

SITE DEVELOPMENT PLANS

FOR

1360 WALTON BOULEVARD PROPOSED STARBUCKS

PID: 15-09-476-030 1360 WALTON BOULEVARD CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

Site Plan Review

Reviewed for compliance to the City Ordinance, **Building and Fire Codes**

Department	Reviewer	Approved
Planning	Kristen Kapelanski 248-841-2772 KapelanskiK@RochesterHills.org	No
Building	NA	
Engineering	Jason Boughton 248-841-2490 BoughtonJ@RochesterHills.org	Yes
Traffic	Keith Depp 248-841-2503 DeppK@RochesterHills.org	Yes
Nat. Resources	Matt Einheuser 248-841-2551 EinheuserM@RochesterHills.org	Yes
Fire	Lt. Ann Echols 248-841-2701 EcholsA@RochesterHills.org	Yes

Planning & Economic Development

addressed prior to final approval.

Conditions and mark-ups noted throughout the plan set must be

OWNER / APPLICANT

VERUS DEVELOPMENT GROUP 36400 WOODWARD AVE, SUITE 240 **BLOOMFIELD HILLS, MI 48304** FRANK.ARCORI@VERUSDG.COM

ARCHITECT

SERRA-MARKO & ASSOCIATES INC 184 E BIG BEAVER ROAD, SUITE 106 TROY, MI 48083

A traffic queuing study of other Metro-Detroit Starbucks should be provided showing average stacking spaces utilized during peak hour(s). Based on staff's experience with the Planning Commission, they will request this nformation as part of their analysis of the conditional use permit request. This must be provided prior to consideration by the Planning Commission.

SCALE: $I'' = 2,000' \pm$

LOCATION MAP



SOURCE: GOOGLE EARTH PRO

A conditional use permit is required for the proposed drive-through. Refer to Section 138-1.203 of the Zoning Ordinance for required signage that must be placed on the property 15 calendar days prior to the public hearing.

AERIAL MAP

SCALE: I" = 100'±

PLANS PREPARED BY:



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607 Shelby Suite 200, Detroit, MI 48226 Phone 248.247.1115

PROJECT B-2 SITE B-5 B-2 FB-2 **OVERLAY** FB-2 **OVERLAY OVERLAY** OVERLAY FB-2 OVERLAY WALTON BOULEVARD SOURCE: CITY OF ROCHESTER HILLS ZONING MAP

ZONING MAP

SCALE: $I'' = 100' \pm$

ADDITIONAL SHEETS				
DRAWING TITLE	SHEET #			
ALTA / TOPOGRAPHIC SURVEY	I OF I			
CITY WATER MAIN STANDARD DETAILS	I OF 3			
CITY WATER MAIN STANDARD DETAILS	2 OF 3			
CITY WATER MAIN STANDARD DETAILS	3 OF 3			
CITY SANITARY SEWER STANDARD DETAILS	I OF 2			
CITY SANITARY SEWER STANDARD DETAILS	2 OF 2			
CITY STORM SYSTEM STANDARD DETAILS	I OF I			

DRAWING TITLE	SHEET#
COVER SHEET	C-I
DEMOLITION PLAN	C-2
SITE PLAN	C-3
GRADING PLAN	C-4
STORMWATER MANAGEMENT PLAN	C-5
UTILITY PLAN	C-6
FIRE PROTECTION PLAN	C-7
LIGHTING PLAN	C-8
SOIL EROSION & SEDIMENT CONTROL PLAN	C-9
LANDSCAPE PLAN	C-10
TREE REPLACEMENT PLAN	C-11
CONSTRUCTION DETAILS	C-12 TO C-16
SIGHT DISTANCE PLAN	C-17

6 02/09/2022 JRC / ECM REVISED PER CITY SECON 5 12/28/2021 JRC / ECM REVISED PER CITY SITE PL 4 09/08/2021 RAC / ECM SUBMISSION FOR SITE PLA 3 08/20/2021 RAC ECM REVISED PER FIRE DEPART 2 08/02/2021 ECM REVISED PER CITY COMME 1 07/08/2021 JRC SUBMISSION FOR PRE-APP ISSUE DATE BY				
02/09/2022 JRC / ECM 12/28/2021 JRC / ECM 09/08/2021 RAC / ECM 08/20/2021 RAC 08/02/2021 ECM 07/08/2021 BY				
02/09/2022 JRC / ECM 12/28/2021 JRC / ECM 09/08/2021 RAC / ECM 08/20/2021 RAC 08/02/2021 ECM 07/08/2021 JRC				
12/28/2021 JRC / ECM 09/08/2021 RAC / ECM 08/20/2021 RAC 08/02/2021 ECM 07/08/2021 JRC	9	02/09/2022	JRC / ECM	REVISED PER CITY SECOND SITE PLAN REVIEW
09/08/2021 RAC / ECM 08/20/2021 RAC 08/02/2021 ECM 07/08/2021 JRC DATE BY	2	12/28/2021	JRC / ECM	REVISED PER CITY SITE PLAN REVIEW
08/20/2021 RAC 08/02/2021 ECM 07/08/2021 JRC DATE BY	4	09/08/2021	RAC / ECM	SUBMISSION FOR SITE PLAN APPROVAL
08/02/2021 ECM 07/08/2021 JRC DATE BY	က	08/20/2021	RAC	REVISED PER FIRE DEPARTMENT COMMENTS
07/08/2021 JRC DATE BY	2	08/02/2021	ECM	REVISED PER CITY COMMENTS
DATE BY	_	07/08/2021	JRC	SUBMISSION FOR PRE-APPLICATION MEETING
	ISSUE	DATE	ВУ	DESCRIPTION

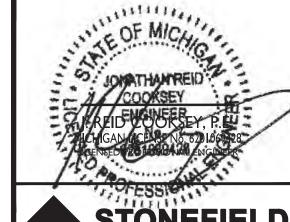
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STONEFIELD engineering & design

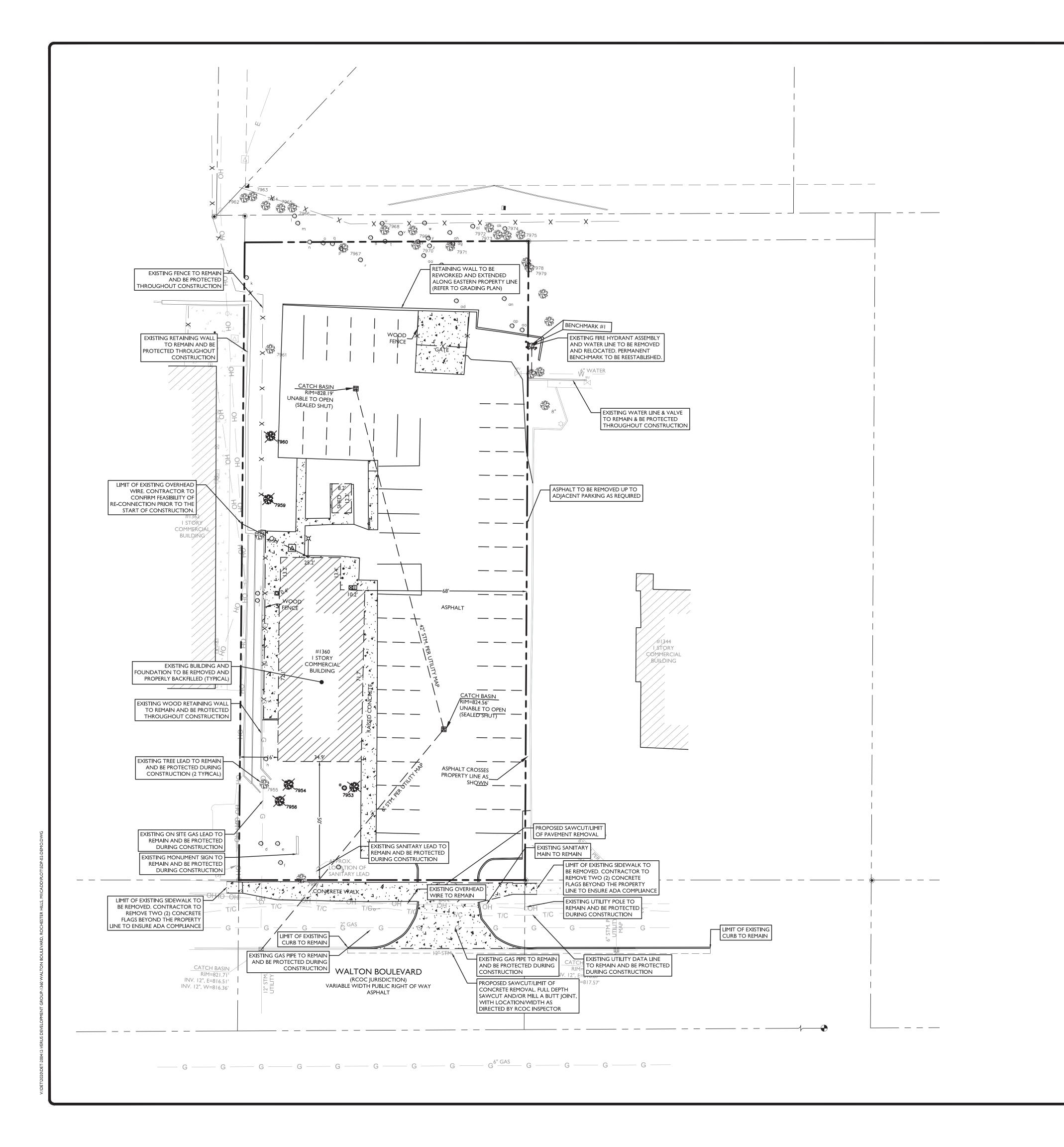
CITY FILE #21-030 SECTION #9 SCALE: AS SHOWN PROJECT ID: DET-200412

COVER SHEET

DRAWING: C-I

PLAN REFERENCE MATERIALS:

- I. THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS **INCLUDING, BUT NOT LIMITED TO:**
- ALTA/NSPS SURVEY OBTAINED FROM KEM-TEC, **DATED 12/27/2021** ARCHITECTURAL PLANS OBTAINED FROM SERRA-MARKO & ASSOCIATES, DATED 08/20/2021
- AERIAL MAP REFERENCED FROM GOOGLE EARTH PRO LOCATION MAP OBTAINED FROM USGS NATIONAL ZONING MAP REFERENCED FROM CITY OF ROCHESTER
- HILLS ZONING MAP 2. 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

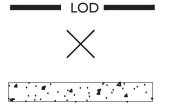




SYMBOL

DESCRIPTION

FEATURE TO BE REMOVED / DEMOLISHED



LIMIT OF DISTURBANCE

TREES TO BE REMOVED

CONCRETE PAVEMENT TO BE REMOVED

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

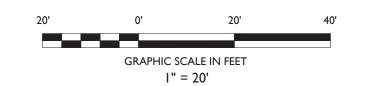


Know what's **below Call** before you dig.

DEMOLITION NOTES

- I. 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.



		ECM REVISED PER CITY SECOND SITE PLAN REVIEW	ECM REVISED PER CITY SITE PLAN REVIEW	ECM SUBMISSION FOR SITE PLAN APPROVAL	C REVISED PER FIRE DEPARTMENT COMMENTS	M REVISED PER CITY COMMENTS	SUBMISSION FOR PRE-APPLICATION MEETING	DESCRIPTION
		JRC / ECM	JRC / ECM	RAC / ECM	RAC	ECM	JRC	ВҮ
		02/09/2022	12/28/2021	09/08/2021	08/20/2021	08/02/2021	07/08/2021	DATE
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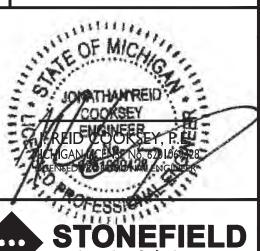
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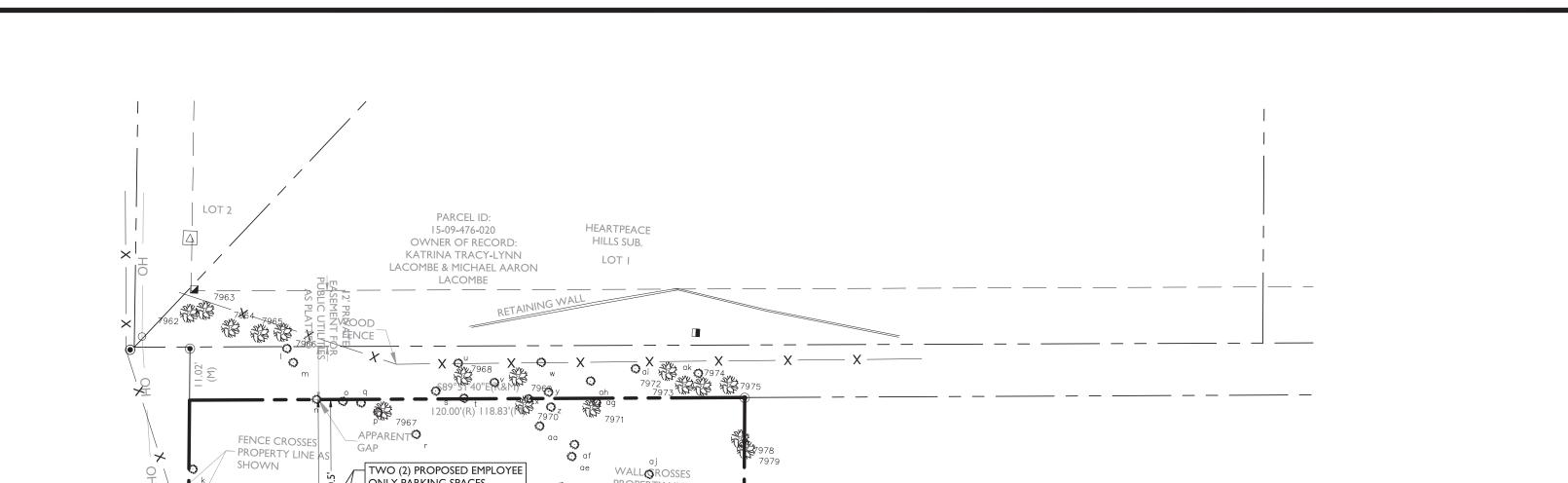


engineering & design

CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412

DEMOLITION PLAN



PROPOSED 6 FT HIGH

TRASH ENCLOSURE

PROPOSED 130 LF

RETAINING WALL

PROPOSED 4" WHITE

NON-ADA PARKING

PROPOSED

EXTENDED CURB

→ PROPOSED FLUSH

PROPOSED ADA

ACCESSIBLE PARKING

SPACE WITH SIGN ON

BOLLARD (2 TYPICAL)

PROPOSED 4" AZUR

BLUE STRIPING FOR

ALL ADA PARKING

TRANSITION RAM

XTENDED CURB

ROPOSED TRANSITION

RAMP WITH DETECTABLE

| WARNING STRIP (TYPICAL) |

LIMIT OF PROPOSED CONCRETE

CONTRACTOR TO REMOVE TWO

SMOOTH TRANSITION (TYPICAL)

(2) CONCRETE FLAGS BEYOND THE

PROPOSED 75 FT TAPER

PROPOSED 9" MDOT 35-P

CONCRETE PAVEMENT

LANE (PER RCOC

REQUIREMENTS)

ENTRANCE

SIDEWALK REPLACEMENT -

PROPERTY LINE TO ENSURE

ROPOSED

CONCRETE CURB (TYPICAL)

The proposed

connected to a

crosswalk should be

pedestrian walkway

1,8TORY

COMMERCIAL

BUILDING

These spaces seem

space. They appear

to be in conflict with

the traffic entering

LIMIT OF PROPOSED

CONCRETE CURB. MATCH

AND TIE PROPOSED CURB

TO EXISTING CURB EPOXY

COATED #4 CAR REQUIRED

problematic,

the site.

particularly the

southern-most

or path instead of ending in a parking

ONLY PARKING SPACES

RESTAURANT

DRIVE-THRU

WINDOW

2,219 SF

PROPOSED -

CURB TO EXISTING CURB EPOXY WALTON BOULEVARD

(RCOC JURISDICTION)

VARIABLE WIDTH PUBLIC RIGHT OF WAY

ASPHALT

120.00'(R&M)

N89°51'40"W(R&M)

EXTENDED CURB

PROPOSED

EXTENDED CURB

CONCRETE CURB (TYPICAL)

PROPOSED

PRE-ORDER BOARD PROPOSED ORDER

SCREEN & CANOPY

PROPOSED ORDER

PROPOSED CONCRETE PAVEMENT (TYPICAL)

PROPOSED 6" CONCRETE TRANSFORMER PAD

PROPOSED

PROPOSED 3 F

PROPOSED 407 SF

OUTDOOR PATIO

BE REUTILZIED

LIMIT OF PROPOSED CONCRETE

COATED #4 CAR REQUIRED

CURB. MATCH AND TIE PROPOSED

DECORATIVE FENCE

EXISTING MONUMENT

SIGN TO REMAIN AND

EXTENDED CURB

ASPHALT CROSSES

PROPERTY LINE AS

PROPOSED CONCRETE SIDEWALK

TO MEET MDOT R-28-J DETAILS AND CITY PATHWAY CONSTRUCTION

LIMIT OF PROPOSED CONCRETE SIDEWALK

BEYOND THE PROPERTY LINE TO ENSURE

DETAIL. SEE DETAIL SHEET PAGES

REPLACEMENT - CONTRACTOR TO

REMOVE TWO (2) CONCRETE FLAGS

SMOOTH TRANSITION (TYPICAL)

C-13 & C-14 (TYPICAL)

SHOWN

MENU BOARD

25 FT RESIDENTIAL BUFFER ac

50 FT REAR YARD SETBACK

PROPOSED

PROPOSED CLEARANCE BAR

EXTENDED CURB

PROPOSED CONCRETE SIDEWALK (TYPICAL)

> PROPOSED CROSSWALK FOR DRIVE-THRU CROSSING (TYPICAL)

FLUSH CURB

DEPTH ASPHALT PAVEMENT (TYPICAL)

TRANSITION RAMP

PROPOSED CONCRETE SIDEWALK (TYPICAL)

50 FT FRONT YARD SETBACK

PROPOSED

PROPOSED 'DO

STOP' SIGN & BAR

PROPOSED 'STOP'

PROPOSED FULL MOVEMENT

MDOT DETAIL "M" CURB

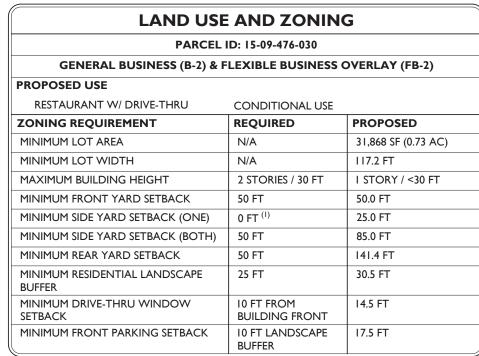
AND GUTTER ENTRANCE

(TYPICAL)

SIGN & BAR

NOT ENTER',

EXTENDED CURB



(I) 25 FT SETBACK IS REQUIRED FOR THE EXTERIOR SIDE OF PARCEL OR LOT ON THE EXTERIOR OF THE DISTRICT

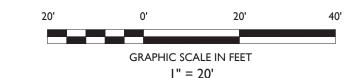
OFF-STREET PARKING REQUIREMENTS					
CODE SECTION	REQUIRED	PROPOSED			
§ 138-11.204	REQUIRED RESTAURANT PARKING:	25 SPACES			
	I SPACE PER 2 PERSONS AT MAX OCCUPANCY				
	(50 PERSONS)(I SPACE / 2 PERSONS) = 25 SPACES				
§ 138-11.204	REQUIRED DRIVE-THRU STACKING:	15 SPACES			
	10 STACKING SPACES				
§ 138-11.302	DIMENSIONAL REQUIREMENTS:	18 FT X 10 FT			
	75°-90°: 18 FT X 10 FT W/ 24 FT TWO-WAY AISLE	W/ 24 FT AISLE			

AY (FB-2)	
POSED	
8 SF (0.73 AC)	
FT	
ORY / <30 FT	
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-T	
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FT	
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EL OR LOT	

- 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
- 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,
- 5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND
- 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

THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS

- 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.
- II. 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.

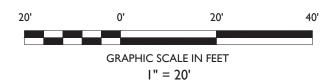


SYMBOL	DESCRIPTION
	PROPERTY LINE
	SETBACK LINE
	SAWCUT LINE
	PROPOSED CURB
	PROPOSED EXTENDED CURB
= = = = =	PROPOSED FLUSH CURB
	PROPOSED SIGNS / BOLLARDS
	PROPOSED BUILDING
Δ	PROPOSED CONCRETE
	PROPOSED ASPHALT
	PROPOSED AREA LIGHT
	PROPOSED BUILDING DOORS
	PROPOSED HANDRAIL

GENERAL NOTES

- I. 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
- LIABILITY INSURANCE.
- 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
- DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW
- REFLECTED WITHIN THE PLAN SET. 9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL
- 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.



			REVISED PER CITY SECOND SITE PLAN REVIE	REVISED PER CITY SITE PLAN REVIEW	SUBMISSION FOR SITE PLAN APPROVAL	REVISED PER FIRE DEPARTMENT COMMENTS	REVISED PER CITY COMMENTS	SUBMISSION FOR PRE-APPLICATION MEETIN	DESCRIPTION
			JRC / ECM	JRC / ECM	RAC / ECM	RAC	ЕСМ	JRC	ВҮ
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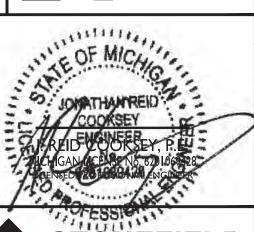
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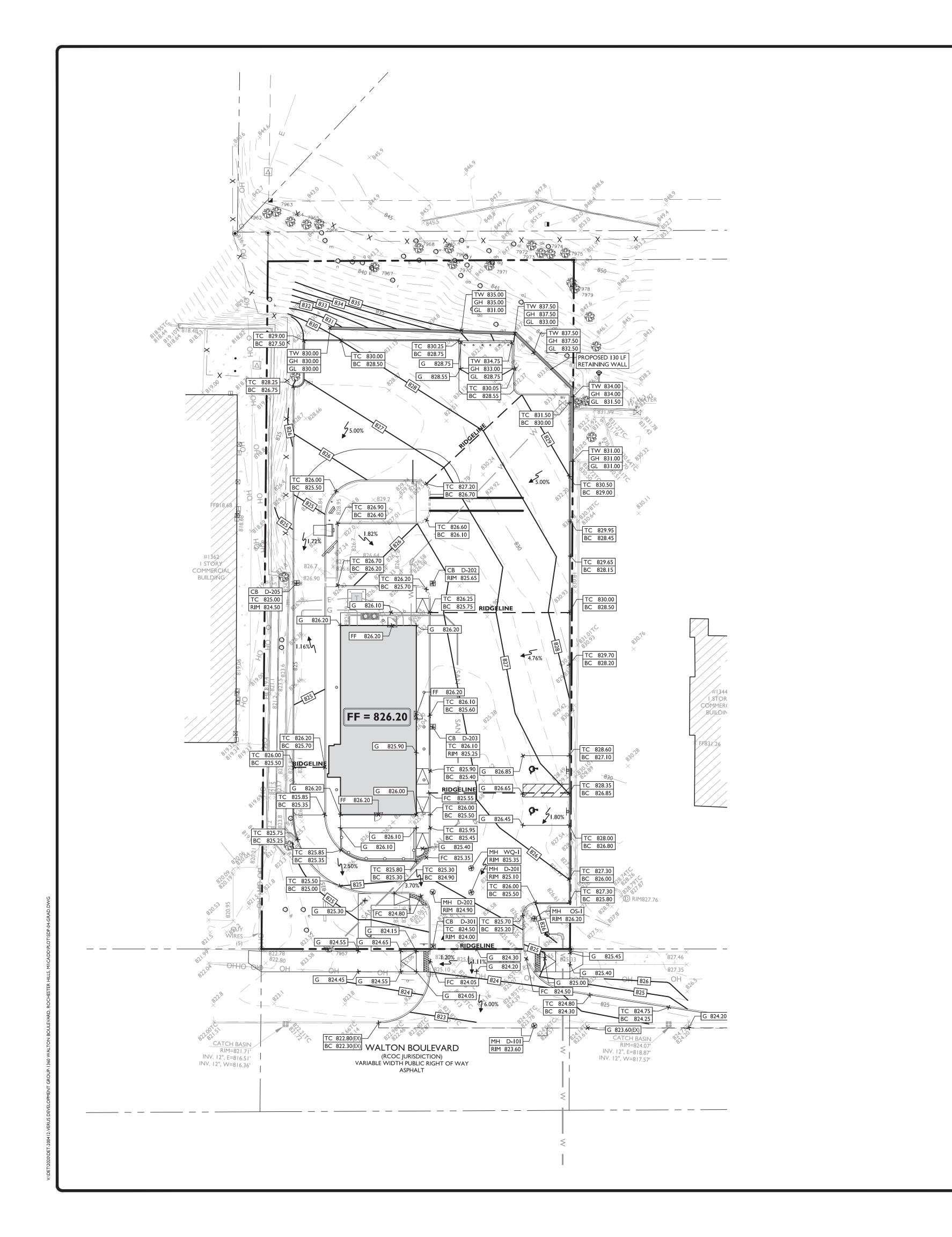


STONEFIELD engineering & design

CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412

SITE PLAN





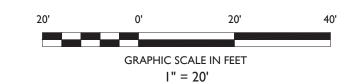
SYMBOL

PROPERTY LINE RIDGELINE **X** G 100.00 PROPOSED GRADE SPOT SHOT PROPOSED TOP OF CURB / BOTTOM OF CURB SPOT SHOT **X** FC 100.00 PROPOSED FLUSH CURB SPOT SHOT

GRADING NOTES

- 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
- 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
- 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
- 5. MINIMUM SLOPE REQUIREMENTS TO PREVENT PONDING SHALL BE AS FOLLOWS: CURB GUTTER:
- 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

- I. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN
- 2. THE CONTRACTOR SHALL PROVIDE COMPLIANT SIGNAGE AT ALL
- 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
- 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.
- ACCESSIBLE PATH AND WITHIN ADA PARKING AREAS. 8. THE CONTRACTOR SHALL ENSURE A MAXIMUM OF 1/4 INCHES
- 9. THE CONTRACTOR SHALL ENSURE THAT ANY OPENINGS (GAPS OR HORIZONTAL SEPARATION) ALONG THE ACCESSIBLE PATH SHALL



DESCRIPTION

PROPOSED TOP OF WALL / BOTTOM OF WALL SPOT SHOT

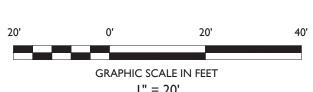
PROPOSED GRADING CONTOUR PROPOSED GRADING RIDGELINE PROPOSED DIRECTION OF DRAINAGE FLOW

X TW 102.00

BW 100.00

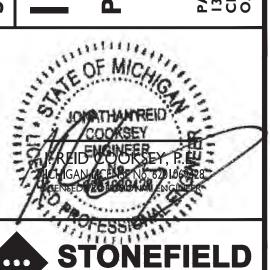
- I. ALL SOIL AND MATERIAL REMOVED FROM THE SITE SHALL BE
- ALL FILL MATERIALS BROUGHT TO THE SITE. STABILITY OF THE SURROUNDING SOILS.
- 3. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 4 INCHES TO 7
- - CONCRETE SURFACES: 1.00%
- ASPHALT SURFACES:
- ENGINEERING & DESIGN, LLC. IF THIS CONDITION CANNOT 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.

- ANY DIRECTION WITHIN THE ADA PARKING SPACES AND ACCESS
- 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
- OF A CURB RAMP SHALL BE NO LESS THAN 36 INCHES WIDE.
- 6. ACCESSIBLE RAMPS WITH A RISE GREATER THAN 6 INCHES SHALL 7. A SLIP RESISTANT SURFACE SHALL BE CONSTRUCTED ALONG THE
- VERTICAL CHANGE IN LEVEL ALONG THE ACCESSIBLE PATH. WHERE A CHANGE IN LEVEL BETWEEN 1/4 INCHES AND 1/2 INCHES EXISTS, CONTRACTOR SHALL ENSURE THAT THE TOP 1/4 INCH CHANGE IN LEVEL IS BEVELED WITH A SLOPE NOT STEEPER THAN I UNIT VERTICAL AND 2 UNITS HORIZONTAL (2:1 SLOPE).
- NOT ALLOW PASSAGE OF A SPHERE GREATER THAN 1/2 INCH.



NOT APPROVED FOR CONSTRUCTION





engineering & design

CITY FILE #21-030 SECTION #9

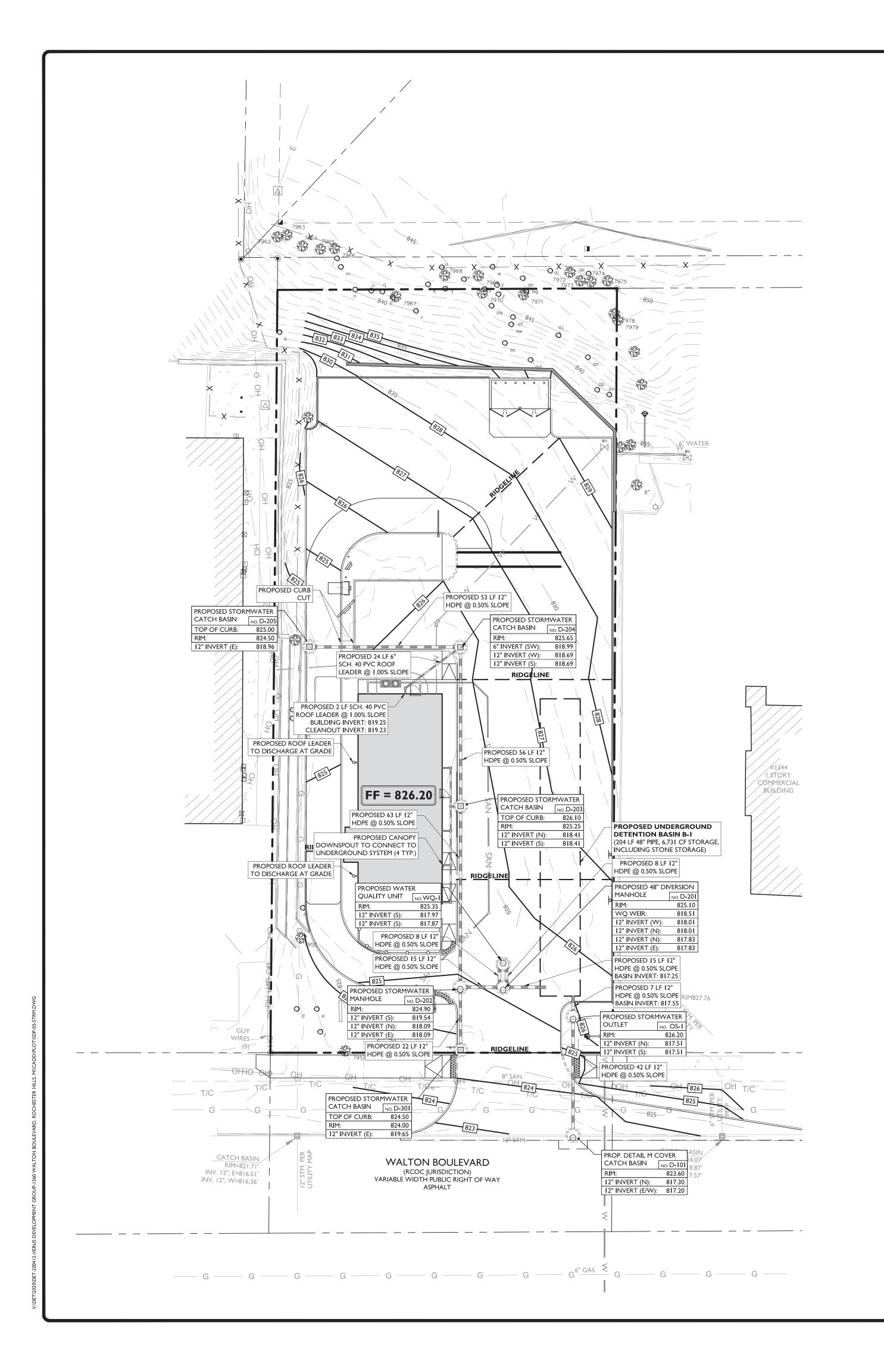
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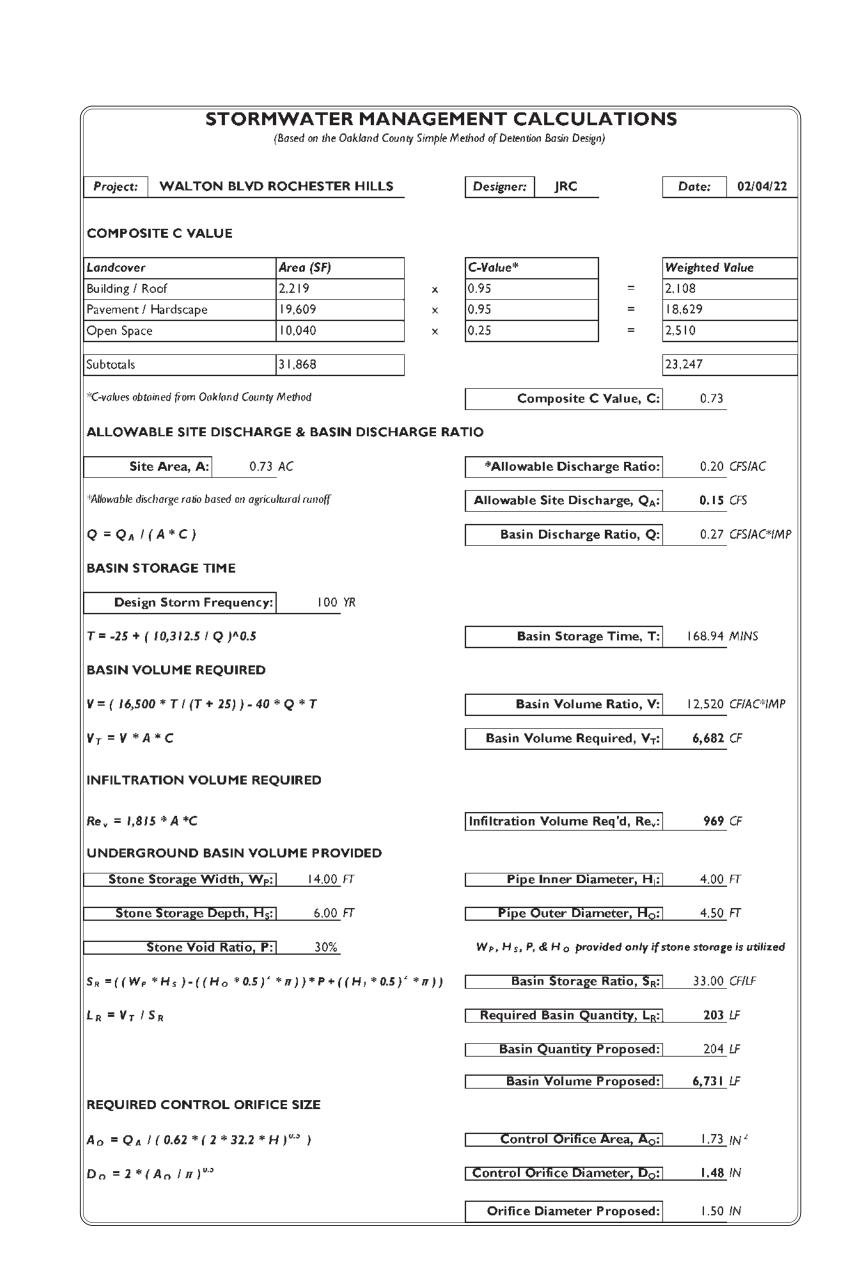
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I" = 20' PROJECT ID: DET-200412

GRADING PLAN







SYMBOL DESCRIPTION

PROPOSED STORMWATER STRUCTURES

PROPERTY LINE PROPOSED GRADING CONTOUR

RIDGELINE PROPOSED GRADING RIDGELINE

PROPOSED STORMWATER PIPING

NOT APPROVED FOR CONSTRUCTION



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I. 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.

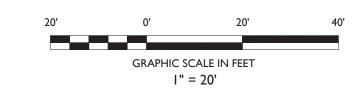
DRAINAGE AND UTILITY NOTES

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

- I. 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

- I. THE CONTRACTOR SHALL INSTALL AND BACKFILL THE UNDERGROUND BMP IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- 2. UNDERGROUND BASINS SHALL UTILIZE A STONE BACKFILL WITH A MINIMUM VOID RATIO OF 40%.
- A FIXED POSITION OVER THE BASIN.



	DISPOSAL.					
STC	RMWATER	UNDERGROUN	ID BMP CO	ONSTRUCTIO	N NOTES	

- 3. NO CONSTRUCTION LOADING OVER UNDERGROUND BASINS IS PERMITTED UNTIL BACKFILL IS COMPLETE PER THE MANUFACTURER'S SPECIFICATIONS. NO VEHICLES SHALL BE STAGED OR OPERATE FROM

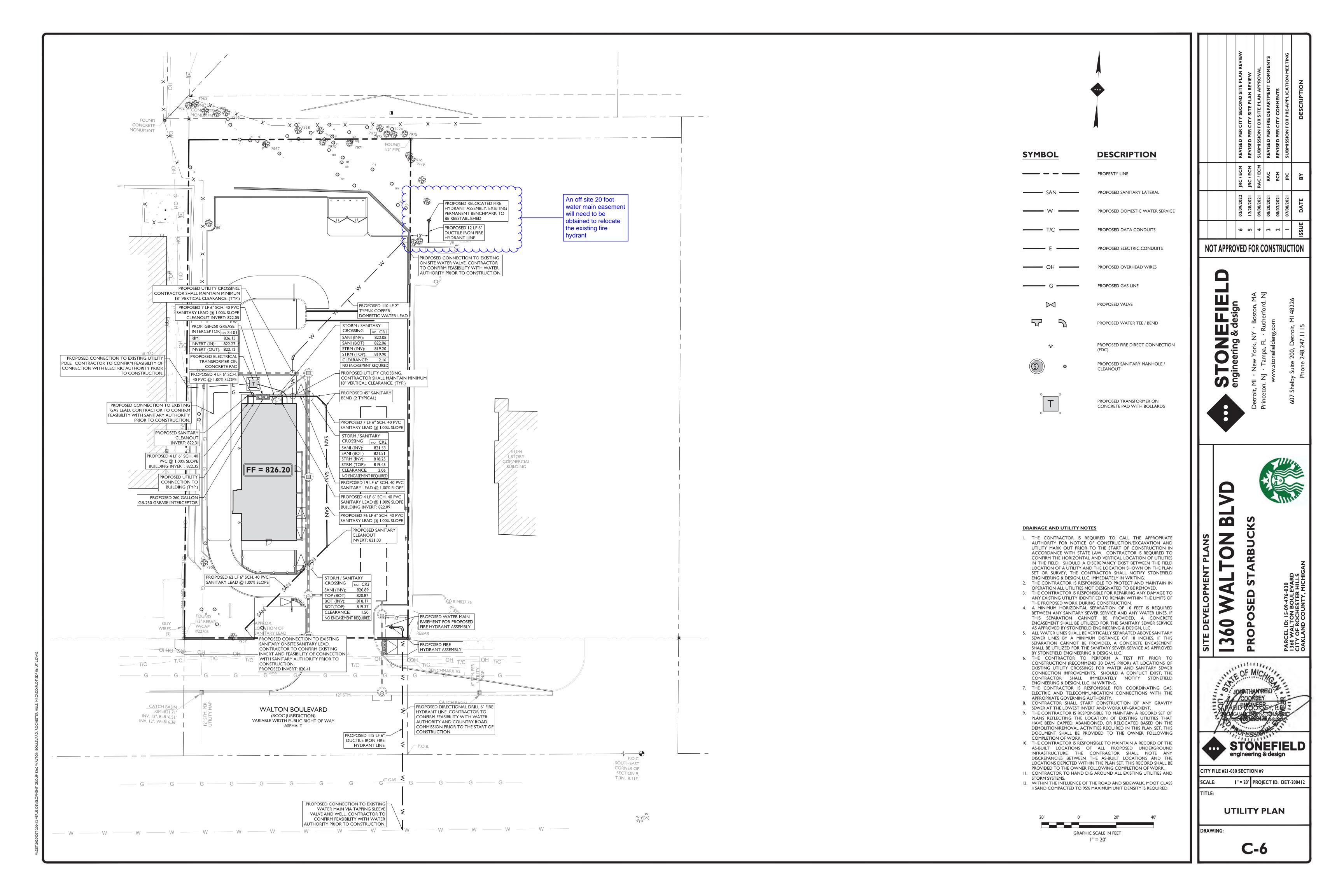
STONEFIELD engineering & design

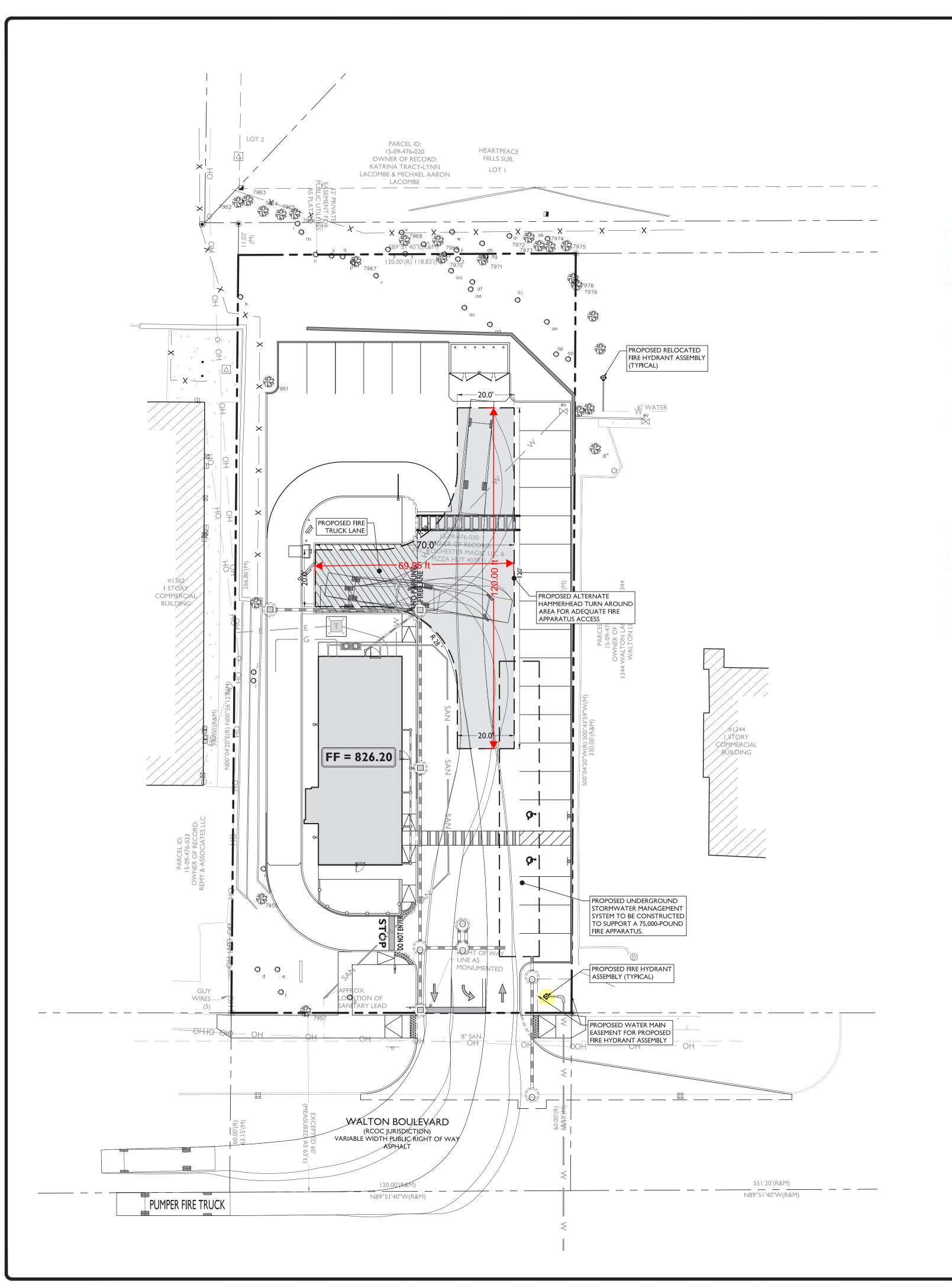
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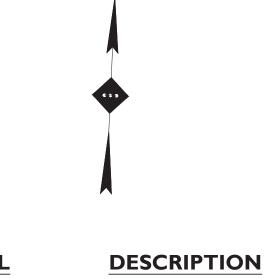
CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412 TITLE:

STORMWATER MANAGEMENT PLAN







SYMBOL

PROPERTY LINE

Bid Number:	1102	Chassis: Arrow XT Chassis, Aerials/Tanke	rs, Tandem Axle
Department:	Citry of Rochester Hills	Body: Aerial, HD Ladder 105', Alum Boo	dy
		Parameters:	
		Inside Cramp Angle:	45°
	appearance and a second	Axle Track:	82.92 in.
	And the same	Wheel Offset:	4.68 in.
V	a production of the second	Tread Width:	16.3 in.
dditional Bumper Dep	Axle Track	Chassis Overhang:	68.99 in.
1	Wheel Offs	Additional Bumper Depth:	16 in.
2	Cramp Ang	Frank Outside and	84.99 in.
hassis Overhang	Tread Widt	Wheelbase:	245.5 in.
1	MAN	Calculated Turning Radii:	
1		Inside Turn:	19 ft. 5 in.
/ /		Curb to curb:	35 ft. 3 in.
Wheelbase / /	Curr Wallto h	Wall to wall:	39 ft. 7 in.
	to Curb	Curb to curb: Wall to wall: Comments: RHFD 105' turn radius	
	m m	RHFD 105' turn radius	

Category
Axle, Front, Custom Axle, Front, Oshkosh TAK-4, Non Drive, 22,800 lb, Qtm/AXT/DCF Wheels, Front Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Hub Pilot 0019611 Tires, Front Tires, Front, Goodyear, G296 MSA, 425/65R22.50, 20 ply 0606536 Bumper, 16" Extended, Steel Painted, Arrow XT Bumpers Aerial Devices Aerial, 105' Heavy Duty Ladder (500 dry/500 water)

Actual Inside cramp angle may be less due to highly specialized options.

Curb to Curb turning radius calculated for 9.00 inch curb.

	REVISED PER CITY SECOND S	REVISED PER CITY SITE PLAN	SUBMISSION FOR SITE PLAN	REVISED PER FIRE DEPARTME	REVISED PER CITY COMMENT	SUBMISSION FOR PRE-APPLIC	DESCRIPT
	JRC / ECM	JRC / ECM	RAC / ECM	RAC	ECM	JRC	ВҮ
	02/09/2022	12/28/2021	09/08/2021	08/20/2021	08/02/2021	07/08/2021	DATE
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STONEFIELD engineering & design

CITY FILE #21-030 SECTION #9

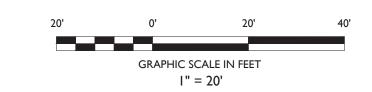
I" = 20' PROJECT ID: DET-200412

FIRE PROTECTION PLAN

DRAWING:

FIRE DEPARTMENT NOTES

- I. A KNOX KEY SYSTEM SHALL BE INSTALLED IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE FROM THE KNOX COMPANY AT WWW.KNOXBOX.COM - IFC 2006
- FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS, SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE" AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES - FIRE
- PREVENTION ORDINANCE CHAPTER 58, SEC. 503 3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14
- 4. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING FOR WARMING OF SAND AND / OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES - FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 307.6.2 & 307.6.2.3

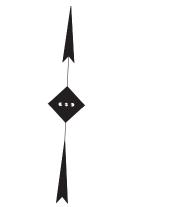


	LIGHTING REQUIREMEN	TS
CODE SECTION	REQUIRED	PROPOSED
§ 138-10.201.A	ALL OUTDOOR LIGHTING SHALL BE SHIELDED	PROVIDED
§ 138-10.201.B	MAXIMUM ILLUMINATION ON SITE:	
	10 FC	9.0 FC
§ 138-10.201.B	MAXIMUM ILLUMINATION AT:	
	PROPERTY LINE: 0.5 FC	0.5 FC
	RIGHT OF WAY PROPERTY LINE: I FC	0.9 FC
§ 138-10.202	MINIMUM FIXTURE HEIGHT:	
	20 FT ⁽¹⁾	I8 FT

(I) 15 FEET HIGH IF WITHIN 50 FEET OF A RESIDENTIAL PROPERTY

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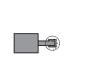
			PROPOSED LUMINAIRE	SCHEDULE			`
SYMBOL	LABEL	QUANTITY	SECURITY LIGHTING	DISTRIBUTION	LLF	MANUFACTURER	IES FILE
	Α		EATON LUMARK PREVAIL AND FIXTURE COMBO WITH HOUSE SIDE SHIELD	TYPE IV	0.9	EATON	PRV-C40-D-UNV-T4-BZ-7030-HSS.ies
	В	1	EATON LUMARK PREVAIL AND FIXTURE COMBO WITH HOUSE SIDE SHIELD	TYPE IV	0.9	EATON	PRV-C25-D-UNV-T4-BZ-7030-HSS.ies
	С		EATON LUMARK PREVAIL AND FIXTURE COMBO WITH HOUSE SIDE SHIELD (2 @ 90°)	TYPE IV	0.9	EATON	PRV-C25-D-UNV-T4-BZ-7030-HSS.ies
P	D	8	OXYGEN LEDA OUTDOOR SCONCE	TYPE IV	0.9	EATON	3-712-222 Leda.ies
	E	2	MIRADA LED WALL SCONCE - 8K LUMEN PACKAGE	FT	0.9	LSI INDUSTRIES	XWM-FT-LED-12L-40
	F	I	MIRADA LED WALL SCONCE - 8K LUMEN PACKAGE	FT	0.9	LSI INDUSTRIES	XWM-3-LED-03-30



SYMBOL

A (XX')

+X.X





PROPOSED BUILDING MOUNTED LIGHT

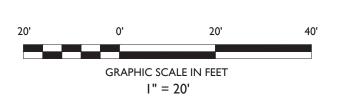
GENERAL LIGHTING NOTES

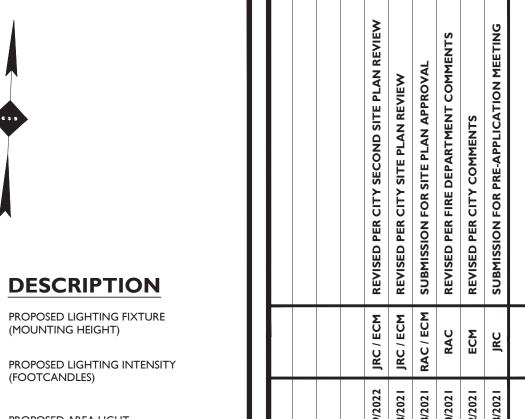
- I. THE LIGHTING LEVELS DEPICTED WITHIN THE PLAN SET ARE CALCULATED UTILIZING DATA OBTAINED FROM THE LISTED MANUFACTURER. ACTUAL ILLUMINATION LEVELS AND PERFORMANCE OF ANY PROPOSED LIGHTING FIXTURE MAY VARY DUE TO UNCONTROLLABLE VARIABLES SUCH ARE WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE 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: METAL HALIDE: 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

ATM LIGHTING NOTES:

ENGINEERING & DESIGN, LLC.

- I. THE CONTRACTOR SHALL REPLACE LAMP COVERS, RE-LAMP AND RE-BALLAST EXISTING LIGHT FIXTURES AS INDICATED WITHIN THE PLAN SET. THE EXISTING FIXTURE HEIGHT SHALL BE MAINTAINED UNLESS INDICATED OTHERWISE. THE LIGHTING DESIGN IS SUBJECT TO CHANGE IF THE EXISTING LIGHT FIXTURES ARE NOT GREATER THAN OR EQUAL TO THE FOLLOWING WATTAGE:
- FIXTURE 'X' = MINIMUM X WATTS 2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING IF THE EXISTING LIGHT FIXTURES ARE NOT THE MINIMUM WATTAGE SPECIFIED WITHIN THE PLAN SET.
- 3. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY EXISTING LIGHT POLES IDENTIFIED FOR REUSE WITH A PROPOSED LIGHT FIXTURE(S) SHALL BE IN ACCEPTABLE WORKING CONDITION AND HAVE THE CAPACITY TO SUPPORT THE PROPOSED LIGHT FIXTURE(S). ANY MOUNTING EQUIPMENT REQUIRED TO ATTACH THE PROPOSED LIGHTING FIXTURE TO THE EXISTING LIGHT POLE SHALL BE PROVIDED BY THE CONTRACTOR.
- 4. THE CONTRACTOR SHALL CONFIRM THAT THE LOCATION OF ANY PROPOSED BUILDING MOUNTED LIGHTING FIXTURE WILL NOT CONFLICT WITH ANY EXISTING OR PROPOSED STRUCTURAL ELEMENT (E.G. CANOPY SUPPORT BEAMS). THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING OF ANY FIXTURE CONFLICT PRIOR TO THE START OF CONSTRUCTION.
- 5. ALL EXISTING TREE LIMBS WITHIN THE 60 FOOT ATM RADIUS SHOWN IN THE PLAN SET SHALL BE TRIMMED TO A MINIMUM OF 6 FEET ABOVE GRADE. ALL SHRUBS WITHIN THE 60 FOOT ATM RADIUS SHALL BE TRIMMED TO A MINIMUM OF 36 INCHES ABOVE GRADE. ALL BRUSH SHALL BE REMOVED. THE CONTRACTOR SHALL CONSIDER ALL FUTURE GROWTH AND FULL BLOOM WHEN TRIMMING LANDSCAPING. EXISTING TREE LIMBS ADJACENT TO LIGHTING FIXTURES SHALL BE TRIMMED AS REQUIRED TO PREVENT LIGHT
- INTERFERENCE. 6. PRIOR TO BID, CONTRACTOR SHALL VERIFY EXISTING EXTERIOR LIGHTING CONDITIONS AFTER DUSK AND NOTIFY THE DEVELOPER/OWNER AND STONEFIELD ENGINEERING & DESIGN, LLC. OF DAMAGED OR INOPERABLE LIGHTS. THE CONTRACTOR SHALL REPAIR ALL INOPERABLE LIGHTS UNLESS OTHERWISE NOTED WITHIN
- THIS PLAN SET. 7. THE ILLUMINATION LEVELS DEPICTED WITHIN THE PLAN SET ARE BASED ON REGULATORY STATE STANDARDS FOR SAFETY LIGHTING
- AND ON CLIENT STANDARDS. 8. ALL LIGHTING FIXTURES, UNLESS OTHERWISE NOTED WITHIN THIS
- PLAN SET, HAVE THE PHOTOCELL OPTION ENABLED. 9. EXISTING LIGHTING FIXTURES CONTROLLED BY OUTSIDE ENTITIES (E.G. LANDLORD) HAVE BEEN EXCLUDED FROM THE LIGHTING ANALYSIS REFLECTED WITHIN THE PLAN SET. THE PROPOSED LIGHT LEVELS HAVE BEEN DESIGNED TO COMPLY WITH ALL APPLICABLE ATM AND SAFETY LIGHTING REQUIREMENTS INDEPENDENT OF ANY UNCONTROLLED LIGHT FIXTURES.





NOT APPROVED FOR CONSTRUCTION





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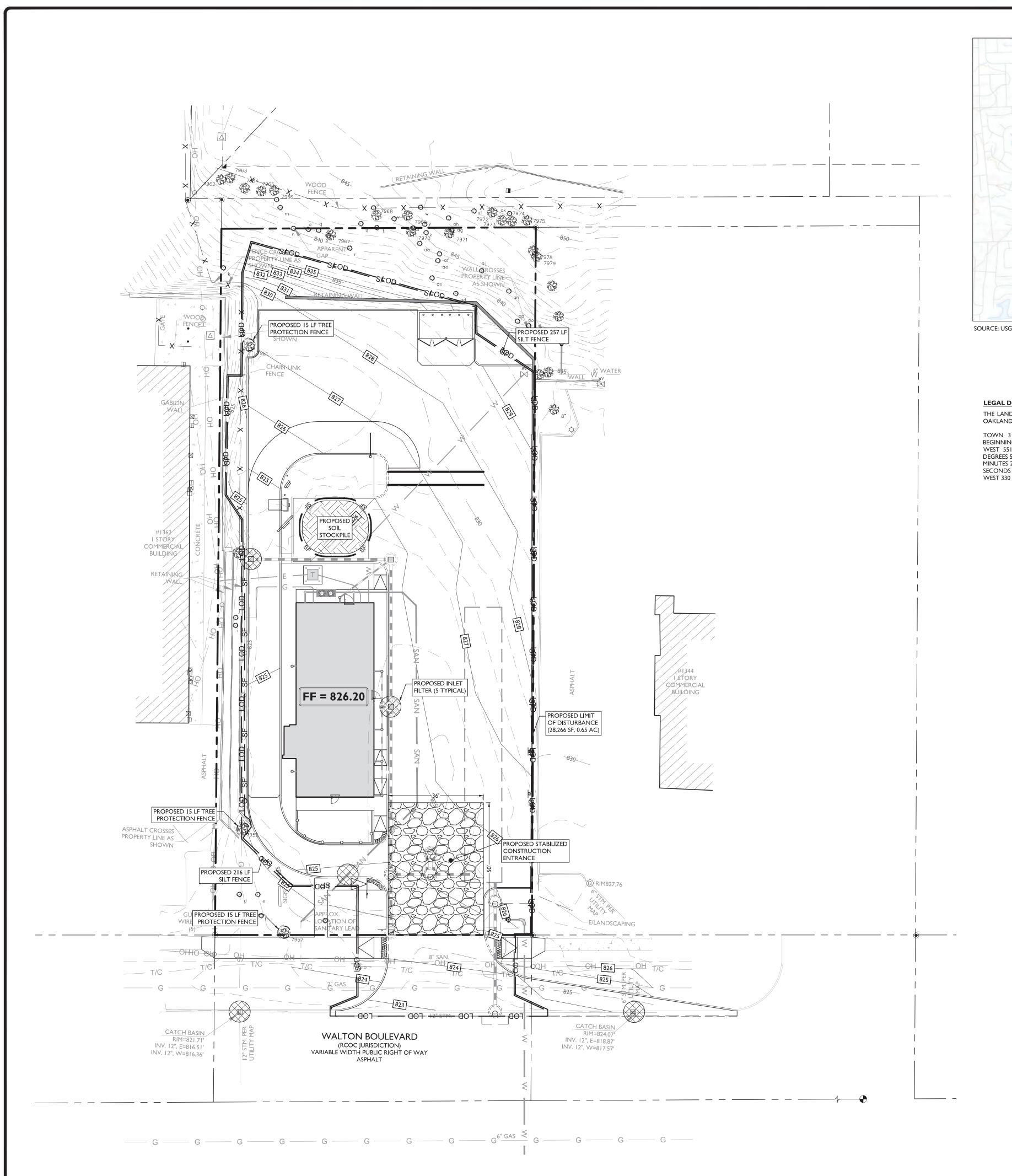


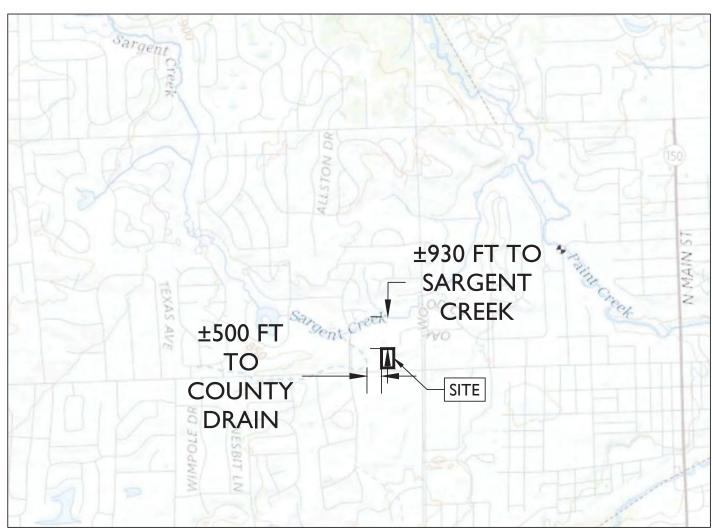
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I" = 20' PROJECT ID: DET-200412

LIGHTING PLAN





SOURCE: USGS NATIONAL MAPPING SYSTEM

LOCATION MAP

SCALE: $I'' = 2,000' \pm$

THE LAND IS DESCRIBED AS FOLLOWS: CITY OF ROCHESTER HILLS, COUNTY OF OAKLAND, STATE OF MICHIGAN

TOWN 3 NORTH, RANGE II EAST, SECTION 9. PART OF SOUTHEAST 1/4 BEGINNING AT POINT DISTANCE NORTH 89 DEGREES 51 MINUTES 40 SECONDS WEST 551.20 FEET FROM SOUTHEAST SECTION CORNER, THENCE NORTH 89 DEGREES 51 MINUTES 40 SECONDS WEST 120 FEET, THENCE NORTH 00 DEGREES 04 MINUTES 20 SECONDS EAST 330 FEET, THENCE SOUTH 89 DEGREES 51 MINUTES 40 SECONDS EAST 120 FEET, THENCE SOUTH 00 DEGREES 04 MINUTES 20 SECONDS WEST 330 FEET TO BEGINNING, EXCEPT SOUTH 60 FEET IN ROAD.



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

PROPOSED INLET PROTECTION FILTER

SOIL CHARACTE	ERISTICS CHART
TYPE OF SOIL	59 - URBAN LAND
PERCENT OF SITE COVERAGE	100%
HYDROLOGIC SOIL GROUP	N/A
DEPTH TO RESTRICTIVE LAYER	N/A
SOIL PERMEABILITY	N/A
DEPTH TO WATER TABLE	N/A

SEQUENCE OF CONSTRUCTION

- INSTALL SILT FENCE AND CONSTRUCTION ENTRANCE (2 DAYS). ROUGH GRADING AND TEMPORARY SEEDING (20 DAYS).
- EXCAVATE AND INSTALL DRAINAGE PIPING, AND INLET'S (20 DAYS). INSTALL INLET FILTERS (I DAY).
- BUILDING CONSTRUCTION AND SITE IMPROVEMENTS (90 DAYS). CONSTRUCT RIGHT OF WAY IMPROVEMENTS (2 DAYS).
- LANDSCAPING IMPROVEMENTS AND FINAL SEEDING (7 DAYS). REMOVE SOIL EROSION MEASURES (I 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.

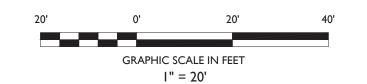
CONTRACTOR SHALL PHASE CONSTRUCTION ACCORDINGLY



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

SOIL EROSION AND SEDIMENT CONTROL NOTES

- I. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL AIR QUALITY
- STANDARDS. 3. THE CONTRACTOR IS RESPONSIBLE TO INSPECT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER A PRECIPITATION EVENT GREATER THAN I INCH. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG ON SITE AND DOCUMENT CORRECTIVE ACTION TAKEN THROUGHOUT THE COURSE OF CONSTRUCTION AS REQUIRED.



SUBMISSION FOR PRE-APPLICATION MEETII DESCRIPTION	JRC BY	07/08/2021 DATE	I ISSUE	
REVISED PER CITY COMMENTS	ЕСМ	08/02/2021	2	
REVISED PER FIRE DEPARTMENT COMMENT	RAC	08/20/2021	3	
SUBMISSION FOR SITE PLAN APPROVAL	RAC / ECM	09/08/2021	4	_
REVISED PER CITY SITE PLAN REVIEW	JRC / ECM	12/28/2021	2	
REVISED PER CITY SECOND SITE PLAN REVI	JRC / ECM	02/09/2022	9	

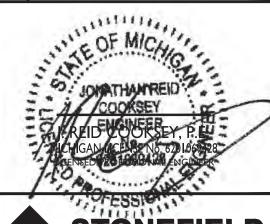
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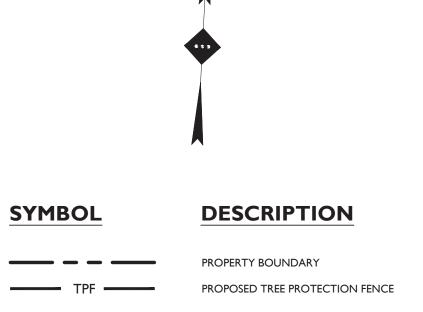
I" = 20' PROJECT ID: DET-200412

SOIL EROSION & SEDIMENT CONTROL

DRAWING:

PLAN





	TREE MITIGATION REQUIRE	MENTS	
CODE SECTION	REQUIRED	PROPOSED	
§ 126-327(2)	MINIMUM PRESERVATION PERCENTAGE:	9 REGULATED TREES TO	
	40% PRESERVATION OF REGULATED TREES	BE PRESERVED (75%)	
	12 REGULATED TREES		
	12 TREES X 0.40 = 5 REGULATED TREES TO BE PRESERVED		
§ 126-397	REGULATED TREE REPLACEMENT:	3 TREES	
	1:1		
	3 TREES REMOVED = 3 TREES REQUIRED		
§ 126-397(3)	SPECIMEN TREE REPLACEMENT:	8" DBH (4 TREES @ 2" EACH)	
	50% OF TOTAL DBH TO BE REPLACED		
	(20" TOTAL DBH)X(0.50)=10" DBH		
	I SPECIMEN TREE PRESERVED=2" CREDIT		
	(10" DBH)-(2" CREDIT)=8" DBH REQUIRED		

LANDSCAPE AND BUFFER REQUIREMENTS					
CODE SECTION	REQUIRED	PROPOSED			
§ 138-12.300	BUFFER REQUIREMENTS: B-2 TO R-2				
	BUFFER WIDTH W/O 6 FT WALL: 25 FT	25.0 FT			
	DECIDUOUS TREES PER 100 LF: 2.5 EA				
	(II9 LF)/(I00) = I.I9				
	(1.19 * 2.5) = 3 TREES REQUIRED	3 EXISTING TREES			
	ORNAMENTAL TREES PER 100 LF: 1.5 EA				
	(1.19 * 1.5) = 2 TREES REQUIRED	2 EXISTING TREES			
	EVERGREEN TREES PER 100 LF: 5 EA				
	(1.19 * 5) = 6 TREES REQUIRED	6 PROPOSED TREES			
	SHRUBS PER 100 LF: 8 EA				
	(1.19 * 8) = 10 SHRUBS REQUIRED	10 EXISTING SHRUBS			
§ 138-12.301(A)(1)	INTERIOR LANDSCAPING:				
	5% OF PARKING LOT AREA				
	$(15,530 \text{ SF}) \times (0.05) = 777 \text{ SF}$	1,272 SF			
	I TREE PER 150 SF				
	(777 SF / 150 SF) = 5 TREES	5 TREES (I EXISTING			
§ 138-12.301(A)(2)	TERMINAL ISLANDS:				
	MIN. 144 SF, 18 FT LONG				
	I TREE PER ISLAND	PROVIDED			
§ 138-12.301(A)(3)	INTERIOR ISLANDS:				
	MIN. 160 SF, 8 FT WIDTH				
	I TREE PER ISLAND	PROVIDED			
§ 138-12.301(B)(1)	PERIMETER LANDSCAPING:				
	I DECIDUOUS TREE PER 25 LF				
	(18.5 LF /25) = I TREE	I EXISTING TREE			
	I ORNAMENTAL TREE PER 35 LF				
	(18.5 LF /35) = I TREE	I EXISTING TREE			
§ 138-12.301(B)(2)	PARKING LOT WITHIN 30 FT OF ROW:				
	CONTINUOUS SHRUB HEDGE 30" O.C.	PROVIDED			
	RIGHT-OF-WAY LANDSCAPING:				
§ 138-12.304(A)(1)	I DECIDUOUS TREE PER 35 LF				
	(I20 LF / 35 LF)= 4 TREES	4 TREES (I EXISTING			
§ 138-12.304(B)	I ORNAMENTAL TREE PER 60 LF				
	(120 LF / 60 LF) = 2 TREES	2 PROPOSED TREES			

nclude Road and Pathway Sight Lines. ee attached details and include with the olan detail sheets.

The response letter indicates the submission of a landscape cost estimate but this could not be identified in the plans. A landscape planting cost estimate including irrigation should be provided.

			PROPOSED PLANT	SCHEDULE			
DECIDUOUS TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
£+3	GIN	6	GINKGO BILOBA `AUTUMN GOLD`	AUTUMN GOLD MAIDENHAIR TREE	2.5" - 3" CAL	B&B	AS SHOWN
ORNAMENTAL TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
	QUE	4	malus x 'Indian summer'	INDIAN SUMMER CRABAPPLE	2.5" - 3" CAL	B&B	AS SHOWN
	CER	2	CERCIS CANADENSIS	EASTERN REDBUD	2.5" - 3" CAL	B&B	AS SHOWN
EVERGREEN TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
	THU	12	THUJA X `GREEN GIANT`	GREEN GIANT ARBORVITAE	8'-10' (2" DBH MINIMUM FOR REPLACEMENT TREES)	B&B	AS SHOWN
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
\otimes	ILE	8	ILEX CRENATA 'COMPACTA'	DWARF JAPANESE HOLLY	24" - 30"	B&B	AS SHOWN
\odot	ILEX	16	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	24" - 30"	POT	AS SHOWN

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

IRRIGATION NOTES:

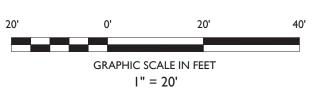
- I. IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA, PRIOR TO CONSTRUCTION. DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS 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,
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- 3. IRRIGATION OVERSPRAY SHALL NOT BE BROADCAST ONTO CITY PATHWAYS

MAINTENANCE NOTES:

- I. LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION, FREE FROM DEBRIS AND REFUSE.
- 2. PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.
- 3. ALL DEAD, DAMAGED, OR DISEASED PLANT MATERIAL SHALL BE REMOVED IMMEDIATELY AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. FOR PURPOSES OF THIS SECTION, THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH I AND JUNE I AND FROM OCTOBER I UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH I AND JUNE I. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE. THE CITY MAY NOTIFY PROPERTY
- OWNERS OF THE NEED TO REPLACE DEAD, DAMAGED, OR DISEASED MATERIAL. 4. THE APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD AND INTEGRAL PART OF THE SITE PLAN APPROVAL. UNLESS OTHERWISE APPROVED IN ACCORDANCE WITH THE AFOREMENTIONED PROCEDURES, ANY REVISIONS TO OR REMOVAL OF PLANT MATERIALS, OR NON-COMPLIANCE WITH THE MAINTENANCE REQUIREMENTS OF THIS SECTION 138-12.109 WILL PLACE THE PARCEL IN NON-CONFORMITY WITH THE APPROVED LANDSCAPE PLAN AND BE A VIOLATION OF THIS ORDINANCE.
- 5. IF PROTECTED TREES ARE DAMAGED, A FINE SHALL BE ISSUED ON AN INCH-BY-INCH BASIS AT A MONETARY RATE AS DEFINED BY THE FORESTRY DEPARTMENT.

LANDSCAPING NOTES

- 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.
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- RIGHT-OF-WAY. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC ROAD. (TREES MUST BE PLANTED AT LEAST 15' AWAY FROM CURB OR ROAD EDGE WHÈRE THE SPEED LIMIT IS MORE THAN 35 MPH.) SHADE TREES AND SHRUBS MUST BE PLANTED AT LEAST 5' FROM THE EDGE OF THE PUBLIC WALKWAY. EVERGREEN AND ORNAMENTAL TREES MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC WALKWAY. NO TREES OR SHRUBS MAY BE PLANTED WITHIN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY STREET RIGHT-OF-WAY LINES AT A DISTANCE ALONG EACH LINE OF 25' FROM THEIR POINT OF INTERSECTION. NO TREES OR SHRUBS MAY BE PLANTED IN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY DRIVEWAY WITH A PUBLIC WALKWAY AT A DISTANCE ALONG EACH LINE OF 15' FROM THEIR POINT OF INTERSECTION. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM ANY FIRE HYDRANT. SHADE AND EVERGREEN TREES MUST BE AT LEAST 15' AWAY FROM THE NEAREST OVERHEAD WIRE. TREES MUST BE PLANTED A MINIMUM OF 5' FROM AN UNDERGROUND UTILITY, UNLESS THE CITY'S LANDSCAPE ARCHITECT REQUIRES A GREATER DISTANCE. PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS FORESTRY UNIT NEEDS TO INSPECT ALL TREES, EXISTING OR PLANTED, TO IDENTIFY ANY THAT POSE A HAZARD TO THE SAFE USE OF THE PUBLIC RIGHT-OF-WAY. FORESTRY MAY REQUIRE THE DEVELOPER TO REMOVE, AND POSSIBLY REPLACE, ANY SUCH TREES. THE ABOVE REQUIREMENTS ARE INCORPORATED INTO THE
- 8. PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS MUST INSPECT ALL LANDSCAPING PLANTINGS.

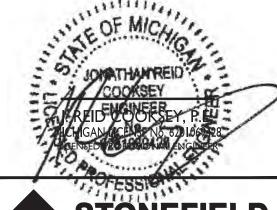


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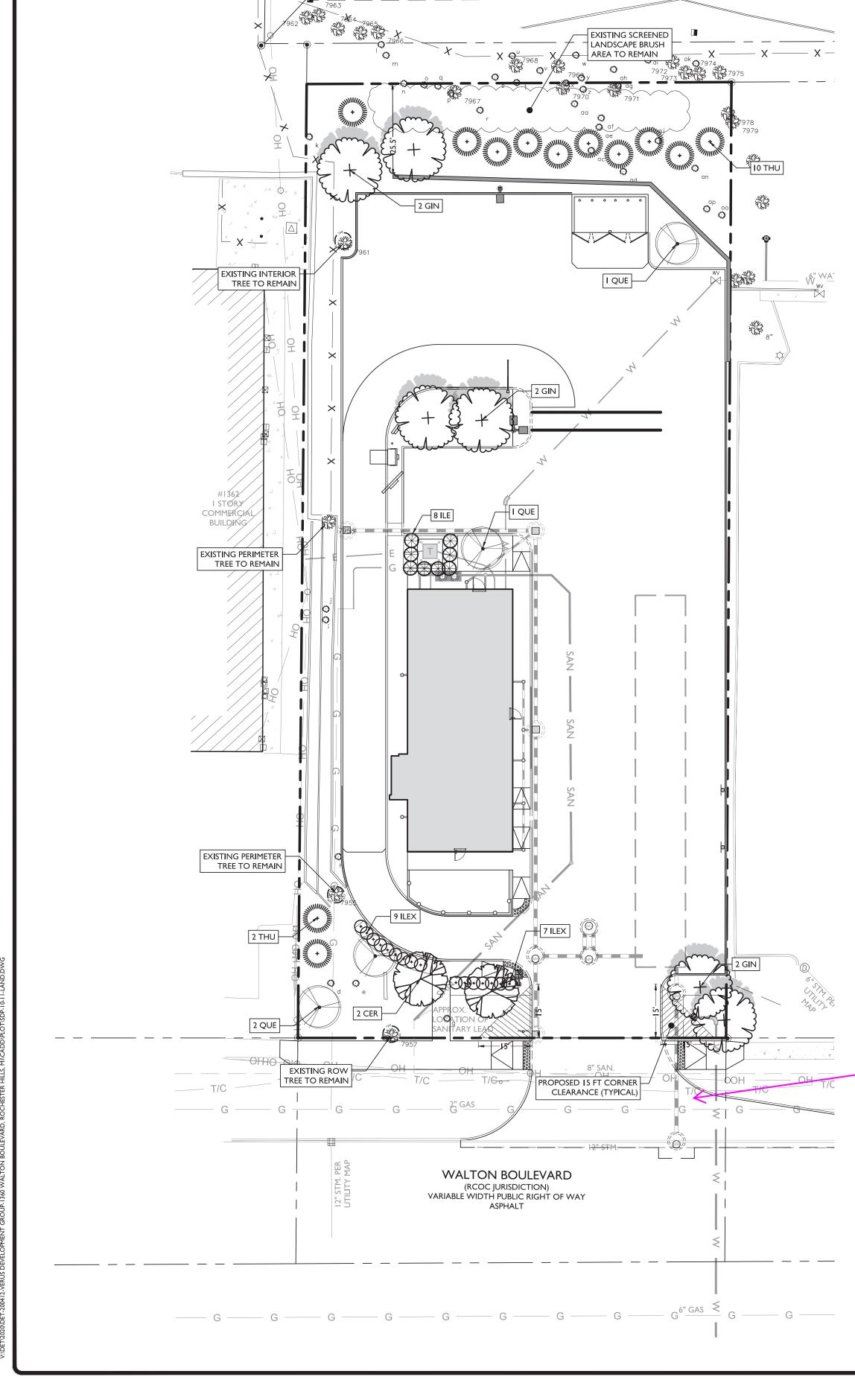


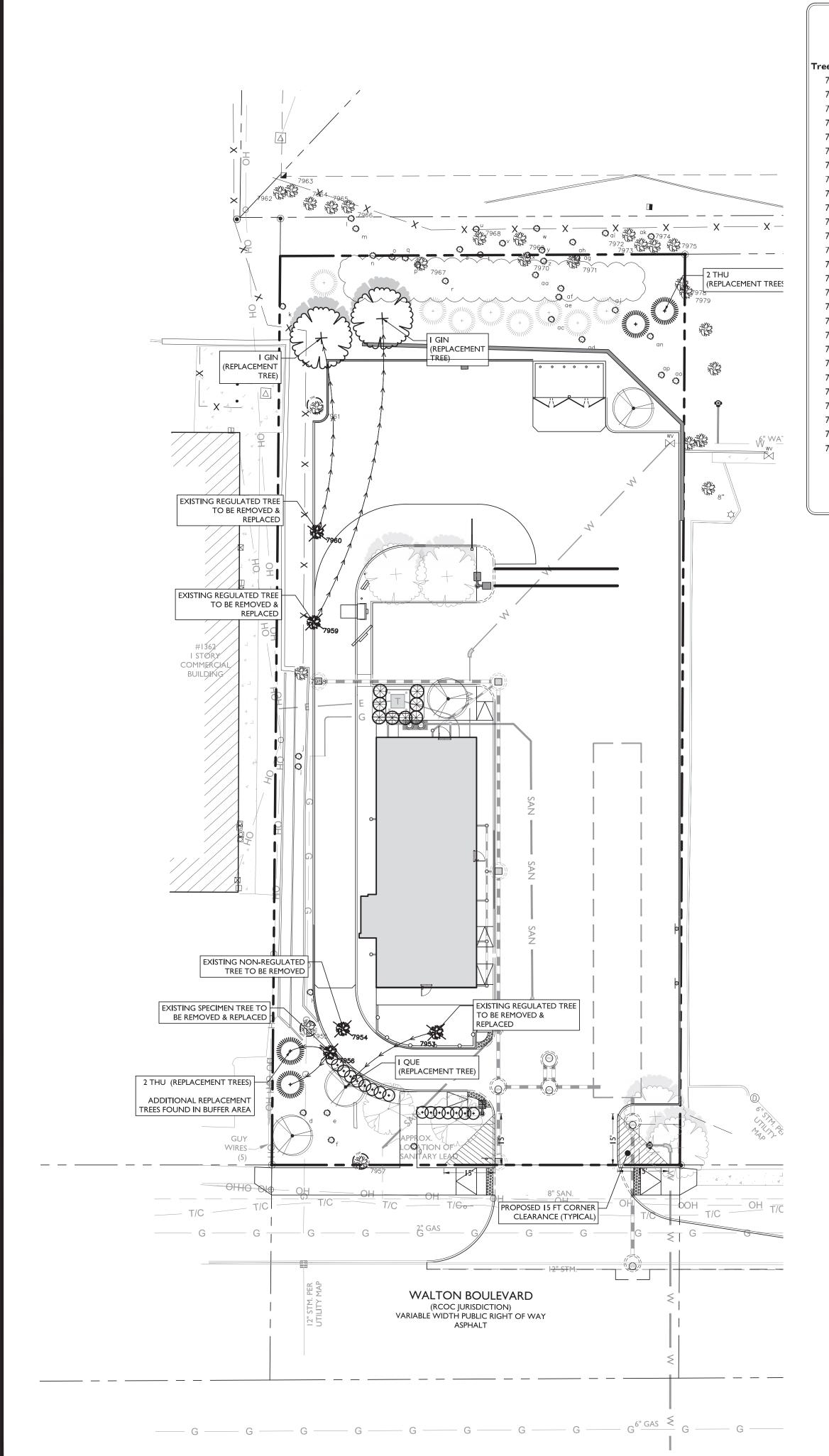


CITY FILE #21-030 SECTION #9

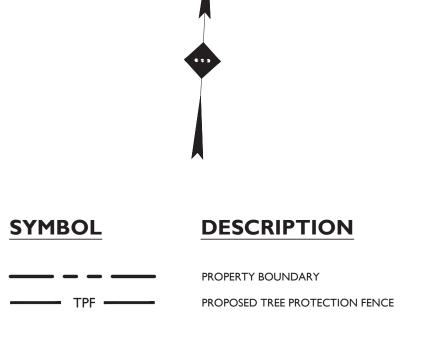
I" = 20' PROJECT ID: DET-200412

LANDSCAPING PLAN









	TREE MITIGATION REQUIRE	EMENTS
CODE SECTION	REQUIRED	PROPOSED
§ 126-327(2)	MINIMUM PRESERVATION PERCENTAGE:	9 REGULATED TREES TO
	40% PRESERVATION OF REGULATED TREES	BE PRESERVED (75%)
	12 REGULATED TREES	
	12 TREES X 0.40 = 5 REGULATED TREES TO BE PRESERVED	
§ 126-397	REGULATED TREE REPLACEMENT:	3 TREES
	1:1	
	3 TREES REMOVED = 3 TREES REQUIRED	
§ 126-397(3)	SPECIMEN TREE REPLACEMENT:	8" DBH (4 TREES @ 2" EACH)
	50% OF TOTAL DBH TO BE REPLACED	
	(20" TOTAL DBH)X(0.50)=10" DBH	
	I SPECIMEN TREE PRESERVED=2" CREDIT	
	(10" DBH)-(2" CREDIT)=8" DBH REQUIRED	

LANDSCAPE AND BUFFER REQUIREMENTS						
CODE SECTION	REQUIRED	PROPOSED				
§ 138-12.300	BUFFER REQUIREMENTS: B-2 TO R-2					
	BUFFER WIDTH W/O 6 FT WALL: 25 FT	25.0 FT				
	DECIDUOUS TREES PER 100 LF: 2.5 EA					
	(119 LF)/(100) = 1.19					
	(1.19 * 2.5) = 3 TREES REQUIRED	3 EXISTING TREES				
	ORNAMENTAL TREES PER 100 LF: 1.5 EA					
	(1.19 * 1.5) = 2 TREES REQUIRED	2 EXISTING TREES				
	EVERGREEN TREES PER 100 LF: 5 EA					
	(1.19 * 5) = 6 TREES REQUIRED	6 PROPOSED TREES				
	SHRUBS PER 100 LF: 8 EA					
	(1.19 * 8) = 10 SHRUBS REQUIRED	10 EXISTING SHRUBS				
§ 138-12.301(A)(I)	INTERIOR LANDSCAPING:					
	5% OF PARKING LOT AREA					
	(15,530 SF)×(0.05) = 777 SF	1,272 SF				
	I TREE PER 150 SF					
	(777 SF / 150 SF) = 5 TREES	5 TREES (I EXISTING)				
§ 138-12.301(A)(2)	TERMINAL ISLANDS:					
	MIN. 144 SF, 18 FT LONG					
	I TREE PER ISLAND	PROVIDED				
§ 138-12.301(A)(3)	INTERIOR ISLANDS:					
	MIN. 160 SF, 8 FT WIDTH					
	I TREE PER ISLAND	PROVIDED				
§ 138-12.301(B)(1)	PERIMETER LANDSCAPING:					
	I DECIDUOUS TREE PER 25 LF					
	(18.5 LF /25) = I TREE	I EXISTING TREE				
	I ORNAMENTAL TREE PER 35 LF					
	(18.5 LF /35) = I TREE	I EXISTING TREE				
§ 138-12.301(B)(2)	PARKING LOT WITHIN 30 FT OF ROW:					
	CONTINUOUS SHRUB HEDGE 30" O.C.	PROVIDED				
	RIGHT-OF-WAY LANDSCAPING:					
§ 138-12.304(A)(1)	I DECIDUOUS TREE PER 35 LF					
. , , ,	(I20 LF / 35 LF)= 4 TREES	4 TREES (I EXISTING)				
§ 138-12.304(B)	I ORNAMENTAL TREE PER 60 LF					
	(120 LF / 60 LF) = 2 TREES	2 PROPOSED TREES				

PROPOSED PLANT SCHEDULE									
DECIDUOUS TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING		
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NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

⊥ (20" dbh)

IRRIGATION NOTES:

REMAINING:

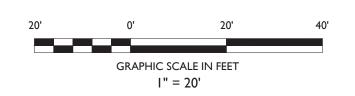
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NOT APPROVED FOR CONSTRUCTION





CITY FILE #21-030 SECTION #9

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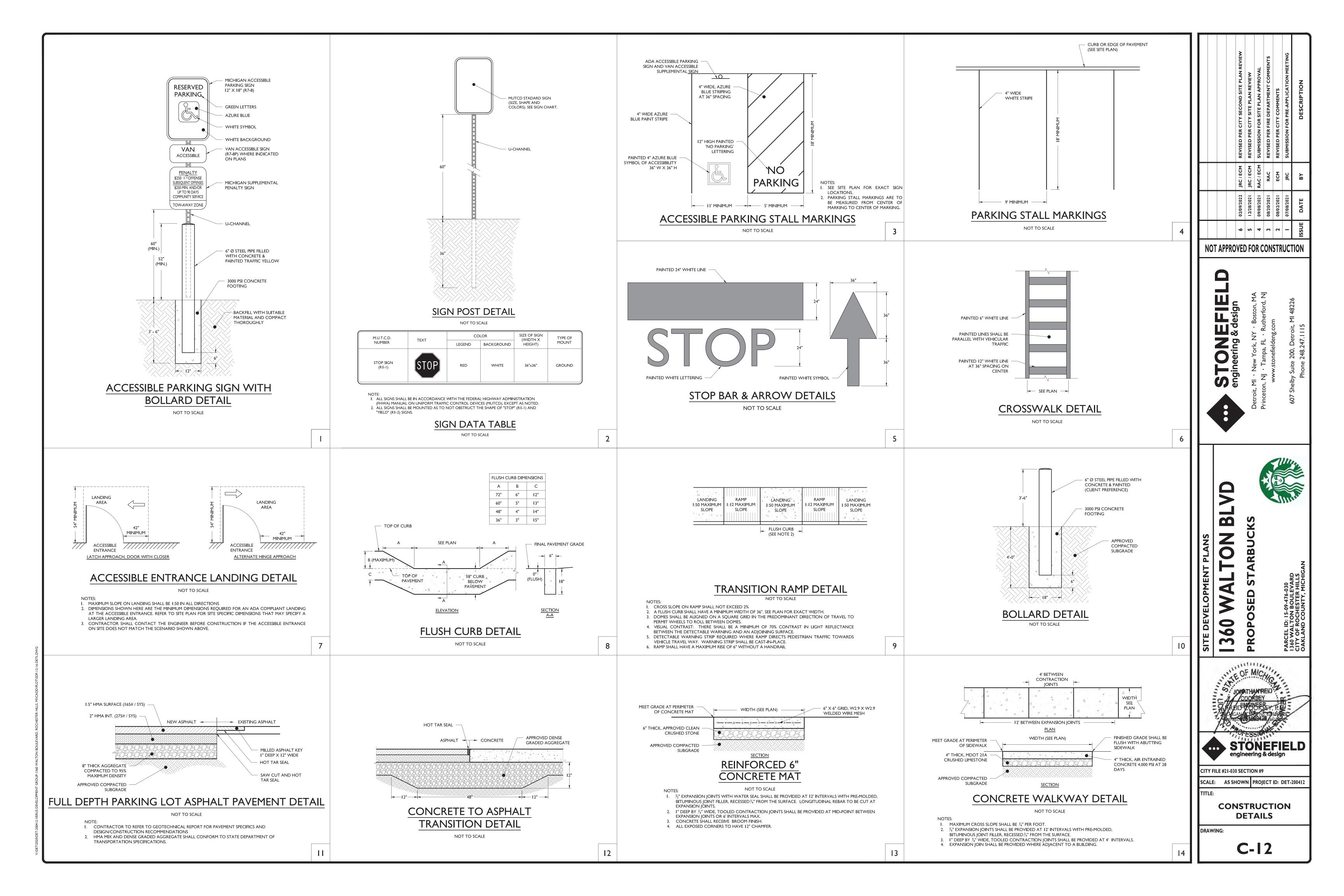
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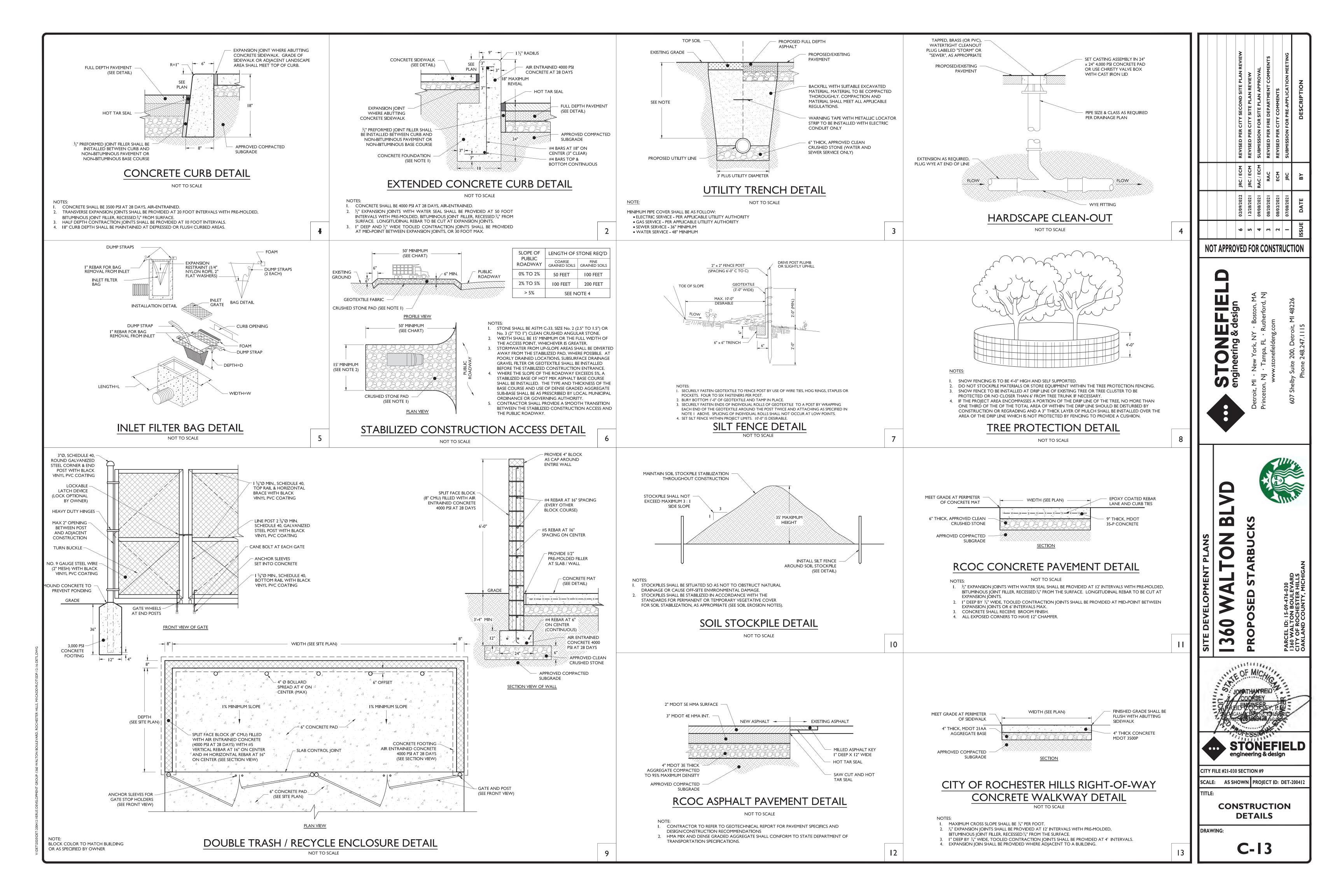
I" = 20' PROJECT ID: DET-200412

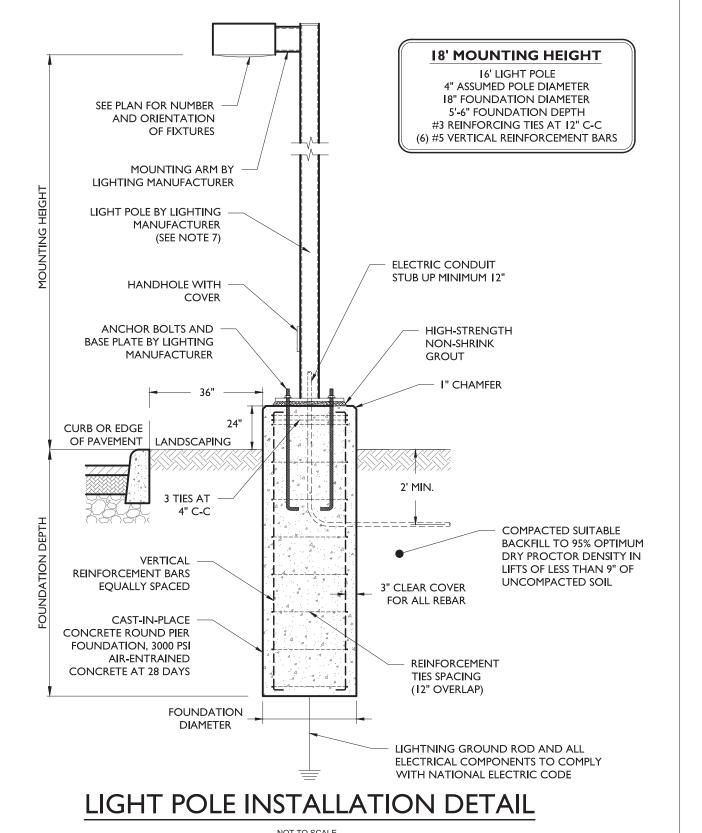
TREE REPLACEMENT

DRAWING:

PLAN







NOT TO SCALE

I. 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. ALL REBAR TO BE NEW GRADE 60 STEEL

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.

CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" (WITHIN I" TOLERANCE). POLE SHALL BE RATED FOR 10 MPH HIGHER THAN MAXIMUM WIND SPEED 33FT ABOVE GROUND FOR THE AREA BASED

NOTES:

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.

15' MOUNTING HEIGHT 13' LIGHT POLE 4" ASSUMED POLE DIAMETER 18" FOUNDATION DIAMETER SEE PLAN FOR NUMBER 5'-6" FOUNDATION DEPTH AND ORIENTATION #3 REINFORCING TIES AT 12" C-C OF FIXTURES (6) #5 VERTICAL REINFORCEMENT BARS MOUNTING ARM BY LIGHTING MANUFACTURER LIGHT POLE BY LIGHTING MANUFACTURER (SEE NOTE 7) ELECTRIC CONDUIT STUB UP MINIMUM 12" HANDHOLE WITH -ANCHOR BOLTS AND -HIGH-STRENGTH BASE PLATE BY LIGHTING NON-SHRINK MANUFACTURER GROUT CURB OR EDGE OF PAVEMENT LANDSCAPING 2' MIN. 3 TIES AT 4" C-C COMPACTED SUITABLE BACKFILL TO 95% OPTIMUM DRY PROCTOR DENSITY IN VERTICAL LIFTS OF LESS THAN 9" OF REINFORCEMENT BARS UNCOMPACTED SOIL **EQUALLY SPACED** 3" CLEAR COVER FOR ALL REBAR CAST-IN-PLACE -CONCRETE ROUND PIER FOUNDATION, 3000 PSI AIR-ENTRAINED REINFORCEMENT CONCRETE AT 28 DAYS TIES SPACING (I2" OVERLAP) FOUNDATION DIAMETER LIGHTNING GROUND ROD AND ALL **ELECTRICAL COMPONENTS TO COMPLY** WITH NATIONAL ELECTRIC CODE LIGHT POLE INSTALLATION DETAIL

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NOT TO SCALE

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LIGHT FIXTURES 'A-C' SPECIFICATIONS

NOT TO SCALE

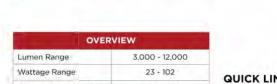


LIGHT FIXTURE 'D' SPECIFICATIONS

TOP VIEW







QUICK LINKS 107 - 140 Ordering Guide Performance Photometrics Dimensions

features over-voltage, under-voltage, short-

circuit and over temperature protection.

Standard Universal Voltage (120-277 Vac)

Operating temperature: -40°C to +50°C

Input 50/60 Hz or optional High Voltage

Custom lumen and wattage packages

0-10V dimming (10% - 100%) standard

L80 Calculated Life: >100k Hours

Total harmonic distortion: <20%

(347-480 Vac).

(-40°F to +122°F).

3) 372-3200 = < 2020 LSI Industries Inc. All Rights Reserved. Specifications subject to change without nature.

Power factor: >.90

FEATURES & SPECIFICATIONS

Construction Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Hinged die-cast aluminum wiring access door located underneath. Galvanized-steel universal wall mount bracket comes standard with hinging mechanism to easily access the junction

box wire connections without removing ti

 Optional pole-mounting bracket (XPMA) permits mounting to standard poles. . Fixtures are finished with LSI's DuraGrip polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.

Optical System

sheet delivers industry leading optical control with an integrated gasket to provide IP65 rated sealed optical chamber in 1 Proprietary silicone refractor optics provide exceptional coverage and uniformity in Types 2, 3, and Forward Throw (FT)

transmittance of 93%. Zero uplight. Available in 5000K, 4000K and 3000K with Peak intensity at 610nm. . Minimum CRI of 70.

Available in Phosphor Converted Amber

. Silicone optical material does not yellow or crack with age and provides a typical light color temperatures per ANSI C78.377. Also

Electrical High-performance programmable driver

LSt Industries Inc. 10000 Alliande Rd. Cincinnati, OH 45242 • www.lsicorp.com

· Shipping weight: 30 lbs in carton. State-of-the-Art one piece silicone optic

on the housing for ease of maintenance. The fixture delivers 1500 lumens during emergency mode. Controls Integral passive infrared Bluetooth™ motion and photocell sensor options. Fixtures operate independently and can be commissioned via an iOS or Android configuration app. Updates and modifications to the control strategy are

 Input power stays constant over life. Optional 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2). High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed via hinged door. Optional integral emergency battery pack vides 90-minutes of constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed

easily implemented via an intuitive app. LSI's AirLink™ Blue lighting control system is a simple feature rich wireless Bluetooth

sensor module provides wireless control of grouped fixtures based on motion sensors. daylight or a fully customizable schedule. Universal wall mounting plate easily mounts directly to 4" octagonal or square junction 2 fasteners secure the hinged door underneath the housing and provide quick & easy access to the electrical compartment Optional terminal block accepts up to 12 ga · LSI LED Fixtures carry a 5-year warranty. 1 Year warranty on Battery Back-up option

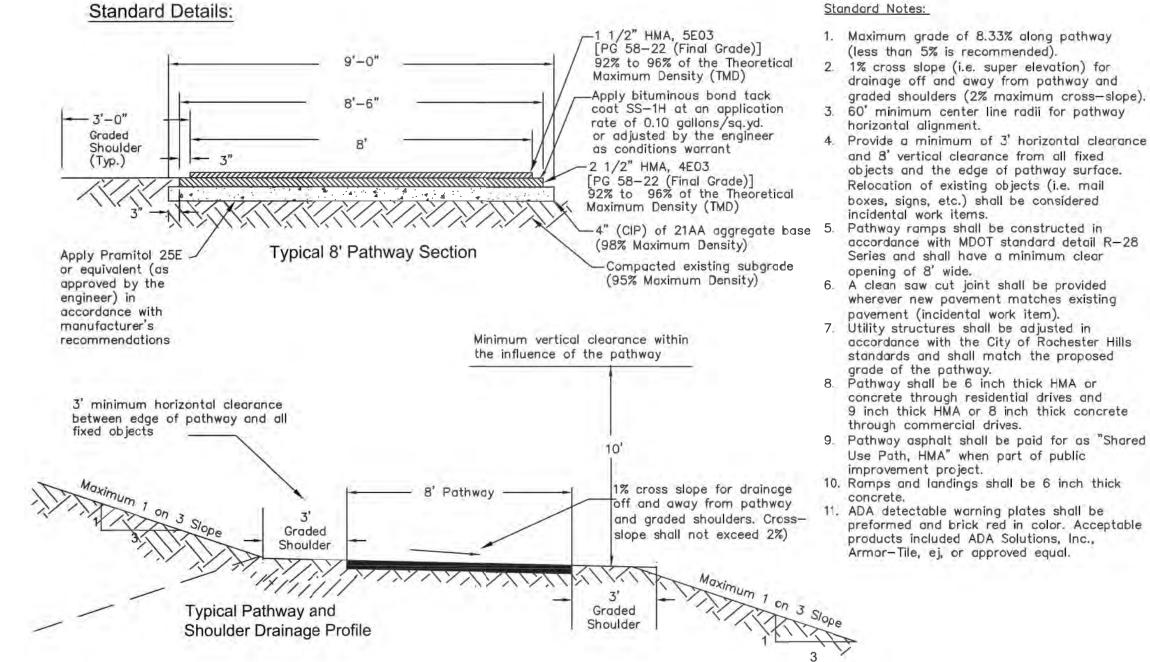
 Listed to UL 1598 and UL 8750. Meets Buy American Act requirements

IDA compliant; with 3000K or lower color temperature selection. · Title 24 Compliant; see local ordinance for qualification information. Suitable for wet Locations. · IP65 rated luminaire per IEC 60598. · 3G rated for ANSI C136,31 high vibration applications when pole mounted (using

optional XPMA bracket) or wall mounted. IKO8 rated luminiare per IEC 66262 mechanical impact code DesignLights Consortium (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights org/QPL to confirm which versions are

LIGHT FIXTURES 'E & F' SPECIFICATIONS

NOT TO SCALE



CITY OF ROCHESTER HILLS PATHWAY CONSTRUCTION DETAILS

w/composite covers: 266 lbs. (For wet weight add 2,310 lbs.) 3. Maximum operating temperature: Capacities - Liquid: 277 gal.; @100 GPM - Grease: 1,895 lbs. @200 GPM - Grease: 1,196 lbs.

Vent not required unless per local code.

Relocation of existing objects (i.e. mail boxes, signs, etc.) shall be considered Pathway ramps shall be constructed in accordance with MDOT standard detail R-28 Series and shall have a minimum clear

opening of 8' wide. 6. A clean saw cut joint shall be provided wherever new pavement matches existing pavement (incidental work item). 7. Utility structures shall be adjusted in accordance with the City of Rochester Hills standards and shall match the proposed

grade of the pathway. 8. Pathway shall be 6 inch thick HMA or concrete through residential drives and 9 inch thick HMA or 8 inch thick concrete through commercial drives. 9. Pathway asphalt shall be paid for as "Shared

Use Path, HMA" when part of public improvement project. 10. Ramps and landings shall be 6 inch thick

ADA detectable warning plates shall be preformed and brick red in color. Acceptable products included ADA Solutions, Inc., Armor-Tile, ej, or approved equal.

SPECIFICATIONS 1. 4" FPT with 4" plain end adapters, single inlet and triple outlet

2. Unit weight - w/cast iron covers: 376 lbs.;

Solids: 69 gal.

5. This unit does not require flow control for 100. GPM applications. Built-in Flow control is provided for 200 GPM applications. For series installations, only install flow control on the first unit in the series if necessary. For gravity drainage applications only. o not use for pressure applications 3. Cover placement allows full access to tank for proper maintenance.

10. Engineered inlet and outlet diffusers are removable to inspect / clean piping.

11. Integral air relief / Anti-siphon / Sampling access.

12. Adjustable cover adapters provide up to 4" of additional height.

13. Fixed outlet models (-FO) have inlet and

outlet permanently welded at the factory in the straight-through (B) positions.

14. Flow rates are based on 2-minute drain time. 15. Safety Star", access restrictor built into each cover adapter, prevents accidental entry to tanks (450 lb rating) **DIFFUSION FLOW TECHNOLOGY**

The inlet diffuser reduces turbulence, creates laminar

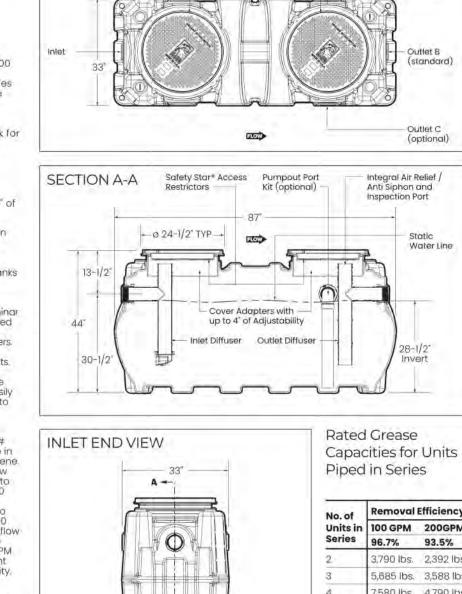
low and allows the entire tank volume to be utilized for efficient grease separation and minimal The inlet diffuser can be attached to any of the three inlets provided to ease job site piping layouts The integral air relief / anti-siphon at the outlet unit during operation. The outlet diffuser can easily be attached to any of the three outlets provided to

ease job site piping layouts. ENGINEER SPECIFICATION GUIDE

Schier Great Basin™ grease interceptor model # GB-250 shall be lifetime guaranteed and made in USA of seamless, rotationally-molded polyethylene Interceptor shall be furnished for above or below grade installation. Interceptor shall be certified to ASME A112.14.3 (Type D for 100 GPM, type C for 200 GPM) and CSA B481.1, with adjustable cover adapters, Safety Star® access restrictor built into ach cover adapter, built-in flow control (for 200 GPM only) and three outlet options. Interceptor flow rate shall be 100 or 200 GPM. Interceptor grease capacity shall be 1,895 lbs. @ 100 GPM or 1,196 GPM @ 200 GPM. Cover shall provide water/ gas-tight seal and have minimum 16,000 lbs. load capacity

CERTIFIED PERFORMANCE Great Bosin™ hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME #A112.14.3 and CSA B481.1 arease interceptor standards and greatly exceed and the International Plumbing Code.

requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code



water tight pickable



GB-250 GREASE INTERCEPTOR DETAIL

NOT TO SCALE

C-14

0 9 No. of Removal Efficiency Units in 100 GPM 200GPM 3,790 lbs. 2,392 lbs. 5,685 lbs. 3,588 lbs. 7.580 lbs. 4.790 lbs.

page 4 of 4

NOT APPROVED FOR CONSTRUCTIO

STONEFIELD engineering & design

CITY FILE #21-030 SECTION #9

SCALE: AS SHOWN PROJECT ID: DET-200412

CONSTRUCTION DETAILS