LAKE SHORE CENTER
SITE IMPROVEMENT PLAN

SHEET INDEX:

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PROPERTY DESCRIPTION:
LOT 2 IN WANDA MANOR PLAT 1, AN OFFICIAL PLAT
IN THE CITY OF ANKENY, POLK COUNTY, IOWA.

ADDRESS:
810 E. 1ST STREET
ANKENY, IOWA 50021

PREPARED FOR:
BIG CREEK DESIGN GROUP
CONTACT: TIM OLSON
109 2ND STREET P.O. BOX 11
POLK CITY, IOWA 50226
PH: (515)-480-4088

OWNER/APPLICANT:
WANDA MANOR COOPERATIVE
CONTACT: BILL KUSY
519 S. SUMMIT STREET
IOWA CITY, IOWA 52240
PH: (515)-974-4277

ZONING:
C-2
GENERAL RETAIL, HIGHWAY ORIENTED,
AND CENTRAL BUSINESS COMMERCIAL DISTRICT

BUILDING SETBACKS:
FRONT YARD = 35.00'
REAR YARD = 40.00'
SIDE YARD = 0' IF ADJACENT TO COMMERCIAL

PARKING REQUIREMENTS:
PARKING REQUIRED:
1 SPACE / 100 SF @ 8,067 SF (INCL. ENCLOSED ROOFTOP AREA) = 81 SPACES
1 SPACE / 4 OUTDOOR SEATS @ 158 SEATS = 40 SPACES
TOTAL PARKING REQUIRED = 121 SPACES

TOTAL PARKING PROVIDED = 81 SPACES (INCL. 4 HC)
(ADDITIONAL 100 SPACES AVAILABLE ON LOT 1, PARKING AGREEMENT
TO BE PROVIDED BETWEEN LOTS BY OWNER)

OPEN SPACE & IMPERVIOUS SURFACE:
TOTAL SITE AREA = 67,409 S.F. = 1.547 ACRES
EXISTING OPEN SPACE = 54,429 S.F. (80.7%)
EXISTING IMPERVIOUS = 12,980 S.F. (19.3%)
PROPOSED OPEN SPACE = 17,248 S.F. (25.6%)
PROPOSED IMPERVIOUS = 50,161 S.F. (74.4%)

ERU CALCULATION:
ERU = 50,161 / 4000 = 13

SITE BENCHMARK:
FOUND CUT "X" LOCATED NEAR NORTHEAST PROPERTY CORNER.
ELEVATION=922.06 (CITY DATUM)

GENERAL NOTES:
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH SUDAS STANDARD SPECIFICATIONS AND ANY AND ALL CITY/COUNTY SUPPLEMENTAL SPECIFICATIONS. THE CITY OF ANKENY MUST BE NOTIFIED BY ALL CONTRACTORS 48 HOURS PRIOR TO COMMENCING WORK.
2. IN EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL UTILITIES. ANY DAMAGE TO SAID UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT O.S.H.A. CODES AND STANDARDS. NOTHING INDIICATED ON THESE PLANS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE APPROPRIATE SAFETY REGULATIONS.
5. ALL NECESSARY CONSTRUCTION SIGNS, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES REQUIRED DURING CONSTRUCTION WILL BE FURNISHED BY THE CONTRACTOR. SIGNS, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES MUST BE IN CONFORMANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
6. BISHOP ENGINEERING SHALL NOT BE LIABLE FOR ANY INJURIES THAT HAPPEN ON SITE. THIS SHALL INCLUDE BUIT NOT BE LIMITED TO TRENCH COLLAPSES FROM VARYING SOIL CONDITIONS OR INJURIES CAUSED BY UNDERGROUND UTILITIES INCLUDING UTILITIES THAT ARE NOT SHOWN ON PLAN.
7. THE CONTRACTOR IS LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTIOIN OR INACTION IN PROVIDING FOR STORM WATER FLOW DURING CONSTRUCTION. DO NOT RESTRICT FLOWS IN EXISTING DRAINAGE CHANNELS, STORM SEWER, OR FACILITIES.
8. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SCHEDULE FOR PERFORMANCE OF WORK ITEMS. THIS SCHEDULE SHALL BE PROVIDED BY THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. NO WORK SHALL BEGIN UNTIL A SCHEDULE HAS BEEN SUBMITTED AND ACCEPTED. THE CONTRACTOR SHALL THEN PERFORM WORK TO CONFORM TO THE ACCEPTED SCHEDULE.
9. LABORATORY TESTS SHALL BE PERFORMED BY THE OWNER UNLESS OTHERWISE NOTED. THE CONTRACTOIR SHALL PROVIDE SAMPLES OF MATERIAL REQUIRED FOR LABORATORY TESTS AND TESTING IN ACCORDANCE WITH THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
10. SOIL IMPORT OR EXPORT ON THIS PROJECT SHALL BE CONSIDERED INCIDENTAL AND WILL NOT BE MEASUIRED OR PAID FOR SEPARATELY.
11. THE CONTRACTOR SHALL PROTECT ALL STRUCTURES NOT SHOWN AS REMOVALS ON THE PLANS.
12. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS PRIOR TO ANY CONSTRUCTION. CONTRAICTOR SHALL WORK WITH OWNER OR OWNERS REPRESENTATIVE ON ALL REQUIRED STORM WATER DISCHARGE PERMITS FROM THE IIOWA DEPARTMENT OF NATURAL RESOURCES AND THE CITY OF ANKENY.
13. GRADING AND EROSION CONTROL SHALL BE DONE IN ACCORDANCE WITH THE APPROVED GRADING PLAN, SWPPP, NPDES DOCUMENTS, AND IOWA DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS.
14. THE CONTRACTOR SHALL PICK UP ANY DEBRIS SPILLED ONTO THE ADJACENT RIGHT OF WAY OR ABUTTING PIROPERTIES AS THE RESULT OF CONSTRUCTION, AT THE END OF EACH WORK DAY.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE PROMPT REMOVAL OF ALL MUD THAT HAS BEEN TRACKED OR WASHED UNTO ADJACENT PROPERTY OR RIGHT OF WAY UNTIL SUCH TIME THAT PERMANENT VEGETATION HAS BEEN ESTABLISHIED.
16. DISPOSE OF ALL EXCESS MATERIALS AND TRASH IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS. PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIALS NOT DESIRABLE FOR INCORPORATION INTO THE PROJECT.

PAVING NOTES:
1. THE PAVING/ GRADING CONTRACTOR SHALL BACKFILL THE PAVING SLAB AND FINE GRADE THE RIGHT OF WAY AS SOON AFTER THE PAVING AS POSSIBLE. ALL AREAS SHALL BE SEEDED IN ACCORDANCE WITH CITY OF ANKENY STANDARD SPECIIFICATIONS AND THE CURRENT VERSION OF SUDAS.
2. SUBGRADE PREPARATION AND PAVEMENTS WILL BE CONSTRUCTED FOLLOWING RECOMMENDATIONS IN THE SOILS REPORT. APPROVED SOILS ENGINEER MUST SIGN OFF ON SUBASE PRIOR TO ANY PAVEMENT BEING PLACED.
3. SEE DETAILS FOR ALL PAVEMENT THICKNESS.
4. ALL PEDESTRIAN WALKWAYS THAT UNLOAD INTO A VEHICLES TRAVELED PATH MUST HAVE A.D.A. DETECTABLE: WARNING PLANEL(S) AS PER A.D.A. REGULATIONS. PANEL TYPE & COLOR SHALL BE PER CITY STANDARD.
5. ALL WALKS, PARKING LOTS, HANDICAP PARKING, RAMPS, ETC. SHALL COMPLY WITH ALL A.D.A. AND CITY CODES.. HANDICAP PARKING SIGNAGE IS REQUIRED FOR ALL HANDICAP STALLS AND SHALL BE CONSIDERED INCIDENTAL. IN EVENT OF A DISICREPANCY BETWEEN THE PLANS AND THE A.D.A./CITY CODES THE A.D.A./CITY CODES SHALL GOVERN. CONTRACTOR SHALL BIE RESPONSIBLE FOR ENSURING A.D.A. CODES ARE MET.

UTILITY NOTES:
1. QUANTITY CALLOUTS ON PIPE LENGTHS ARE APPROXIMATE AND SHOULD BE USED FOR REFERENCE ONLY.
2. THE CONTRACTOR SHALL PROVIDE AS-BUILTS OF ALL UTILITIES, INCLUDING DEPTH AND LOCATION OF ALL SERWICES.
3. THE CONTRACTOR SHALL COORDINATE THE ADJUSTMENT OF ANY AND ALL EXISTING AND PROPOSED UTIILITIES TO PROPOSED GRADES. EXISTING UTILITIES SHALL BE RAISED OR LOWERED IN ACCORDANCE WITH THE UTILITY OWNER IREQUIREMENTS. ANY NECESSARY ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
4. ACTIVE EXISTING FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE REPAIRED, REROUTED, OR CIONNECTED TO PUBLIC OR PRIVATE STORM SEWER TO REMAIN IN SERVICE.
5. ALL PROPOSED RCP STORM SEWER PIPE JOINTS SHALL BE FABRIC WRAPPED AND THE LAST 3 PIPE SECTIONS ON THE APRON SHALL BE TIED WITH RF-14 TYPE II CONNECTORS. ALL APRONS SHALL HAVE A STANDARD FOOTING AND TRASH GUARID.
6. SANITARY SEWER SERVICE CONNECTIONS SHALL BE PLACED AT A SLOPE OF NO LESS THAN 2%. SERVICES SHALL MAINTAIN 18" OF VERTICAL SEPARATION FROM THE WATERMAIN WITH 18" OF COMPACTED LOW PERMEABILITY SOIL BETWEENI THE UTILITIES WITHIN 10' OF THE CROSSING.
7. MANDREL AND PRESSURE TESTS SHALL BE REQUIRED FOR ALL PROPOSED SANITARY LINES. TELEVISING OF THE SANITARY SEWER SYSTEM SHALL BE COMPLETED PRIOR TO PAVING UNLESS OTHERWISE APPROVED BY JURISDICTION.
8. WATERMAINS SHALL BE C-900. SIZE OF WATERMAIN AS SHOWN ON PLANS.
9. THRUST BLOCKS SHALL BE INSTALLED AS REQUIRED AND SHALL BE CONSIDERED INCIDENTAL TO WATERMAIN CONSTRUCTION.
10. PROPOSED WATERMAIN SHALL BE PRESSURE TESTED, BACTERIA TESTED AND CHLORINATED. THE FILLING OF THE WATER MAIN SHALL BE DONE BY THE CITY OF ANKENY.
11. TRACER WIRE SHALL BE ADDED TO ALL WATER MAIN, AND BROUGHT TO THE SURFACE AT EVERY HYDRANT.
12. ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY OF ANKENY WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.
13. THE MINIMUM HYDRANT LEAD SHALL BE 3.5 FEET.

VICINITY MAP
NOT TO SCALE

UTILITY CONFLICT NOTES:
1. UTILITY CONFLICTS MAY EXIST ACROSS THE SITE WITH NEW UTILITIES, GRADING, PAVING ETC. MOST UTILITY CONFLICTS HAVE BEEN CALLED OUT FOR CONTRACTOR CONVENIENCE.
2. CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY CONFLICTS THAT ARE EITHER CALLED OUT ON THE PLANS OR THAT CAN BE SEEN ON THE PLANS BETWEEN AND EXISTING UTILITY AND PROPOSED CONSTRUCTION

WETLAND NOTES:
1. BISHOP ENGINEERING DOES NOT PERFORM WETLAND STUDIES OR WETLAND MITIGATION. IT IS THE OWNER'S RESPONSIBILITY TO DETERMINE IF ANY WETLANDS ARE LOCATED ON THE PROJECT SITE AND PERFORM ANY NECESSARY MITIGATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

SWPPP NOTES:
1. STORM WATER POLLUTION PREVENTION PLAN HAS BEEN PREPARED BY BISHOP ENGINEERING. CONTACT CHARLES BISHOP (515-276-0467) FOR A COPY OF THE SWPPP.

LEGEND:
- SAN — SANITARY SEWER
- ST — STORM SEWER
- W — WATER LINE
- G — GAS LINE
- U/E — UNDERGROUND ELECTRIC
- O/E — OVERHEAD ELECTRIC
- TELE — TELEPHONE LINE
- F/O — FIBER OPTIC
- CATV — CABLE TV
- STORM MANHOLE
- CURB INTAKE
- SURFACE INTAKE
- FLARED END SECTION
- SANITARY MANHOLE
- CLEANOUT
- FIRE HYDRANT
- SPRINKLER
- IRRIGATION CONTROL VALVE
- WATER MANHOLE
- WELL
- WATER VALVE
- WATER SHUT OFF
- YARD HYDRANT
- ELECTRIC MANHOLE
- ELECTRIC METER
- ELECTRIC RISER
- ELECTRIC VAULT
- POWER POLE
- TRANSFORMER POLE
- LIGHT POLE
- ELECTRIC JUNCTION BOX
- ELECTRIC PANEL
- TRANSFORMER
- GROUND LIGHT
- GUY WIRE
- ELECTRIC HANDHOLE
- GAS METER
- GAS VALVE
- AIR CONDITIONING UNIT
- TELEPHONE RISER
- TELEPHONE VAULT
- TELEPHONE MANHOLE
- TRAFFIC SIGNAL MANHOLE
- FIBER OPTIC RISER
- FIBER OPTIC FAULT
- CABLE TV RISER
- SIGN
- DENOTES NUMBER OF PARKING STALLS
- PROPERTY CORNER - FOUND AS NOTED
- PROPERTY CORNER- PLACED 3/4" IRON PIPE WITH YELLOW PLASTIC CAP ID #14775
- SECTION CORNER - FOUND AS NOTED

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

UTILITY NOTE:
THE LOCATION OF THE UTILITIES INDICATED ON THE PLANS HAVE BEEN TAKEN FROM THE FIELD SURVEY, EXISTING PUBLIC RECORDS, AND PLANS PROVIDED BY OTHERS. SURFACE UTILITY LOCATIONS HAVE BEEN FIELD LOCATED BY BISHOP ENGINEERING, UNLESS OTHERWISE NOTED. ALL UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE LOCATIONS ONLY. BISHOP ENGINEERING DOES NOT GUARANTEE THE UNDERGROUND LOCATION OF ANY UTILITIES SHOWN. IT SHALL BE THE DUTY OF THE CONTRACTOR TO DETERMINE THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES SHOWN AND IF ANY ADDITIONAL UTILITIES, OTHER THAN THOSE SHOWN ON THE PLANS, MAY BE PRESENT. A REQUEST WAS MADE TO IOWA ONE CALL FOR UTILITY PROVIDERS TO VERIFY, LOCATE, AND MARK THEIR UTILITIES IN THE FIELD.

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LICENSED PROFESSIONAL ENGINEER
CHARLES J. BISHOP
11055
IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

SIGNED: _____ DATE: _____
CHARLES J. BISHOP, P.E. 11055
LICENSE RENEWAL DATE: DEC. 31, 2016
PAGES OR SHEETS COVERED BY THIS SEAL: _____

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PROJECT NAME.
LAKE SHORE CENTER

810 EAST 1ST STREET
ANKENY, IOWA 50021

RECEIVED
NOV 30 2016
CITY OF ANKENY

OWNER :
WANDA MANOR COOPERATIVE
519 Summit Street
Iowa City, Iowa 52240

DRAWING ISSUE INFORMATION.
ISSUE FOR : CITY SUBMITTAL
ISSUE DATE : 11.04.2016

MARK	DATE	DESCRIPTION
	11.30.16	CITY SUBMITTAL

MANAGEMENT INFORMATION.
PROJECT NO : 2016.109
CAD DWG FILE :
PRINCIPAL IN CHARGE : TIM OLSON
PROJECT ARCHITECT : TIM O.
DRAWN BY : EWM
CHECKED BY : CJB

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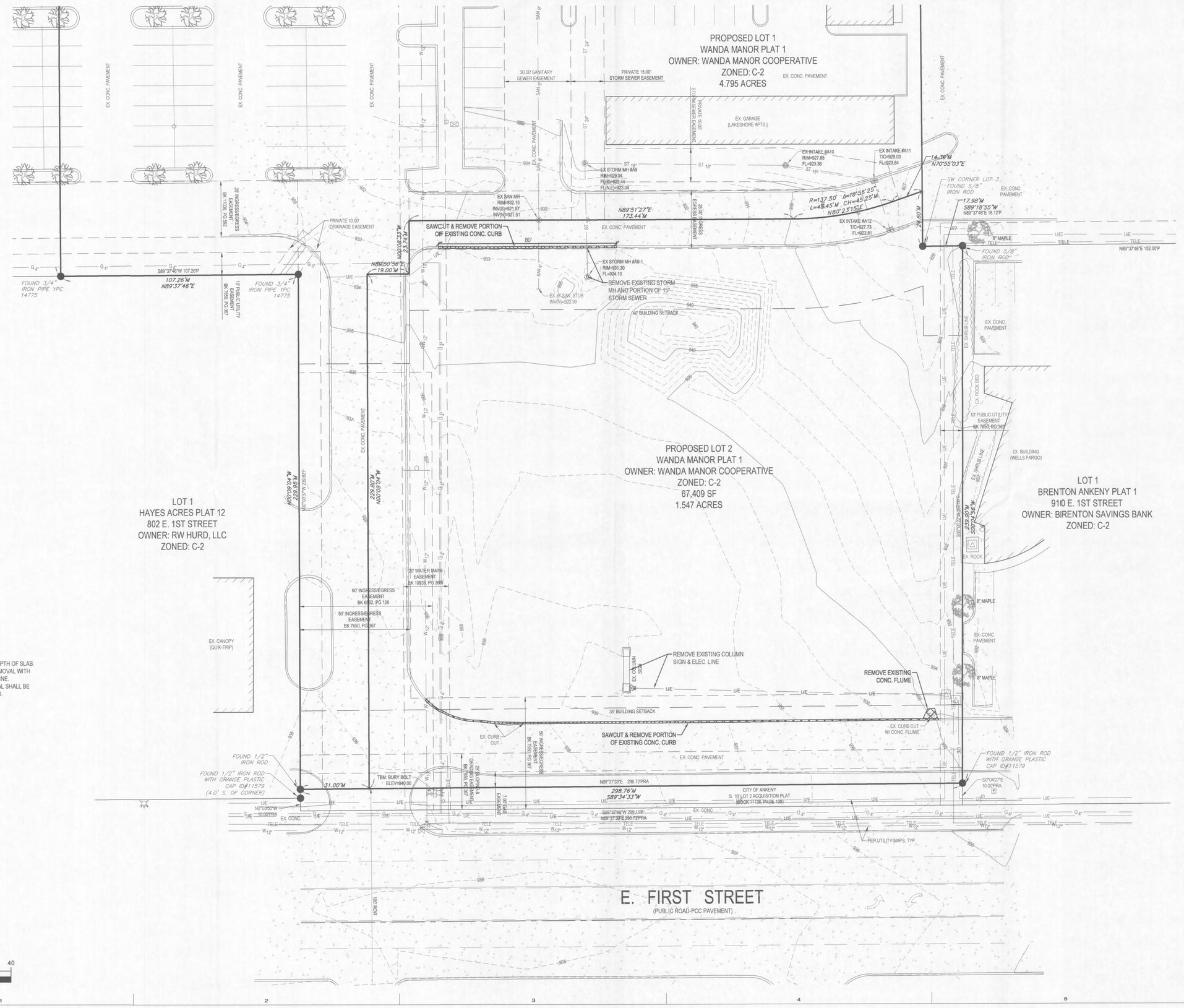
SHEET TITLE.
CIVIL COVER SHEET

SHEET NO.
C0.1



DEMO NOTES:

1. SAWCUT & REMOVE ALL PAVEMENT TO FULL DEPTH OF SLAB.
2. PROTECT ALL TREES NOT CALLED OUT FOR REMOVAL WITH ORANGE CONSTRUCTION FENCE AT THE DRIP LINE.
3. PAVEMENT STRIPING CALLED OUT FOR REMOVAL SHALL BE SANDBLASTED. NO GRINDING WILL BE ALLOWED.

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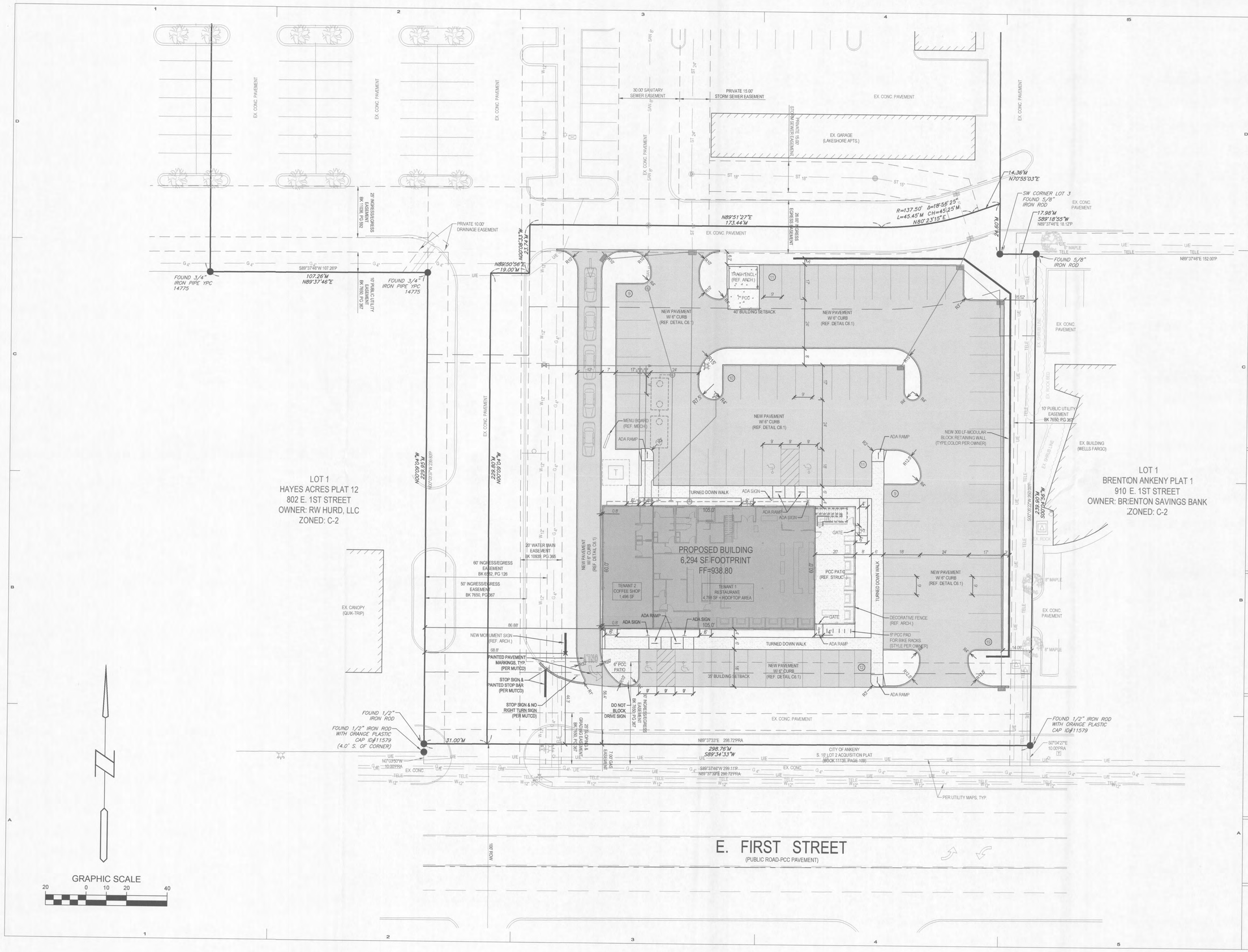
SHEET TITLE.

EXISTING COND./ DEMO PLAN

SHEET NO.

C1.1



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LAYOUT PLAN

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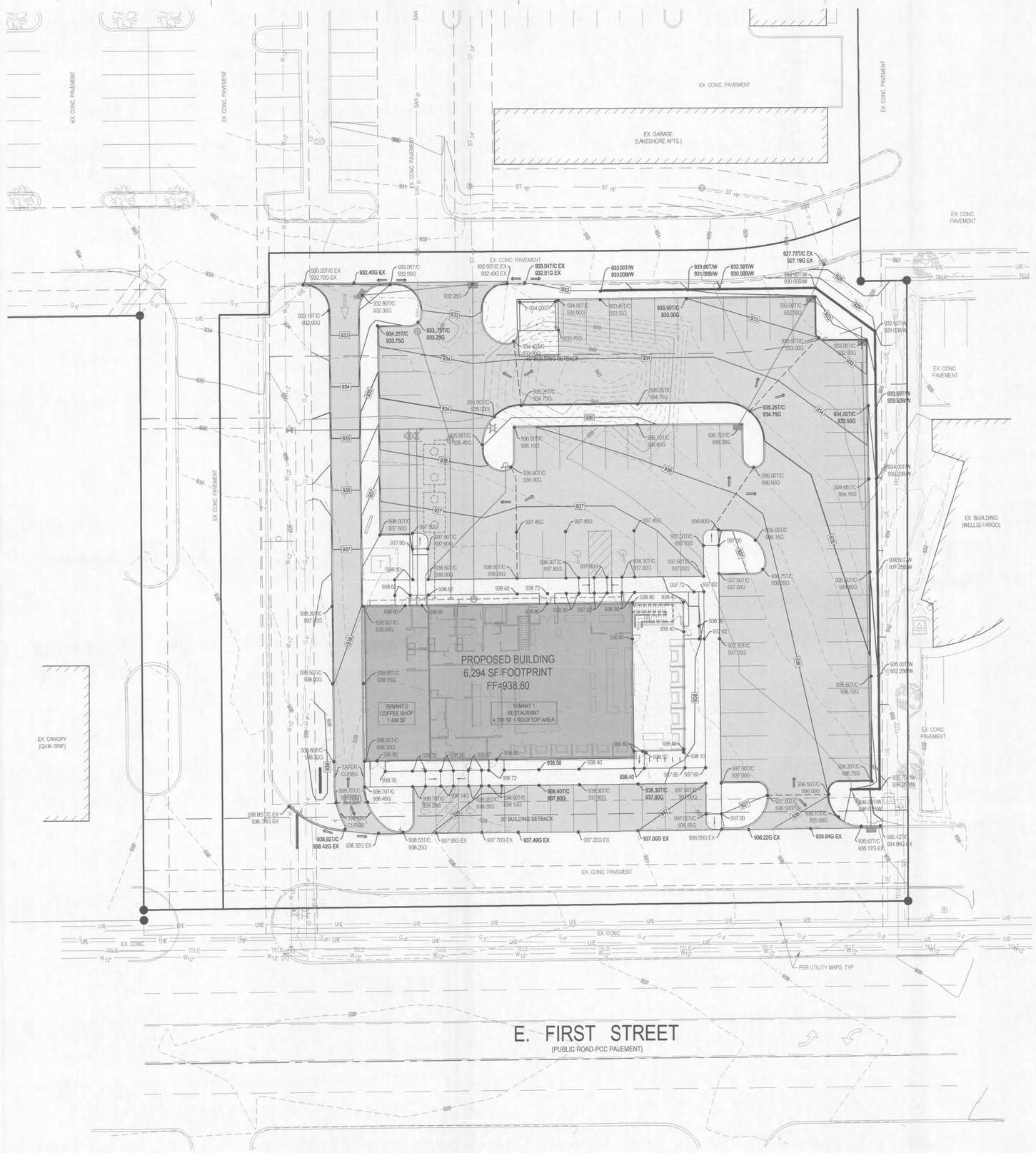
C2.1



TOPSOIL NOTES:

1. STRIP AND STOCKPILE THE TOP 6" OF SOIL ON ALL DISTURBED AREAS.
2. RESPREAD TOPSOIL TO A MINIMUM DEPTH OF 6" ON ALL GREEN (NON PAVED) AREAS. IMPORT TOPSOIL AS NECESSARY TO ACHIEVE A MINIMUM DEPTH OF 6".
3. **TOPSOIL SHALL BE FREE OF ALL ROCK AND DEBRIS LARGER THAN 3/4" IN SIZE.**
4. TOPSOIL IS DEFINED AS: FERTILE, FRIABLE LOAM, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH, FROM WELL DRAINED SITE FREE FROM FLOODING, NOT IN FROZEN OR MUDDY CONDITIONS; REASONABLE FREE FROM SUBSOIL, CLAY LUMPS, ROOTS, GRASS, WEEDS, STONES LARGER THAN 3/4 INCH IN DIAMETER, AND FOREIGN MATTER; ACIDITY RANGE (PH) OF 5.5 TO 7.5; CONTAINING MINIMUM 4 PERCENT AND MAXIMUM 20 PERCENT ORGANIC MATTER.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2 ARE MET.

GRADING LEGEND:

EXISTING CONTOUR	150
PROPOSED CONTOUR	150
FINISHED GROUND ELEVATION	150.50
TOP OF CURB ELEVATION	150.50T/C
GUTTER ELEVATION	150.50G
TOP OF WALL ELEVATION	150.50T/W
BOTTOM OF WALL ELEVATION	150.50B/W
EDGE OF WALK ELEVATION	150.50E/W
TOP OF STAIR ELEVATION	150.50T/S
BOTTOM OF STAIR ELEVATION	150.50B/S

NOTE: WALL ELEVATIONS SHOWN ON PLAN ARE FINISHED GROUND GRADES AT THE TOP AND BOTTOM OF THE WALL.

GRAPHIC SCALE

20 0 10 20 40

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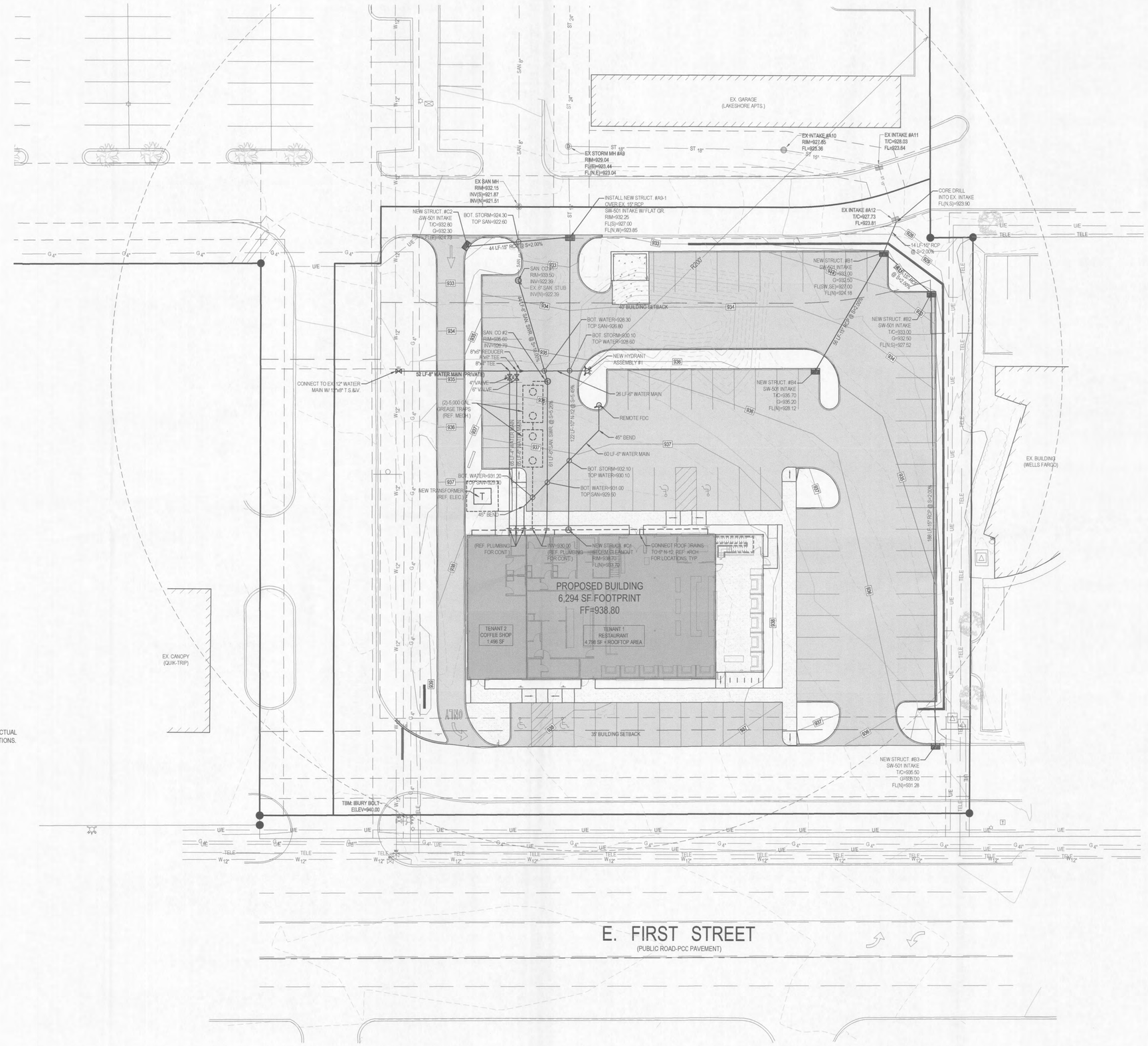
GRADING PLAN

SHEET NO.
C3.1



UTILITY NOTES:

1. ALL PROPOSED UTILITIES SHALL BE PRIVATE, UNLESS NOTED OTHERWISE.
2. ALL WATER LINES SHALL HAVE A MINIMUM OF 5.5' OF COVER UNLESS NOTED OTHERWISE.
3. FIRE HYDRANT ASSEMBLY SHALL INCLUDE THE TEE, BRANCH, VALVE AND HYDRANT.
4. TRANSFORMER PAD IS SHOWN FOR REFERENCE ONLY AND MAY NOT BE DRAWN TO ACTUAL SIZE. PAD SHALL CONFORM TO ALL UTILITY COMPANY DESIGN STANDARDS AND SPECIFICATIONS.

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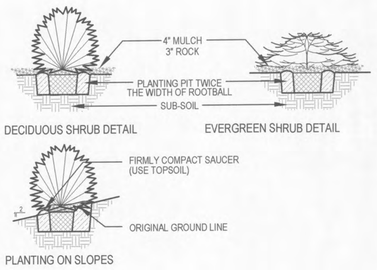
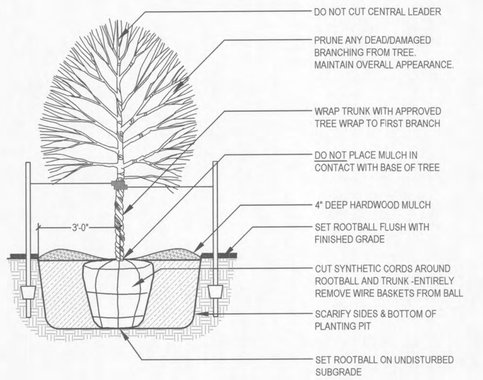
SHEET TITLE.
UTILITY PLAN

SHEET NO.
C4.1



SHRUB PLANTING (TYP)

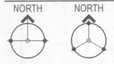
SCALE: NOT TO SCALE



DECIDUOUS TREE PLANTING (TYP.)

SCALE: NOT TO SCALE

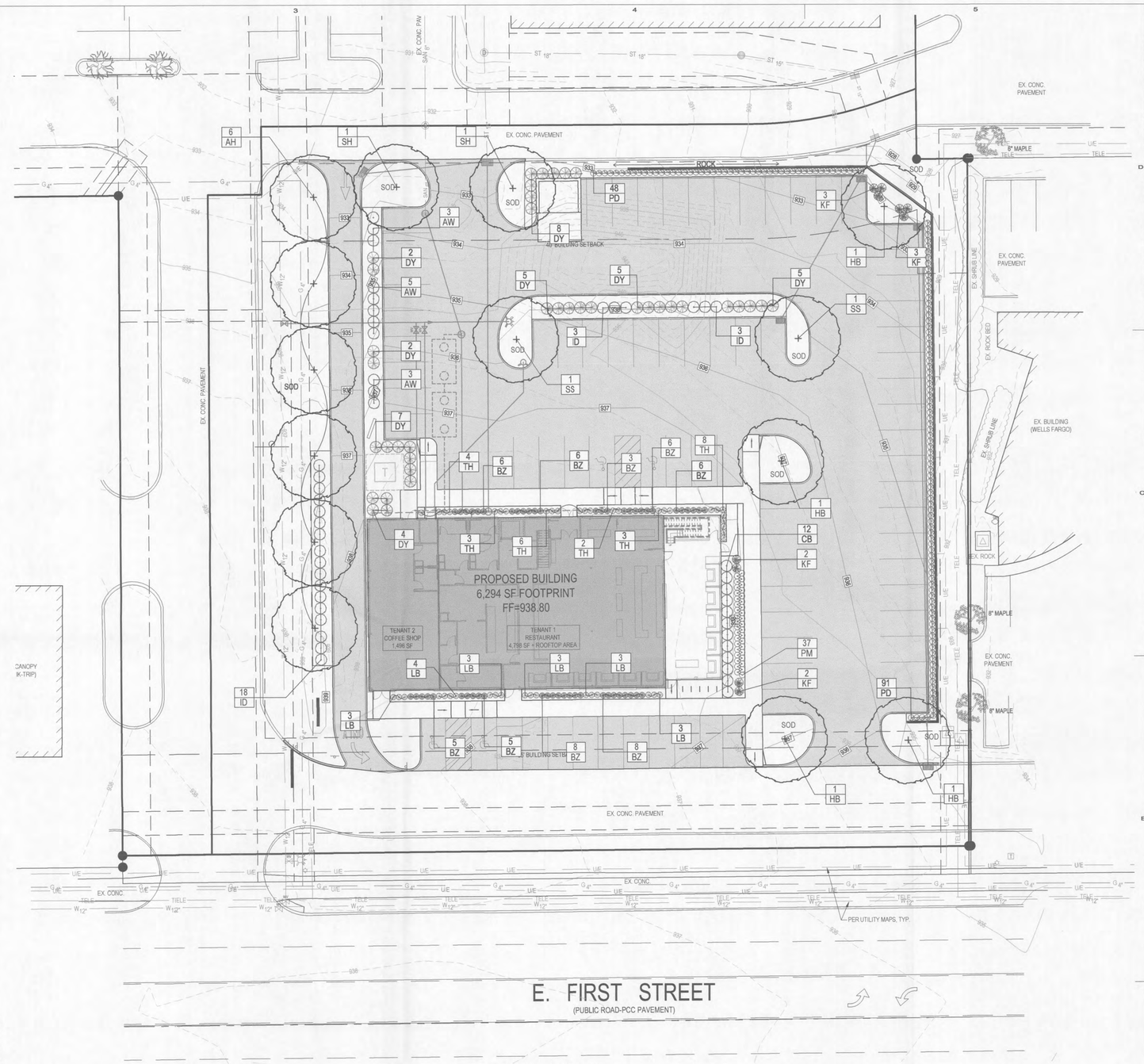
STAKING ORIENTATION



2 STAKES - 3" CAL. & LESS
3 STAKES - GREATER THAN 3" CAL.

USE HOSE GUARDS AROUND TRUNK ON STAKING WIRE. TIE WIRE TO STEEL POSTS PLACED OUTSIDE PLANT PIT..

LEAVE STAKES IN PLACE NO MORE THAN 1 YEAR FROM INSTALLATION. CONTRACTOR RESPONSIBLE FOR REMOVAL.



LANDSCAPE NOTES:

1. ALL SODDING & LANDSCAPE PLANTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE URBAN STANDARD SPECIFICATIONS, UNLESS SPECIFIED OTHERWISE.
2. SOD ALL DISTURBED AREAS WITHIN THE CONTRACT LIMITS, UNLESS NOTED OTHERWISE.
3. STAKE SOD ON ALL SLOPES 3 : 1 OR GREATER.
4. PLANT QUANTITIES ARE FOR CONTRACTORS CONVENIENCE, THE DRAWING SHALL PREVAIL IF A CONFLICT OCCURS.
5. ALL PLANT MATERIAL SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1).
6. CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE.
7. IT IS THE CONTRACTORS RESPONSIBILITY TO REMOVE IDENTIFICATION TAGS AND CORDS ON ALL PLANT MATERIAL PRIOR TO THE COMPLETION OF THE CONTRACT.
8. CONTRACTOR SHALL PLACE SHREDDED HARDWOOD MULCH AROUND ALL TREES, SHRUBS AND GROUND COVER BEDS TO A DEPTH OF 3 INCHES, UNLESS NOTED.
9. STAKE AND WRAP ALL DECIDUOUS TREES IMMEDIATELY AFTER PLANTING. STAKE ALL TREES ACCORDING TO THE STAKING DETAILS. CONTRACTOR SHALL ADJUST AND MAINTAIN GUYING TENSION THROUGHOUT THE PLANT ESTABLISHMENT PERIOD.
10. THE LANDSCAPING CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED BEFORE STARTING ANY SITE WORK OR PLANTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES.
11. NO LANDSCAPE MATERIAL SHALL BE SUBSTITUTED WITHOUT THE AUTHORIZATION OF THE LANDSCAPE ARCHITECT.
12. ALL EDGING SHALL BE DURAEDGE 1/8" STEEL EDGING - COLOR GREEN, OR APPROVED EQUAL..
13. CONTRACTOR SHALL BE RESPONSIBLE TO WATER ALL NEW PLANTS FOR A PERIOD OF 30 DAYS.
14. ALL SHRUB AND PERENNIAL PLANTING BEDS (INCLUDING PARKING LOT ISLANDS) SHALL INCORPORATE TYPAR 3301 NONWOVEN LANDSCAPE FABRIC AND 3" THICK RIVER ROCK (ROCK TO BE SIZED 1.5" TO 2").
15. ALL BEDS TO RECEIVE GRANULAR PRE-EMERGENT WEED CONTROL BEFORE LANDSCAPE FABRIC IS INSTALLED AND AFTER ROCK IS INSTALLED.

LANDSCAPE REQUIREMENTS:

TOTAL SIZE OF LOT	67,409 SF
TOTAL REQUIRED OPEN SPACE (20%)	13,482 SF
TOTAL LANDSCAPE UNITS (1 / 3000 OF OPEN SPACE)	4.49
TOTAL TREES REQUIRED (2 PER LANDSCAPE UNIT)	10
TOTAL SHRUBS REQUIRED (6 PER LANDSCAPE UNIT)	30
TOTAL TREES PROVIDED	6
TOTAL SHRUBS PROVIDED	86
TOTAL ORNAMENTAL GRASSES PROVIDED	187
TOTAL PERENNIALS PROVIDED	89
PARKING LOT AND SHADING REQUIREMENTS	
TOTAL GROSS PAVED PARKING AREA	28,183 SF
REQUIRED SHADING (20% OF GROSS PAVED)	5,637 SF
SHADING AREA / 706 (SF OF 15' DIA CANOPY)	7.9
TOTAL TREES REQUIRED FOR SHADING	8
TOTAL TREES PROVIDED	8

GRAPHIC SCALE

20 0 10 20 40

PLANTING SCHEDULE

CODE	QUAN	COMMON NAME	LATIN NAME	SIZE	ROOT	NOTES
SS	2	STATE STREET MAPLE	*ACER MIYABE 'MORTON'*	2" CAL	B&B	MATCHED SPECIMENS
AH	6	AMERICAN HORNBEAM	*CARPINUS CAROLINIANA*	1.5" CAL	B&B	MATCHED SPECIMENS
HB	4	COMMON HACKBERRY	*CELTIS OCCIDENTALIS*	2.5" CAL	B&B	MATCHED SPECIMENS
SH	2	SKYLINE HONEYLOCUST	*GLEDITSIA TRIACANTHO INERMIS 'SKYLINE'*	2.5" CAL	B&B	MATCHED SPECIMENS
CB	12	CHICAGOLAND BOXWOOD	*BUXUS X 'GLENCOE'*	#5	CONT	FULL FORM - MATCHED
ID	25	ISANTI DOGWOOD	*CORNUS SERICEA 'ISANTI'*	#5	CONT	FULL FORM - MATCHED
AW	11	ANTHONY WATERER SPIREA	*SPIRAEA BUMALDA 'ANTHONY WATERER'*	#5	CONT	FULL FORM - MATCHED
DY	38	DENSIFORMIS YEW	*TAXUS MEDIA 'DENSIFORMIS'*	36"	B&B	FULL FORM - MATCHED
KF	10	KARL FOERSTER FEATHER REED GRASS	*CALAMAGROSTIS ACUTIFOLIA 'KARL FOERSTER'*	#1	CONT	FULLY ROOTED IN CONTAINER
TH	26	TUFTED HAIR GRASS	*DESCHAPSIA CAESPITOSA*	#1	CONT	FULLY ROOTED IN CONTAINER
LB	19	LITTLE BLUESTEM	*SCHIZACHYRIUM SCOPARIUM*	#1	CONT	FULLY ROOTED IN CONTAINER
PD	139	PRAIRIE DROPSEED	*SPOROBOLUS HETEROLEPSIS*	#1	CONT	FULLY ROOTED IN CONTAINER
PM	37	PARDON ME DAYLILY	*HEMEROCALLIS X 'PARDON ME'*	#1	CONT	FULLY ROOTED IN CONTAINER
BZ	53	BLUE ZINGER SEDGE	*CAREX FLACCA 'BLUE ZINGER'*	#1	CONT	FULLY ROOTED IN CONTAINER

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PROJECT NAME.

LAKE SHORE CENTER

810 EAST 1ST STREET
ANKENY, IOWA 50021

OWNER :
WANDA MANOR COOPERATIVE
519 Summit Street
Iowa City, Iowa 52240

DRAWING ISSUE INFORMATION.
ISSUE FOR : CITY SUBMITTAL
ISSUE DATE : 11.04.2016

MARK	DATE	DESCRIPTION
	11.30.16	CITY SUBMITTAL

MANAGEMENT INFORMATION.

PROJECT NO : 2016.109

CAD DWG FILE :

PRINCIPAL IN CHARGE : TIM OLSON
PROJECT ARCHITECT : TIM O.

DRAWN BY : EWM
CHECKED BY : CJB

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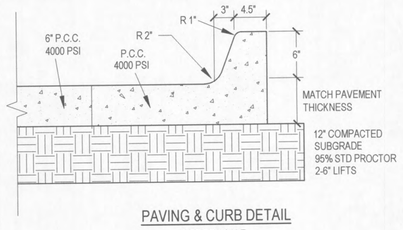
SHEET TITLE.

LANDSCAPE PLAN

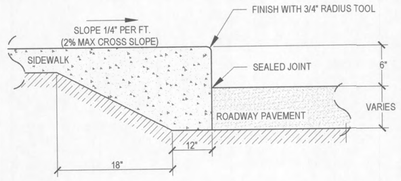
SHEET NO.

C5.1



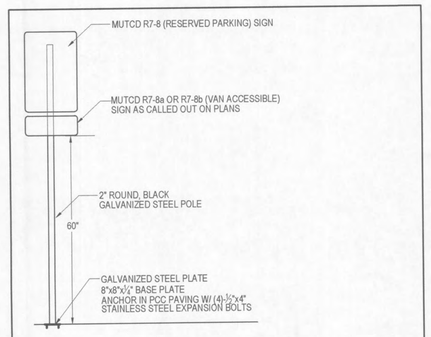
PAVING & CURB DETAIL

NOT TO SCALE



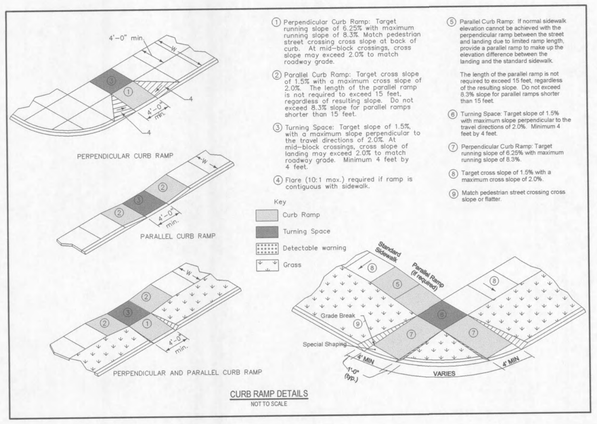
TURNED DOWN WALK DETAIL

NOT TO SCALE



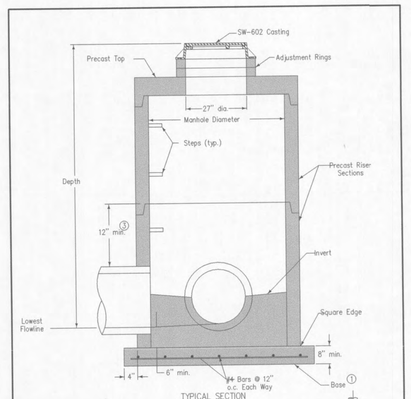
ADA PARKING SIGN DETAIL

NOT TO SCALE



CURB RAMP DETAILS

NOT TO SCALE



TYPICAL SECTION

PLAN

① Cast-in-place base shown. If base is precast integral with bottom riser, the footprint of the base is not required to extend beyond the outer edge of the riser.

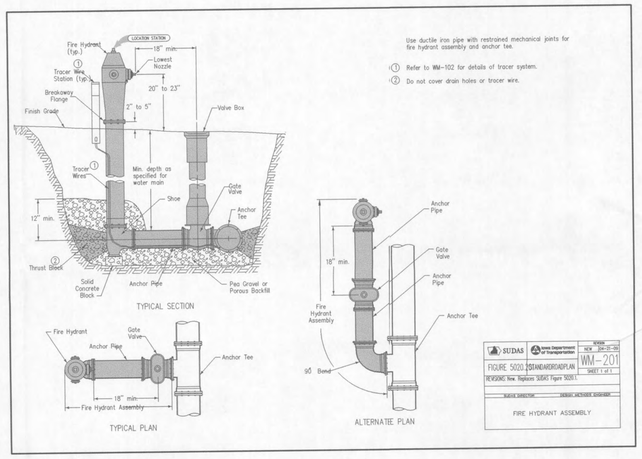
② For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.

③ 12 inch minimum riser height above all pipe openings.

Manhole Diameter (Inches)	Maximum Pipe Diameter ② (inches) for 2 Pipes At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

SUDAS | Iowa Department of Transportation | REVISED NEW JUN-21-00 | FIGURE 6010.401 STANDARDROADPLAN | SW-401 | SHEET 1 of 1 | REVISIONS: New. Replaces SUDAS Type "M-4" Manhole. Will replace SW-301.

CIRCULAR STORM SEWER MANHOLE



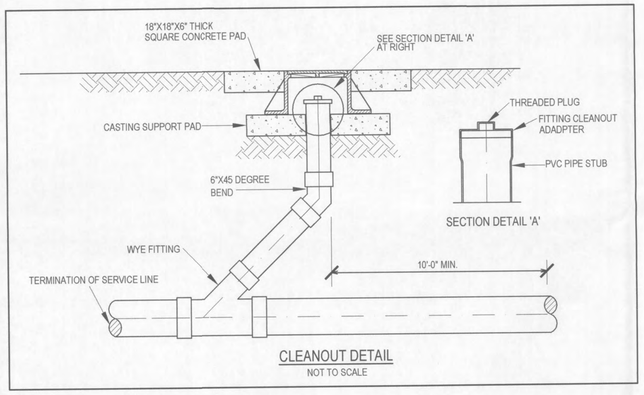
Use ductile iron pipe with restrained mechanical joints for fire hydrant assembly and anchor tee.

① Refer to WM-102 for details of tracer system.

② Do not cover drain holes or tracer wire.

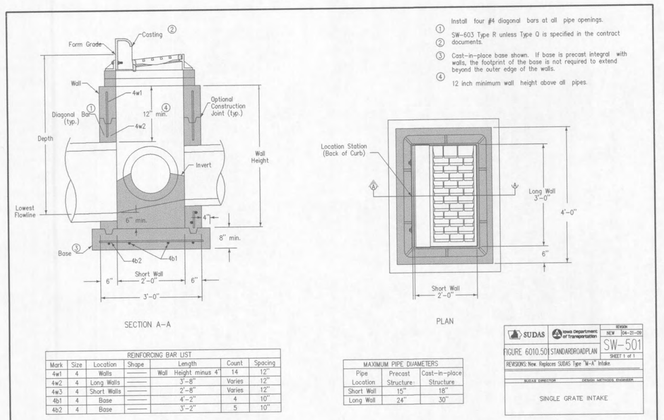
SUDAS | Iowa Department of Transportation | REVISED NEW JUN-21-00 | FIGURE 5020.201 STANDARDROADPLAN | WM-201 | SHEET 1 of 1 | REVISIONS: New. Replaces SUDAS Figure 5020.1.

FIRE HYDRANT ASSEMBLY



CLEANOUT DETAIL

NOT TO SCALE



① Install four #4 diagonal bars at all pipe openings.

② SW-603 Type R unless Type Q is specified in the contract documents.

③ Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.

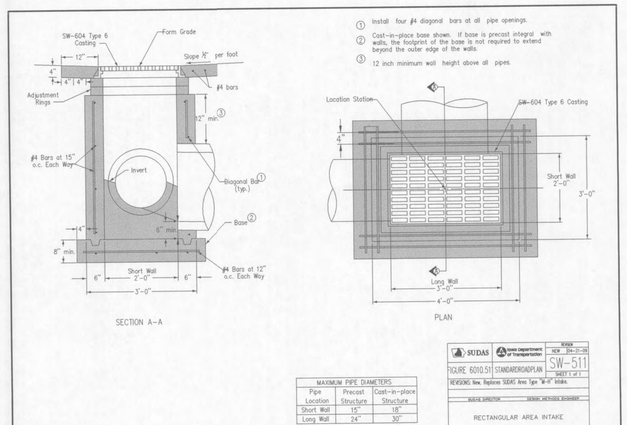
④ 12 inch minimum wall height above all pipes.

REINFORCING BAR LIST							
Mark	Size	Location	Shape	Length		Count	Spacing
4w1	4	Walls	———	Wall Height minus 4		14	12"
4w2	4	Long Walls	———	3'-8"		Varies	12"
4w3	4	Short Walls	———	2'-8		Varies	12"
4b1	4	Base	———	4'-2"		4	10"
4b2	4	Base	———	3'-2"		5	10"

MAXIMUM PIPE DIAMETERS		
Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	15"	18"
Long Wall	24"	30"

SUDAS | Iowa Department of Transportation | REVISED NEW JUN-21-00 | FIGURE 6010.501 STANDARDROADPLAN | SW-501 | SHEET 1 of 1 | REVISIONS: New. Replaces SUDAS Type "M-4" Intake.

SINGLE GRATE INTAKE



① Install four #4 diagonal bars at all pipe openings.

② Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.

③ 12 inch minimum wall height above all pipes.

MAXIMUM PIPE DIAMETERS		
Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	15"	18"
Long Wall	24"	30"

SUDAS | Iowa Department of Transportation | REVISED NEW JUN-21-00 | FIGURE 6010.511 STANDARDROADPLAN | SW-511 | SHEET 1 of 1 | REVISIONS: New. Replaces SUDAS Area Type "M-4" Intake.

RECTANGULAR AREA INTAKE

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PROJECT NO : 2016.109

CAD DWG FILE :

PRINCIPAL IN CHARGE : TIM OLSON
PROJECT ARCHITECT : TIM O.

DRAWN BY : EWM
CHECKED BY : CJB

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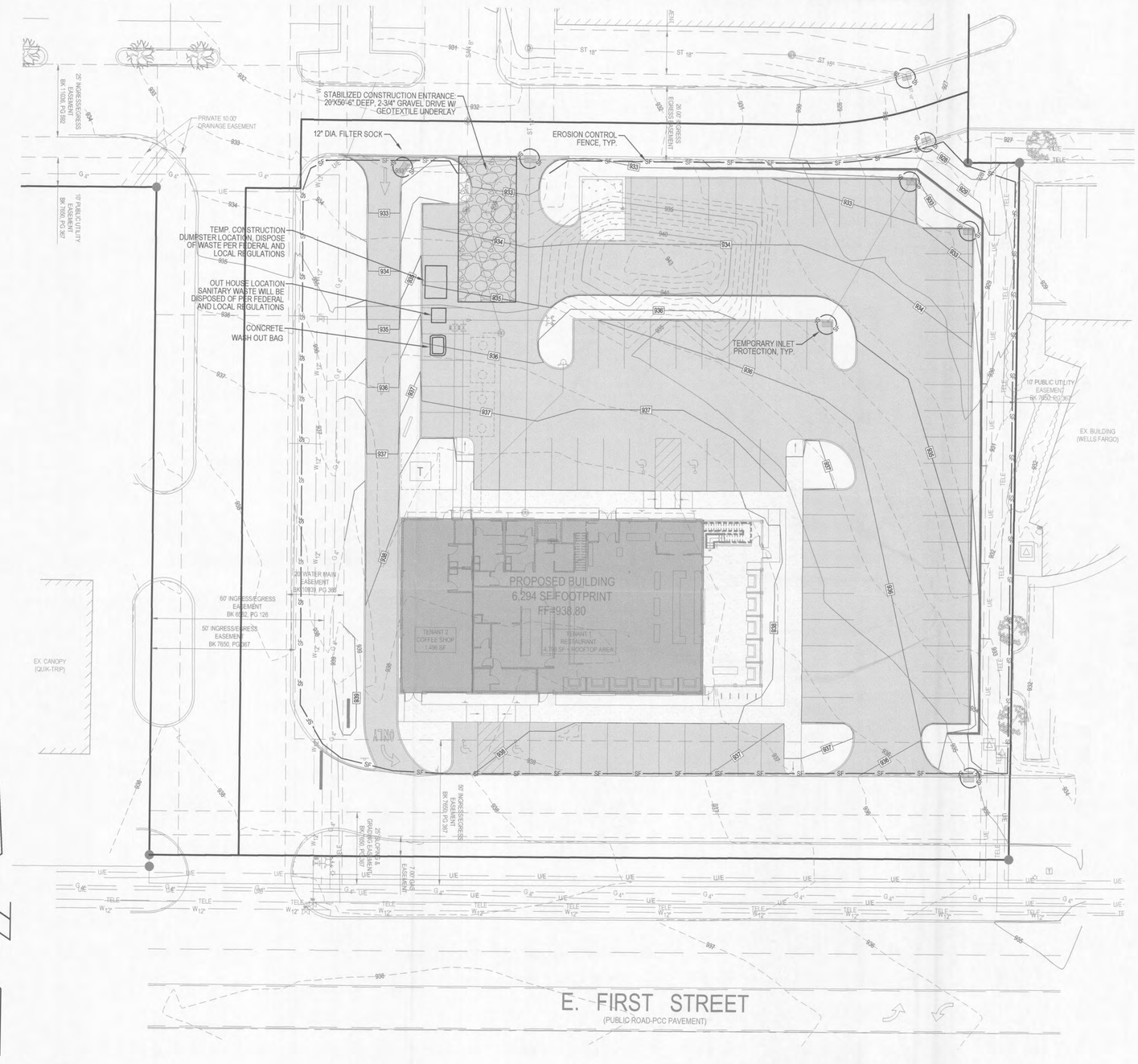
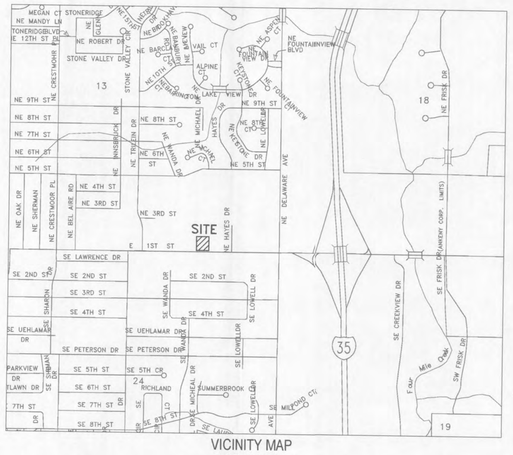
SHEET TITLE.
DETAILS SHEET

SHEET NO.
C6.1

STORM WATER POLLUTION PREVENTION PLAN





VICINITY MAP
NOT TO SCALE

PROPERTY DESCRIPTION:

LOT 2 IN WANDA MANOR PLAT 1, AN OFFICIAL PLAT IN THE CITY OF ANKENY, POLK COUNTY, IOWA.

ADDRESS:

810 E. 1ST STREET
ANKENY, IOWA 50021

PREPARED FOR:

BIG CREEK DESIGN GROUP
CONTACT: TIM OLSON
109 2ND STREET P.O. BOX 11
POLK CITY, IOWA 50226
PH: (515)-480-4088

OWNER/APPLICANT:

WANDA MANOR COOPERATIVE
CONTACT: BILL KUSY
519 S. SUMMIT STREET
IOWA CITY, IOWA 52240
PH: (515)-974-4277

ZONING:

C-2
GENERAL RETAIL, HIGHWAY ORIENTED, AND CENTRAL BUSINESS COMMERCIAL DISTRICT

OPEN SPACE & IMPERVIOUS SURFACE:

TOTAL SITE AREA = 67,409 S.F. = 1.547 ACRES
EXISTING OPEN SPACE = 54,429 S.F. (80.7%)
EXISTING IMPERVIOUS = 12,980 S.F. (19.3%)
PROPOSED OPEN SPACE = 17,248 S.F. (25.6%)
PROPOSED IMPERVIOUS = 50,161 S.F. (74.4%)

SITE BENCHMARK:

FOUND CUT "X" LOCATED NEAR NORTHEAST PROPERTY CORNER.
ELEVATION=922.06 (CITY DATUM)

EROSION CONTROL NOTES:

1. SEE SUPPLEMENTAL DETAIL STORM WATER POLLUTION PLAN NARRATIVE FOR ALL EROSION CONTROL MEASURES; ADDITIONAL DETAILS AND NOTE. ADDITIONAL NOTES AND MEASURES IN NARRATIVE SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE ORIGINAL BID.
2. SWPPP PLAN AND NARRATIVE ARE CONSIDERED A LIVING DOCUMENT AND WILL NEED PERIODIC UPDATES AND ADJUSTMENTS AS NECESSARY DEPENDING ON SITE CONDITIONS TO ASSURE COMPLIANCE WITH NPDES GENERAL PERMIT NO. 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UPDATE THE SWPPP AND IMPLEMENT ANY AND ALL MEASURES NECESSARY TO COMPLY WITH SAID PERMIT NO. 2.
3. INSTALL PERIMETER SILT FENCE AS SHOWN ON PLANS PRIOR TO CONSTRUCTION.
4. INSTALL INTAKE PROTECTION WITH SILT FENCE IMMEDIATELY AFTER STORM SEWER CONSTRUCTION.
5. INSTALL FINISHED PAVING INLET PROTECTION IMMEDIATELY AFTER PAVING IS COMPLETED AROUND INTAKE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING A CONCRETE WASHOUT IN ACCORDANCE WITH NPDES GENERAL PERMIT NO. 2 DURING ALL CONCRETE WORK.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING TEMPORARY RESTROOM FACILITIES. SANITARY WASTE SHALL BE DISPOSED OF PER ALL FEDERAL, STATE AND LOCAL REGULATIONS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2 ARE MET.

EROSION CONTROL REMOVAL NOTES:

1. AFTER FINAL STABILIZATION HAS OCCURED, AS DEFINED IN NPDES GENERAL PERMIT NO. 2, CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY EROSION CONTROL DEVICES INCLUDING, BUT NOT LIMITED TO: SILT FENCE, INLET PROTECTION, AND TEMPORARY STANDPIPES.

TOPSOIL NOTES:

1. STRIP AND STOCKPILE THE TOP 6" OF SOIL ON ALL DISTURBED AREAS.
2. RESPREAD TOPSOIL TO A MINIMUM DEPTH OF 6" ON ALL GREEN (NON PAVED) AREAS. IMPORT TOPSOIL AS NECESSARY TO ACHIEVE A MINIMUM DEPTH OF 6".
3. **TOPSOIL SHALL BE FREE OF ALL ROCK AND DEBRIS LARGER THAN 3/4" IN SIZE.**
4. TOPSOIL IS DEFINED AS: FERTILE, FRIABLE LOAM, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH, FROM WELL DRAINED SITE FREE FROM FLOODING, NOT IN FROZEN OR MUDDY CONDITIONS; REASONABLE FREE FROM SUBSOIL, CLAY LUMPS, ROOTS, GRASS, WEEDS, STONES LARGER THAN 3/4 INCH IN DIAMETER, AND FOREIGN MATTER; ACIDITY RANGE (PH) OF 5.5 TO 7.5; CONTAINING MINIMUM 4 PERCENT AND MAXIMUM 20 PERCENT ORGANIC MATTER.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2 ARE MET.

QUANTITY ESTIMATE:

EROSION CONTROL FENCE	820 L.F.
TEMP. INLET PROTECTION	8 EA.
SOD	0.5 ACRES

GRAPHIC SCALE
20 0 10 20 40

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com

UTILITY NOTE:

THE LOCATION OF THE UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS AND ARE APPROXIMATE LOCATIONS. THE EXACT LOCATIONS OF ALL UTILITIES MUST BE ASCERTAINED IN THE FIELD. IT SHALL BE THE DUTY OF THE CONTRACTOR TO DETERMINE WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

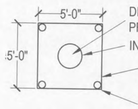
LEGEND:

- SF SF SF — SILT FENCE (TYP)
- 120 — EXISTING CONTOUR
- 120 — PROPOSED CONTOUR
- STABILIZED ENTRANCE 30'X90'-6" DEEP 2" CLEAN CRUSHED ROCK DRIVE ON GEOTEXTILE

NOTES:

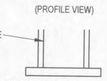
1. SECURE TOP OF FABRIC TO POSTS, USING CABLE TIES OR WIRE.
2. FABRIC TO BE BURIED 12", AND FOLDED ALONG BOTTOM.
3. STEEL POSTS TO BE EMBEDDED 28".

(PLAN VIEW)



INLET PROTECTION DETAIL
NOT TO SCALE

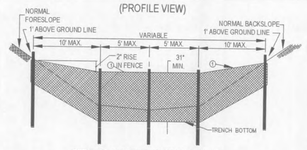
(PROFILE VIEW) (PLAN VIEW)



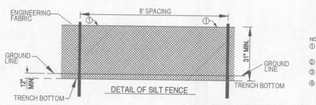
NOTES:
1. 1 C.Y. CONCRETE BAG SHALL BE REQUIRED AT ANY LOCATION WHERE CONCRETE IS USED.
2. CONCRETE WASHOUT DUMPSTER W/ HEAVY DUTY LINER IS AN ACCEPTIBLE ALTERNATIVE

CONCRETE WASH-OUT BAG DETAIL
NOT TO SCALE

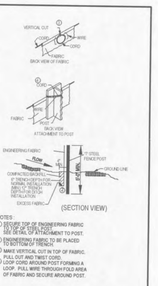
(PROFILE VIEW)



DETAIL OF SILT FENCE AT DITCH OR SWALE



DETAIL OF SILT FENCE



NOTES:
① REVERSE SIDE OF ENGINEERING FABRIC FROM UP STREAM SIDE SEE DETAIL OF ATTACHMENT TO POST.
② ENGINEERING FABRIC TO BE PLACED TO BOTTOM OF TRENCH.
③ MAKE VERTICAL CUT IN TOP OF FABRIC.
④ PULL OUT AND TWIST CORE OF FABRIC AROUND POST FORMING A LOOP. PULL WIRE THROUGH FOLD AREA OF FABRIC AND SECURE AROUND POST.

SILT FENCE DETAILS
NOT TO SCALE

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DRAWING ISSUE INFORMATION.
ISSUE FOR : CITY SUBMITTAL
ISSUE DATE : 11.04.2016

MARK	DATE	DESCRIPTION
	11.30.16	CITY SUBMITTAL

MANAGEMENT INFORMATION.
PROJECT NO : 2016.109
CAD DWG FILE :
PRINCIPAL IN CHARGE : TIM OLSON
PROJECT ARCHITECT : TIM O.
DRAWN BY : EWM
CHECKED BY : CJB

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SHEET TITLE.
SWPPP

SHEET NO.
C7.1