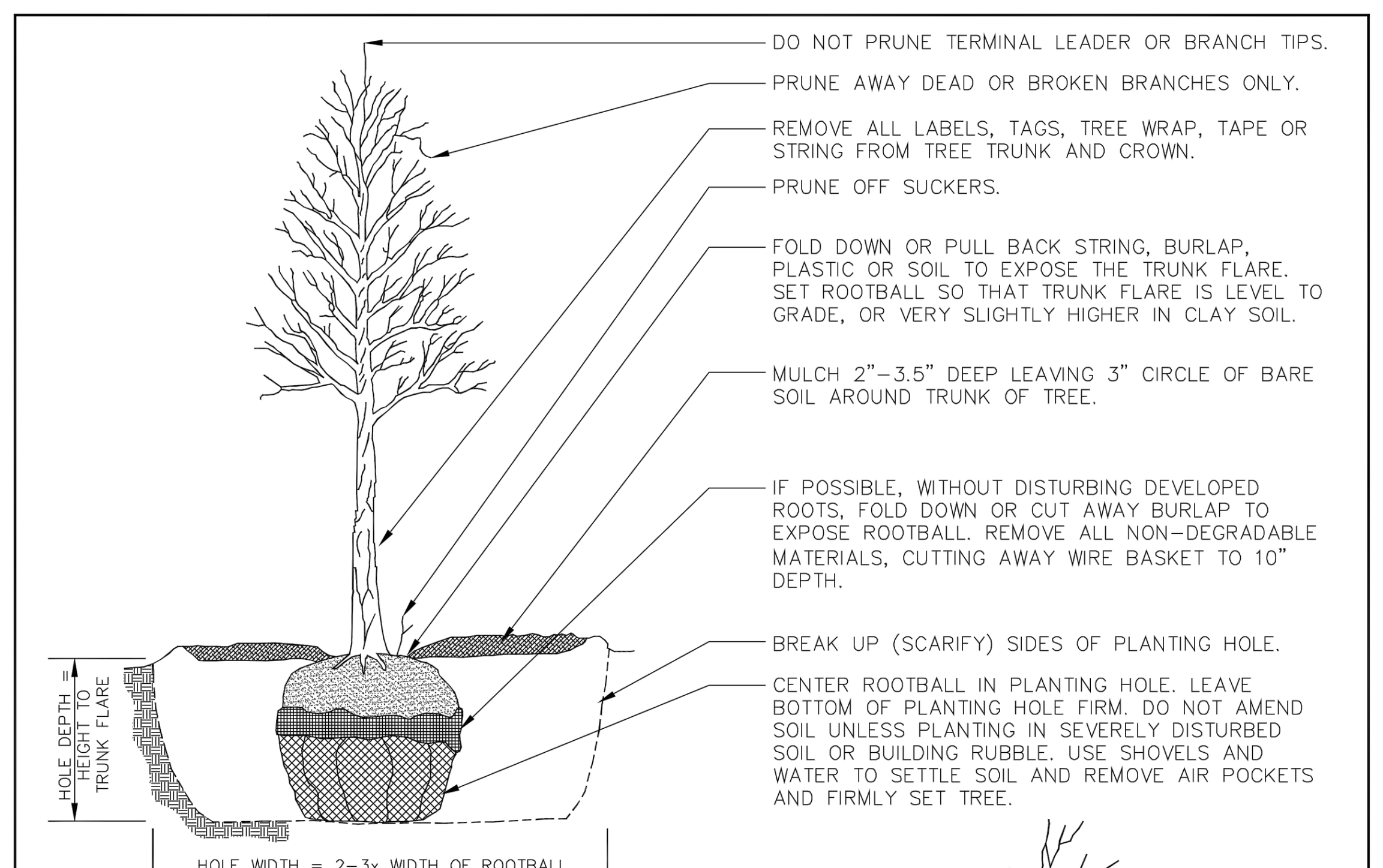


REFERENCES ARCHITECTURAL GRAPHIC STANDARDS COPYRIGHT 2000

DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL

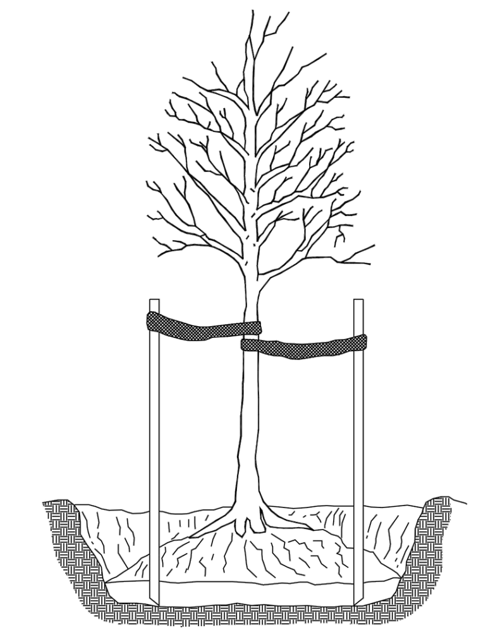
NOT TO SCALE

5



DO NOT STAKE UNLESS IN HEAVY CLAY SOIL, WINDY CONDITIONS, 3" OR GREATER DIAMETER TREE TRUNK OR LARGE CROWN. IF STAKING IS NEEDED DUE TO THESE CONDITIONS:

- STAKE WITH 2 x 2 HARDWOOD STAKES, OR APPROVED EQUAL, DRIVEN 6"–8" OUTSIDE OF ROOTBALL.
- LOOSELY STAKE TREE TRUNK TO ALLOW FOR TRUNK FLEXING.
- STAKE TREES JUST BELOW FIRST BRANCH WITH 2"–3" WIDE BELT–LIKE, NYLON OR PLASTIC STRAPS (2 PER TREE ON OPPOSITE SIDES OF TREE, CONNECT FROM TREE TO STAKE HORIZONTALLY. DO NOT USE ROPE OR WIRE THROUGH A HOSE.)
- REMOVE ALL STAKING MATERIALS AFTER 1 YEAR.



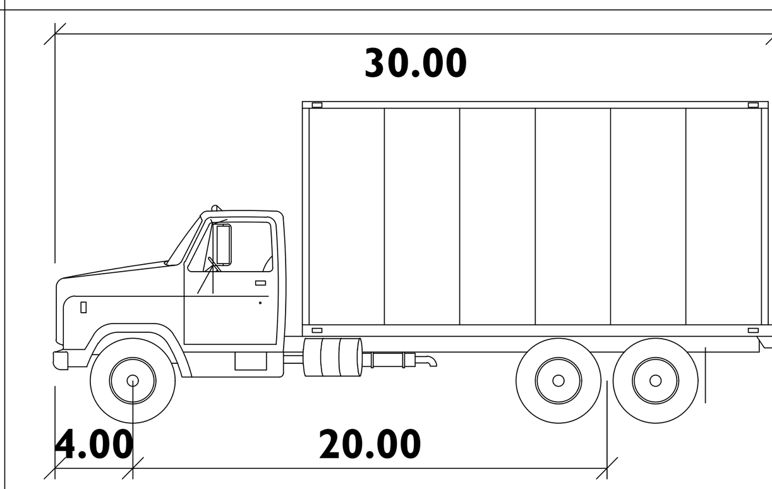
REVISIONS	REV. NO.	DR.BY	CH. BY	DATE

PUBLIC SERVICES DEPARTMENT
CITY OF ANN ARBOR

TREE PLANTING DETAIL

DR. BY	ARG	CH. BY	CSS	DRAWING NO.
SCALE	NONE	DATE	7–23–10	SD–L–3
INCH				SHEET NO. ______ OF ______

3

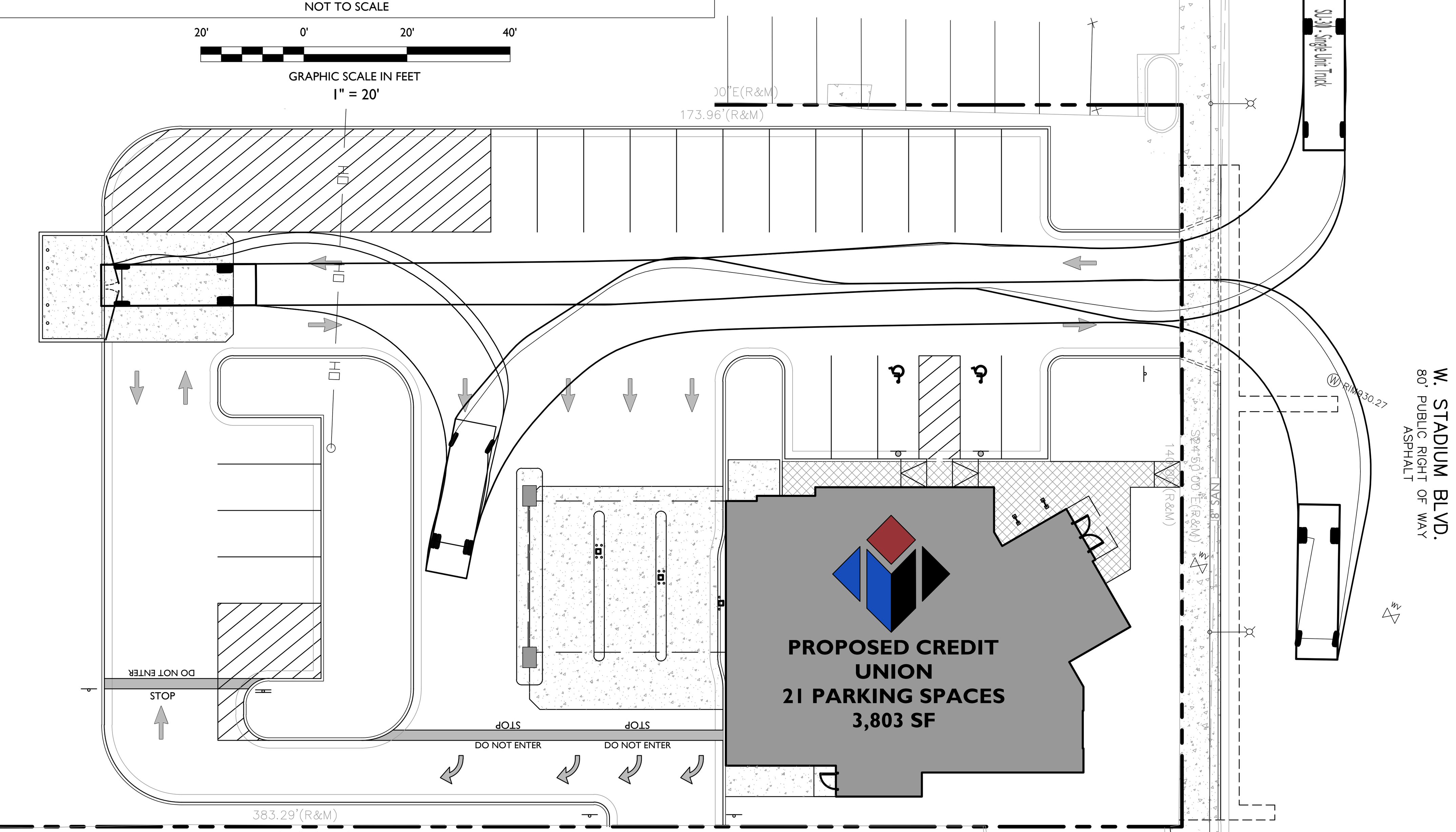


SU-30		feet
Width	:	8.00
Track	:	8.00
Lock to Lock Time	:	6.0
Steering Angle	:	31.8

SU-30 TRUCK TURNING EXHIBIT

NOT TO SCALE

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'



ISSUE	DATE	BY	DESCRIPTION
5	10-28-2019	KML	REVISIONS PER 3RD PLANNING REVIEW COMMENTS
4	10-11-2019	KML	REVISIONS PER 2ND PLANNING REVIEW COMMENTS
3	08-22-2019	ADG	REVISIONS PER PLANNING REVIEW COMMENTS
2	08-08-2019	ADG	REVISIONS PER PLANNING REVIEW COMMENTS
1	05-30-2019	ADG	SUBMISSION FOR SITE PLAN APPROVAL

NOT APPROVED FOR CONSTRUCTION

STONEFIELD
engineering & design
Detroit, MI · New York, NY
Princeton, NJ · Tampa, FL · Rutherford, N
www.stonefieldeng.com
607 Shelby Suite 200, Detroit, MI 48226
Phone 248.247.1115

SITE PLAN FOR CITY COUNCIL APPROVAL

MICHIGAN SCHOOLS & GOVERNMENT CREDIT UNION

PROPOSED CREDIT UNION WITH DRIVE-THRU FACILITIES

PARCEL ID: 09-09-30-318-028
2151 WEST STADIUM BOULEVARD
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

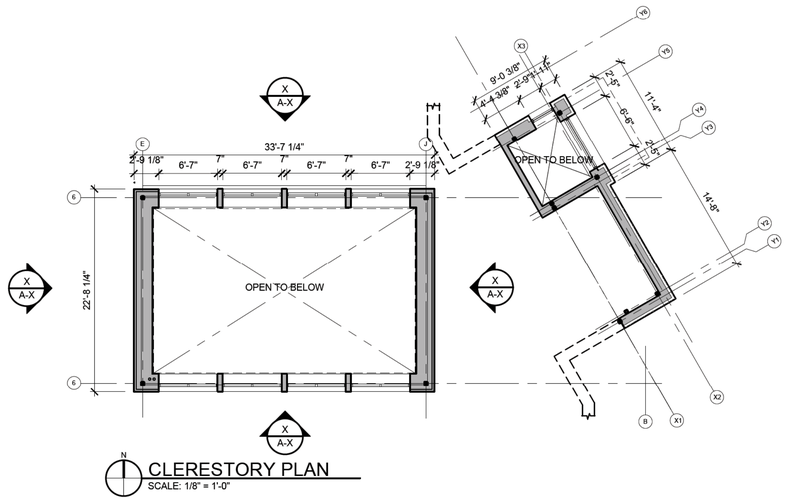
STATE OF MICHIGAN
JAKE MODESTOW
ENGINEER
6201065336
MICHIGAN LICENSE No.6201065336
LICENSED PROFESSIONAL ENGINEER

STONEFIELD
engineering & design

SCALE: AS SHOWN | PROJECT ID: M-19060
CITY OF ANN ARBOR PROJECT NUMBER: SP19-019

TITLE: CONSTRUCTION DETAILS

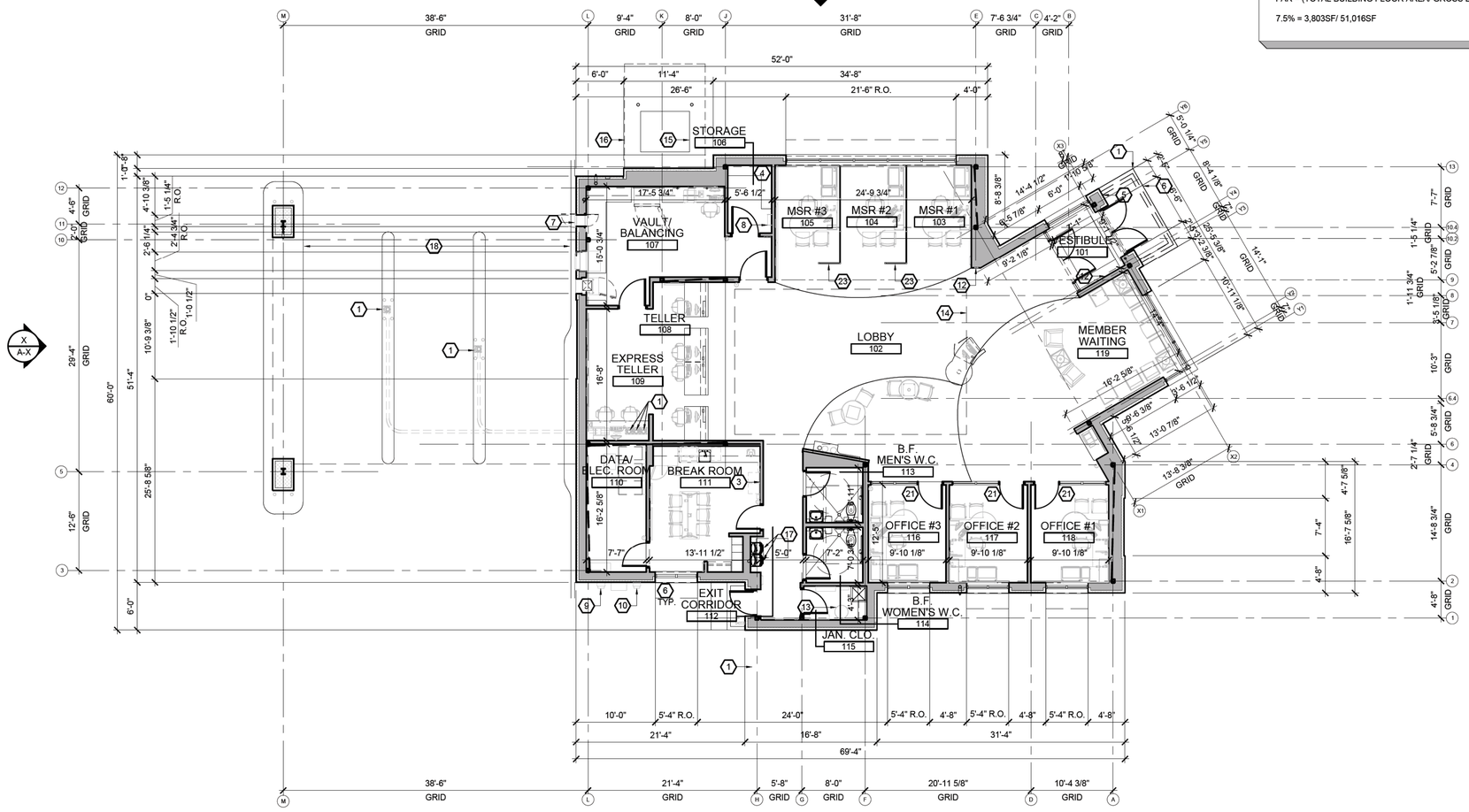
DRAWING: C-14



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

FAR = (TOTAL BUILDING FLOOR AREA/ GROSS LOT AREA)

7.5% = 3,803SF/ 51,016SF



ARCHITECTURAL FLOOR PLAN
SCALE: 1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES:

1. THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE SET OF WORK AS INDICATED AND SHALL FIELD VERIFY ALL WORK, COORDINATE ALL DRAWINGS / NEW WORK AND SHALL NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES.
2. ALL DIMENSIONS ARE SHOWN FROM FINISH FACE TO FINISH FACE OF PARTITION UNLESS OTHERWISE NOTED.
3. WALL THICKNESS' ARE NOMINAL NOT ACTUAL DIMENSIONS. SEE WALL SCHEDULE FOR ACTUAL DIMENSIONS.
4. ALL WOOD, INCLUDING BLOCKING, USED ON THE PROJECT SHALL BE FIRE RETARDANT TREATED.
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE, COUNTY CODE REGULATIONS, O.S.H.A., AND THE AMERICAN WITH DISABILITIES ACT (ADA). REFER TO THE CODE PLAN FOR MORE INFORMATION.
6. PROVIDE POSITIVE SLOPE TO ALL FLOOR DRAINS WHILE KEEPING FLOOR LEVEL AT WALL BASE CONDITION.
7. PROVIDE TRANSITION STRIPS AT EACH CHANGE IN FLOOR FINISH MATERIALS.
8. REINFORCE WALL AND PROVIDE BLOCKING AS REQUIRED TO SUPPORT WALL CABINETS AND COUNTERTOPS.
9. THE CONTRACTOR SHALL PROVIDE AND INSTALL WALL REINFORCING FOR INSTALLATION OF ACCESSORIES, COAT RACKS, CHART RACKS, CASEWORK, AND OTHER WALL MOUNTED ITEMS.
10. ALL EXPOSED PIPES, DUCTS, AND CONDUIT TO BE PAINTED TO MATCH EXISTING.
11. PROVIDE CONTROL JOINTS IN GYPSUM BOARD PARTITIONS AT 30'-0" O.C. MAXIMUM AND AS INDICATED IN THE CONTRACT DOCUMENTS.
12. COORDINATE WITH OWNER'S EQUIPMENT SUPPLIER FOR INSTALLATION REQUIREMENTS / LOCATIONS OF FLOOR / WALL / CEILING MOUNTED ITEMS; IE. CAMERAS, TV'S, SPEAKERS, SENSORS, SECURITY WIRING, VAULTS, ATM'S.
13. CONTRACTOR SHALL CONDUCT A ROUGH ELECTRICAL INSPECTION WITH OWNER, PRIOR TO ENCLOSING WALLS, FOR THE PURPOSE OF CONFIRMING ALL J-BOX LOCATIONS FOR POWER, DATA, VOICE, SWITCH, THERMOSTAT, ETC.
14. CONTRACTOR TO FILL ANY AND ALL EQUIPMENT PENETRATIONS OR DEPRESSIONS INTO OR THROUGH THE EXISTING SLAB THAT WILL NOT BE UTILIZED TO FEED NEW EQUIPMENT (I.E. ABANDONED FLOOR CORES, IMPRESSION FROM PREVIOUS EQUIPMENT FLOOR PLATE REMOVAL). PENETRATIONS SHALL BE FILLED WITH NON-SHRINK GROUT. THE SIDES OF ANY EXISTING OPENINGS SHALL BE MODIFIED/TAPERED SO THAT THEY ARE WIDER AT THE TOP THAN AT THE BOTTOM. FOR LARGE OPENINGS, PROVIDE ONE (1) #5 BAR 2' UP FROM BOTTOM OF HOLE.
15. A TACTILE SIGN STATING 'EXIT' AND COMPLYING WITH ICC-A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN 'AREA OF REFUGE', AN EXTERIOR AREA FOR ASSISTED RESCUE, AN EXIT STAIRWAY, AN EXIT RAMP, AN EXIT PASSAGEWAY, AND THE EXIT DISCHARGE.

FLOOR PLAN KEY NOTES:
(TYPICAL THIS SHEET ONLY)

1. 6'-8" WIDE SUPPORTED CONC. STOOP
2. VACUUM AIR TUBE SYSTEM; COOR UNIT LOCATIONS WITH LAYOUT OF ROOF STRUCTURE.
3. TACK BOARDS
4. PROVIDE FIVE (5) 1-1/2" THICK SHELVES; 18" DEEP W/ WHITE P.LAM FINISH, VERT. K.V. STANDARDS & BRACKETS FL TO CEILING @ 16" O.C. HORIZ.
5. SECURITY KEY BOX - VERIFY WITH FIRE MARSHAL EXACT PRODUCT REQUIRED (MANUF - KNOX BOX).
6. SUNSHADE CANOPY ABOVE WINDOWS ONLY. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
7. ATM DRIVE-UP KIOSK WITH VALANCE AND POINT-TO POINT VAT SYSTEM BY OWNER'S BANK EQUIPMENT VENDOR; CONTRACTOR TO COORDINATE INSTALLATION.
8. STEEL ROOF LADDER.
9. ELECTRICAL METER AND CT CABINET; PAINT TO MATCH MASONRY COLOR.
10. GAS METER; GAS PIPING TO BE RUN IN WALL CAVITY.
11. ELECTRICAL / DATA OUTLETS TO BE CENTERED BETWEEN WINDOWS; COOR W/ FURNITURE.
12. AUTOMATIC DOOR OPERATOR BARRIER FREE PUSH-BUTTON
13. WATER HEATER ON OVERHEAD PLATFORM. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
14. OUTLINE OF CLERESTORY / SOFFIT ABOVE.
15. TRANSFORMER ON CONCRETE PAD; COORDINATE WITH ELECTRICAL TRADES.
16. TRANSFORMER CLEARANCE; COORDINATE WITH ELECTRICAL TRADES.
17. BARRIER FREE COMPLIANT HI / LOW DRINKING FOUNTAIN.
18. REFER TO SITE DRAWINGS FOR ADDITIONAL DRIVE-THRU PAVING REQUIREMENTS.
19. PROVIDE 3/4" PLYWOOD BACKER FOR WALL MOUNTED BINDER BINS. COORDINATE EXACT LOCATIONS WITH FURNITURE LAYOUT.
20. ALL ELECTRICAL/LOW VOLTAGE INSTALLED SERVICE OUTLETS TO BE RUN UNDERGROUND/UNDERFLOOR (SEE ELECTRICAL ENGINEERING DRAWINGS).
21. ½" THICK GLASS IN ANODIZED ALUMINUM FRAMES FOR OFFICE WALLS AS ILLUSTRATED.
22. PROVIDE CUSTOM PL-1 LAMINATE PASS-THRU TRIM (BOTH SIDES AND SOFFIT ABOVE) AT OPENING AS ILLUSTRATED. OVERLAP TRIM 2" ON ALL SIDES TO MATCH DOOR FRAME SIMILAR WIDTH. REFER TO MILLWORK DETAILS FOR FURTHER INFORMATION.
23. PRE-MANUFACTURE DECORATIVE FURNITURE WALL PARTITION SYSTEM. WALL TO HAVE 42" HIGH FABRIC WALL COVERING WITH 15" HIGH GLASS PARTITION BEARING ON WALL. COORDINATE WITH FURNITURE MANUFACTURE.

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Consultants:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :
MICHIGAN SCHOOLS
+ GOVERNMENT CREDIT
UNION - NEW BUILD
2151 W. STADIUM BLVD.
ANN ARBOR, MI

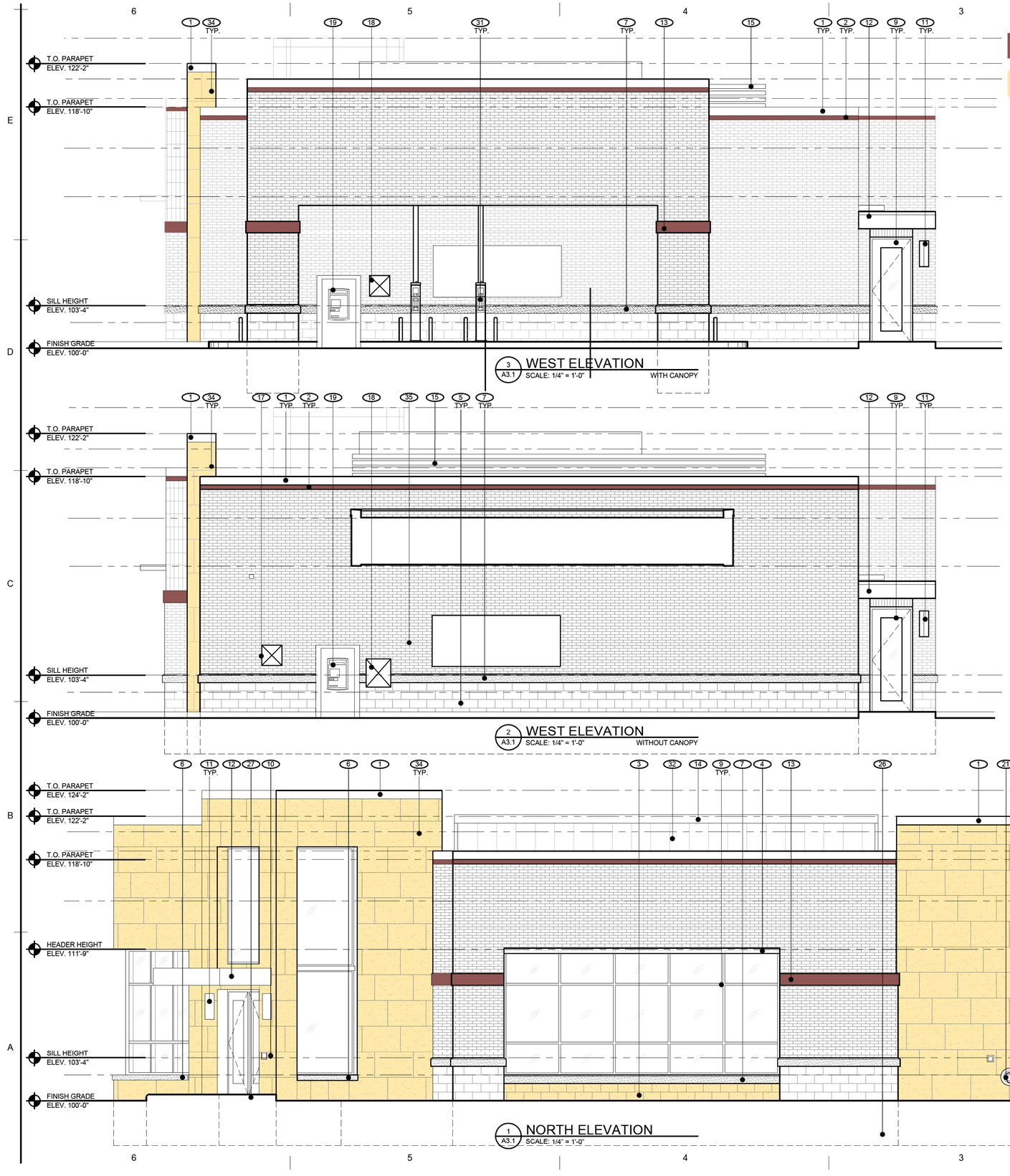
Issued for :
SITE PLAN
APPROVAL 05.30.19
SITE PLAN APPROVAL
REVISIONS 08.15.19
SITE PLAN APPROVAL
REVISIONS 10.11.19
REVISIONS PER 3RD PLAN'G
COMMENTS 10.2819

Drawn by :
RBG
Checked by :
MJB

Sheet Title :
ARCHITECTURAL
FLOOR PLAN

Project No. :
2018.157

Sheet No. :
A1.1



COLOR TO MATCH PMS 209C

READING ROCK CAST STONE WHEATSTONE (SMOOTH) ST2436/ ST015

ELEVATION KEY NOTES:

1. PREFINISHED METAL COPING SYSTEM. COLOR TO BE SILVER METALLIC.
2. PAINTED METAL COPING EXTENDER WITH OFFSET AND A 1/4" DRIP EDGE; COLOR: TO MATCH, PMS 209C
3. CAST STONE VENEER SYSTEM - SMOOTH (CS-1) 8"x16" W/ 1/4" JOINT
4. PRE-FINISHED KAWNEER OUTRIGGER SUNSHADE BLADE SYSTEM. POWDER COAT FINISH TO MATCH BURGANDY PMS 209C
5. CAST STONE VENEER SYSTEM - SPLIT FACE (CS-2) 8"X16" W/ 1/4" JOINT
6. 4" CAST STONE SILL (SL325)
7. 8" CAST STONE SILL (SL 375)
8. CAST STONE WALL CAP
9. STOREFRONT SYSTEM, REFER TO WINDOW TYPES
10. AUTOMATIC ENTRANCE DOOR PUSH-BUTTON
11. WALL SCONCE LIGHT FIXTURE
12. PREFINISHED METAL CLAD CANOPY
13. PAINTED METAL ACCENT BAND. COLOR TO MATCH PMS 209C
14. PREFINISHED FLUSH METAL PANEL SYSTEM
15. PREFINISHED CORRUGATED METAL WALL PANEL ROOF TOP EQUIPMENT SCREEN
16. LANE INDICATOR SIGNS, SEMI-RECESSED
17. PACKAGE RECEIVER M.O.; PAINTED
18. NIGHT DEPOSIT M.O.
19. ATM KIOSK W/ VALANCE; CONTR TO COOR INSTALLATION
20. BULLET-RESISTANT WINDOW BY OTHERS; CONTRACTOR TO COORDINATE INSTALL
21. OVERFLOW ROOF DRAIN SPOUT WITH RODENT SCREEN; PAINT INTERIOR PIPE BLACK
22. RECESSED HOSE BIBB
23. NOT USED
24. NOT USED
25. COMPOSITE WOOD FACED GATE WITH GALV FLUSH BOLT & STL SLEAVES IN CONCRETE
26. CONCRETE FOUNDATION @ 42" BELOW FIN GRADE; MIN
27. SUPPORTED STOOP
28. J-BOX BY CONTRACTOR FOR SECURITY CAMERA BY OTHERS; COOR. LOCATION WITH SECURITY CONTRACTOR.
29. PREFINISHED METAL PIER CAP.
30. PREFINISHED METAL COUNTERFLASHING
31. VAT SYSTEM BY OTHERS; CONTRACTOR TO COORDINATE INSTALLATION.
32. CPI DAYLIGHTING SYSTEM.
33. TEMPORARY BANNER - NOW OPEN!
34. READING ROCK CAST STONE 24 X 26 (SMOOTH ST2436)
35. 10'x4' AREA TO BE A DIRECT APPLIED FINISH SYSTEM WITH A SMOOTH FINISH. AREA TO BE AN EXTERIOR MARKETING BOARD.

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Project :

MICHIGAN SCHOOLS
+ GOVERNMENT CREDIT
UNION - NEW BUILD
2151 W. STADIUM BLVD.
ANN ARBOR, MI

Issued for :

SITE PLAN APPROVAL	05.30.19
SITE PLAN APPROVAL REVISIONS	10.11.19
REVISIONS PER 3RD PLAN'G COMMENTS	10.2819

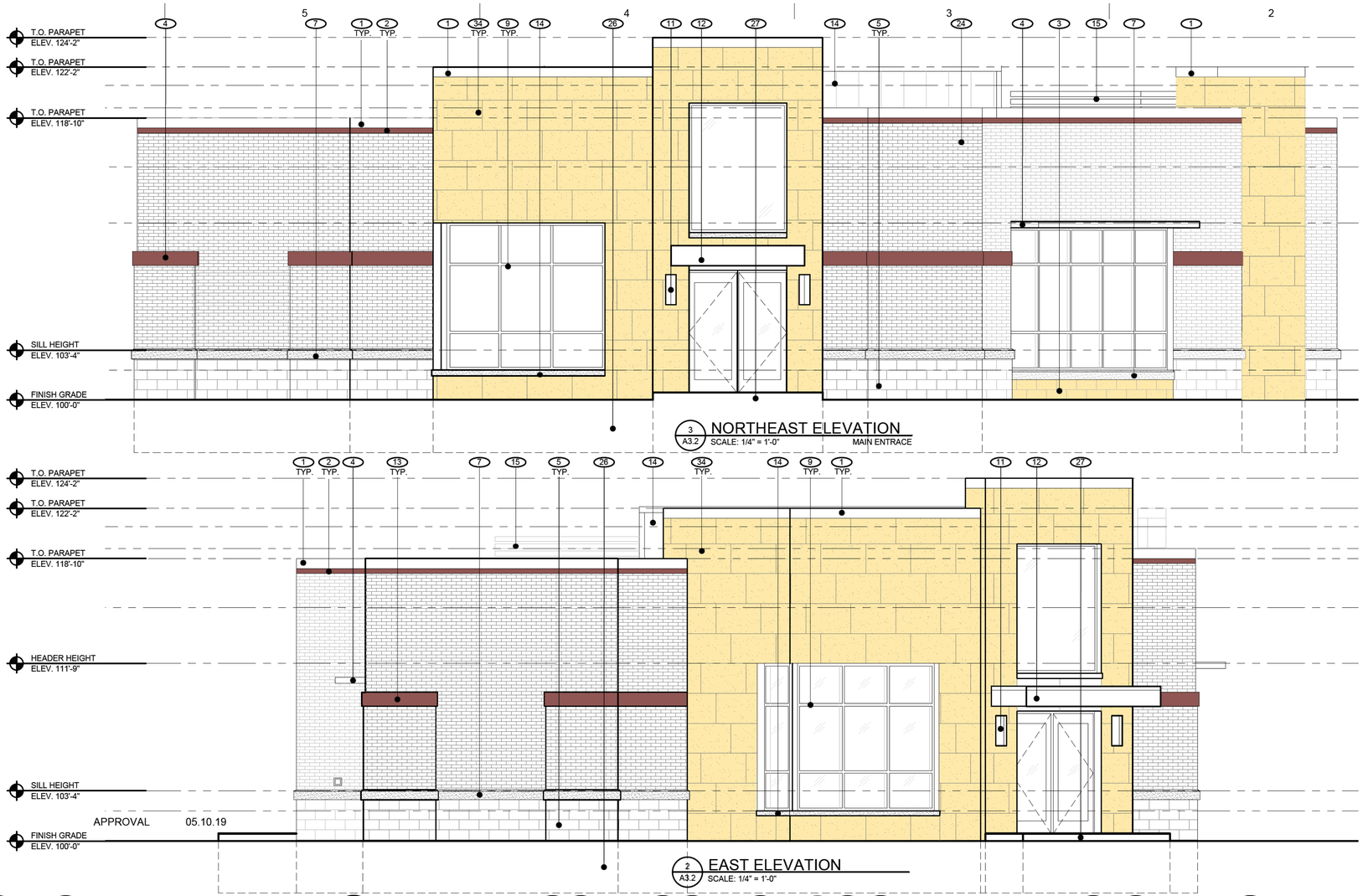
Drawn by : RBG

Checked by : MJB

Sheet Title : EXTERIOR ELEVATIONS

Project No. : 2018.157

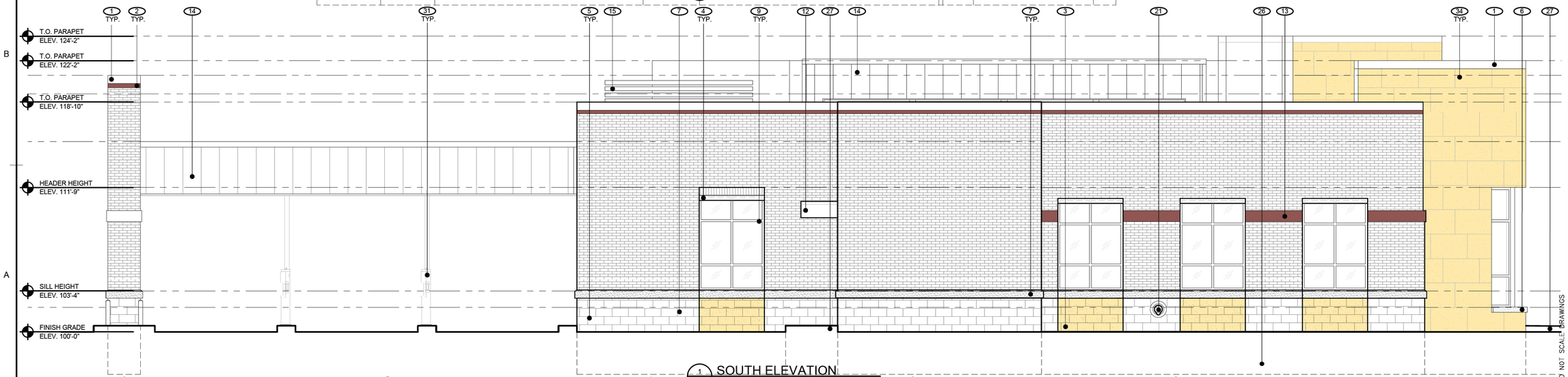
Sheet No. : A3.1



3 A3.2 NORTHEAST ELEVATION
SCALE: 1/4" = 1'-0" MAIN ENTRACE

APPROVAL 05.10.19

2 A3.2 EAST ELEVATION
SCALE: 1/4" = 1'-0"



1 A3.2 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES:

1. PREFINISHED METAL COPING SYSTEM. COLOR TO BE SILVER METALLIC.
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12. PREFINISHED METAL CLAD CANOPY
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14. PREFINISHED FLUSH METAL PANEL SYSTEM
15. PREFINISHED CORRUGATED METAL WALL PANEL ROOF TOP EQUIPMENT SCREEN
16. LANE INDICATOR SIGNS, SEMI-RECESSED
17. PACKAGE RECEIVER M.O.; PAINTED
18. NIGHT DEPOSIT M.O.
19. ATM KIOSK W/ VALANCE; CONTR TO COOR INSTALLATION
20. BULLET-RESISTANT WINDOW BY OTHERS; CONTRACTOR TO COORDINATE INSTALL
21. OVERFLOW ROOF DRAIN SPOUT WITH RODENT SCREEN; PAINT INTERIOR PIPE BLACK
22. RECESSED HOSE BIBB
23. WALL SIGN - SEE 11/A2.1 FOR DIMENSIONS
24. 8" PIN MOUNTED BUILDING ADDRESS
25. COMPOSITE WOOD FACED GATE WITH GALV FLUSH BOLT & STL SLEAVES IN CONCRETE
26. CONCRETE FOUNDATION @ 42" BELOW FIN GRADE; MIN
27. SUPPORTED STOOP
28. J-BOX BY CONTRACTOR FOR SECURITY CAMERA BY OTHERS; COOR. LOCATION WITH SECURITY CONTRACTOR.
29. PREFINISHED METAL PIER CAP.
30. PREFINISHED METAL COUNTERFLASHING
31. VAT SYSTEM BY OTHERS; CONTRACTOR TO COORDINATE INSTALLATION.
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Sheet Title :
EXTERIOR RENDERING

Project No. :
2018.157

Sheet No. :
A3.3