


**CITY OF WEST DES MOINES
PLAN AND ZONING COMMISSION COMMUNICATION**

Meeting Date: April 11, 2016

Item: Mill Ridge, Southwest corner of S. 88th Street and Stagecoach Drive – Approval of a Phased Site Plan to allow grading of the site and installation of underground private utilities – Hubbell Realty Company – SP-002936-2015

Requested Action: Approval of a Phased Site Plan

Case Advisor: J. Bradley Munford 

Applicant's Request: The applicant, Hubbell Realty Company, represented by Josh Trygstad of Civil Design Advantage, is requesting phased approval of a site plan to initiate grading and to allow the installation of underground private utilities for approximately 65 acres generally located at the southwest corner of S. 88th Street and Stagecoach Drive in anticipation of approval of a full site plan in the near future for the construction of 60 single family lots and 240 townhome lots on the site. The applicant is on a tight construction schedule and wishes to complete the infrastructure and have some units built before next winter. The applicant will return to the Plan and Zoning Commission and City Council for approval of the full site plan which will provide details of the above ground elements.

History: The property is generally undeveloped. All except the 24 acres at the northeast corner of the proposal was previously platted in the Corrected Michael's Landing Plat 1. The 24 acres was a large acreage property belonging to James Miller. On December 14, 2016 the City Council approved an amendment to the Comprehensive Plan Land Use Map and amendment to the Tallyn's Reach Planned Unit Development (PUD) to incorporate the Miller property and modify regulations to accommodate this development. On March 21, 2016 the City Council approved the Preliminary Plat.

City Council Subcommittee: This item was presented to the Development and Planning City Council Subcommittee on March 7, 2016 and an informational item only. The Subcommittee expressed support of the development.

Staff Review and Comment: This request was distributed to other City departments and other agencies for their review and comment. There are no outstanding issues. Staff notes the following:

Grading and Site Infrastructure: The applicant is still working with staff on the design of the proposed multi-family units. The applicant is requesting authorization to grade and install underground private utilities while they continue to work to resolve details on the unit designs. At a later date, the applicant will return to the Plan and Zoning Commission and City Council for approval of the full site plan which will provide full architectural details of all of the units being built. As a part of this approval, staff recommends a caveat that no above ground construction commence until the site plan is approved and all necessary documentation, including final plans, have been submitted to the City.

Staff is comfortable with the applicant proceeding with grading and utility installation while minor architectural details are finalized. Phased approval of a site plan has been done in other cases within the City, most notably, both Microsoft data center sites and the Newport office building.

Comprehensive Plan Consistency: The project has been reviewed for consistency with the Comprehensive Plan. Based upon that review, a finding has been made that the proposed project is consistent with the Comprehensive Plan in that the project is consistent with all of the goals and policies of the Comprehensive Plan and the land use map of the Comprehensive Plan.

Site Plan Findings: This proposed project was distributed to various city departments for review and comment. Based upon that review, the following findings have been made on the proposed project:

1. The proposed development and use is consistent with the West Des Moines Comprehensive Plan in that the project has been reviewed for consistency with the Comprehensive Plan. Based upon that review, a finding has been made that the proposed project is consistent with the Comprehensive Plan in that the project is consistent with all of the goals and policies of the Comprehensive Plan.
2. The proposed development and use does assure compatibility of property uses within the zone and general area in that this project was reviewed by various City Departments for compliance with the Zoning Ordinance.
3. All applicable standards and conditions have been imposed which protects the public health, safety and welfare in that this project was reviewed by various City Departments and public agencies for compliance with the various state and local regulations. Based upon that review a finding is made that the project has been adequately conditioned to protect the health, welfare and safety of the community.
4. There is adequate on-site and off-site public infrastructure to support the proposed development in that this project was reviewed by various public agencies and City Departments and public utilities to ensure that either the petitioner will construct or the project has been conditioned to construct adequate public infrastructure to serve the development.
5. The proposed development and use has met the requirements contained in the City Code in that this project was reviewed by various City Departments and the project has complied with or has been conditioned to comply with all City Code requirements.
6. The proposed development and use is in keeping with the scale and nature of the surrounding neighborhood in that the proposed project is consistent with the zoning designation and Comprehensive Plan which designates this site as suitable for development such as that proposed by this project.

Staff Recommendations and Conditions of Approval: Based upon the preceding review and a finding of consistency with the Comprehensive Plan, staff recommends that the Plan and Zoning Commission adopt a resolution approving the phased site plan to allow grading and the installation of site infrastructure, subject to the applicant meeting all City Code requirements and the following:

1. The applicant install and maintain all necessary soil erosion measures;
2. The applicant agrees that any infrastructure work done to the site prior to the full approval of the site plan which contains all site development details is at their own risk, and that the final site development will need to comply with any changes that are deemed necessary as part of those subsequent approvals. The applicant further acknowledges and agrees that should the continued review, development and finalization of the site's details warrant changes to the utilities or building design or locations resulting in changes to the grades, or utilities, that the applicant will need to make the necessary changes at their own cost with no compensation from the City; and,
3. The applicant acknowledges that approval of this site plan does not allow for any above foundation work or ground construction of any type and that subsequent site plan approval and submittal of final plans to the City is required before any above ground work can be started.
4. The applicant agrees to obtain all appropriate building permits prior to initiation of any site work

Property Owner:

Miller Land Partnership
1390 S 88th Street
West Des Moines, Iowa 50266

Applicant:

Joe Pietruszynski
Hubbell Realty Company
6900 Westown Parkway
West Des Moines, Iowa 50266
Joe.Pietruszynski@HubbellRealty.com

Applicant's Representatives:

Josh Trygstad P.E
Civil Design Advantage
3405 SE Crossroads Drive Suite G
Grimes, Iowa 50111
JoshT@cda-eng.com

Attachments:

Attachment A	-	Plan and Zoning Commission Resolution
Exhibit A	-	Conditions of Approval
Attachment B	-	Location Map
Attachment C	-	Site Plan: Grading, Site Layout, & Utility

RESOLUTION NO.

A RESOLUTION OF THE PLAN AND ZONING COMMISSION OF THE CITY OF WEST DES MOINES, APPROVING THE MILL RIDGE PHASED SITE PLAN (SP-002936-2015) FOR THE PURPOSE OF GRADING THE SITE AND INSTALLING PRIVATE INFRASTRUCTURE IN ANTICIPATION OF NEW CONSTRUCTION OF 60 SINGLE FAMILY AND 240 TOWNHOME LOT SUBDIVISION

WHEREAS, pursuant to the provisions of Title 8, Building, Chapter 5, Site Grading Regulations, et seq, of the West Des Moines Municipal Code, the property owner, Hubbell Realty Company, has requested approval for a Grading Plan as part of a pending site plan (SP-002936-2015) for approximately 65 acres generally located at the southwest corner of S. 88th Street and Stagecoach Drive, for the purpose of grading the property in anticipation of the construction of 60 single family and 240 townhome lot subdivision;

WHEREAS, pursuant to the provisions of Title 9, Chapter 1 et seq, of the West Des Moines Municipal Code, the applicant, Hubbell Realty Company, has requested approval for a Phased Site Plan (SP-002936-2015) for approximately 65 acres generally located at the southwest corner of S. 88th Street and Stagecoach Drive, for the purpose of allowing installation of underground private utilities in anticipation of the construction of 60 single family and 240 townhome lot subdivision;

WHEREAS, studies and investigations were made and staff reports and recommendations were submitted which are made a part of this record and herein incorporated by reference;

WHEREAS, on April 11, 2016 this Commission held a duly-noticed meeting to consider the application for Mill Ridge Site Plan (SP-002936-2015) to allow site grading and installation of underground private infrastructure only;

NOW, THEREFORE, THE PLAN AND ZONING COMMISSION OF THE CITY OF WEST DES MOINES DOES RESOLVE AS FOLLOWS:

SECTION 1. The findings, for approval, in the staff report or as amended orally at the Plan and Zoning Commission meeting are adopted.

SECTION 2. The Phase Site Plan (SP-002936-2015) permit to grade the property and allow installation of underground private utilities for that site located at the southwest corner of S. 88th Street and Stagecoach Drive is hereby approved by the Plan and Zoning Commission, subject to compliance with all the conditions in the staff report including conditions added at the meeting and attached hereto as Exhibit "A". Violation of any such conditions shall be grounds for revocation of the permit, as well as any other remedy which is available to the City.

PASSED AND ADOPTED on April 11, 2016.

Craig Erickson, Chair
Plan and Zoning Commission

ATTEST:

Recording Secretary

I HEREBY CERTIFY that the foregoing resolution was duly adopted by the Plan and Zoning Commission of the City of West Des Moines, Iowa, at a regular meeting held on April 11, 2016, by the following vote:

AYES:

NAYS:

ABSTENTIONS:

ABSENT:

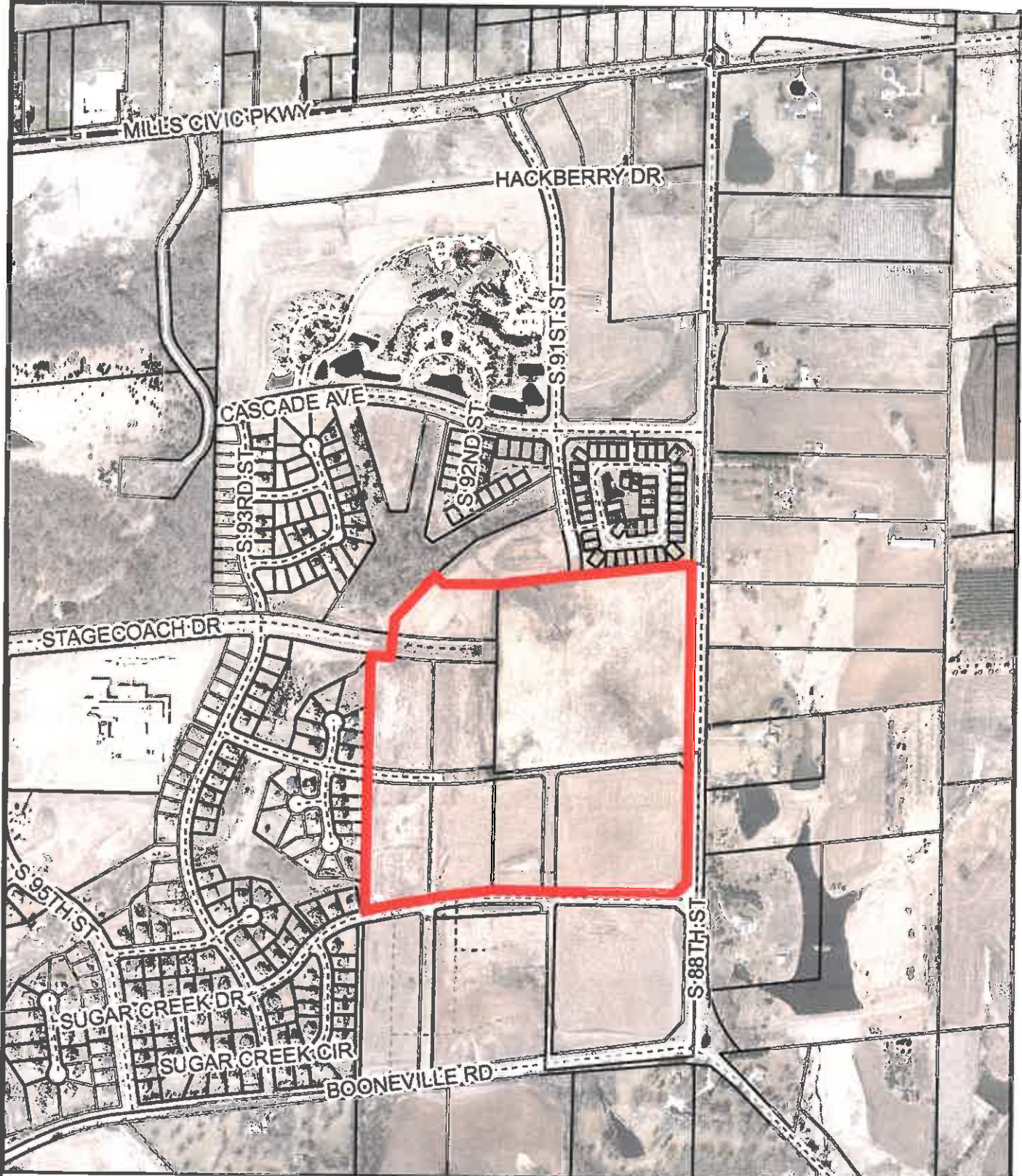
ATTEST:

Recording Secretary

**EXHIBIT A
CONDITIONS OF APPROVAL**

EXHIBIT A

1. The applicant install and maintain all necessary soil erosion measures
2. The applicant agrees that any grading or infrastructure work done to the site prior to the full approval of the site plan which contains all site development details is at their own risk, and that the final site development will need to comply with any changes that are deemed necessary as part of those subsequent approvals. The applicant further acknowledges and agrees that should the continued review, development and finalization of the site's details warrant changes to the utilities or building design or locations resulting in changes to the grades, or utilities, that the applicant will need to make the necessary changes at their own cost with no compensation from the City
3. The applicant acknowledges that approval of this site plan does not allow for any above ground construction of any type and that subsequent site plan approval and submittal of final plans to the City is required before any above ground work can be started.
4. The applicant agrees to obtain all appropriate building permits prior to initiation of any site work



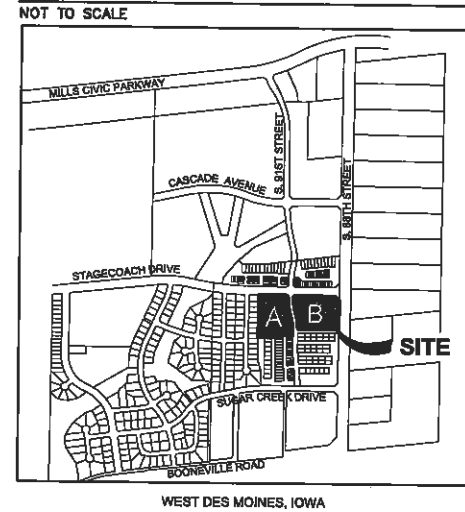
Mill Ridge



NOT TO SCALE

SITE PLAN FOR: MILL RIDGE TOWNHOMES - PHASE 1 WEST DES MOINES, IOWA

VICINITY MAP



OWNER

MILLER LAND PARTNERSHIP
1390 S 88TH STREET
WEST DES MOINES, IOWA 50266

AND

COMMUNITY BUSINESS LENDERS, LLC
5000 WESTOWN PARKWAY, SUITE 420
WEST DES MOINES, IOWA 50266

APPLICANT

HUBBELL REALTY COMPANY
CONTACT: JOE PIETRUSZYNSKI
6900 WESTOWN PARKWAY
WEST DES MOINES, IA 50266
PH. (515) 280-2059

ENGINEER

CIVIL DESIGN ADVANTAGE
CONTACT: JOSH TRYGSTAD
EMAIL: JOSHT@CDA-ENG.COM
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410

SURVEYOR

CIVIL DESIGN ADVANTAGE, LLC
CONTACT: MIKE BROONER
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410

ARCHITECT

SUBMITTAL DATES

- SITE PLAN SUBMITTAL TO CITY #1:	12/08/15
- SITE PLAN SUBMITTAL TO CITY #2:	02/03/16
- SITE PLAN SUBMITTAL TO CITY #3:	02/26/16

COMPREHENSIVE LAND USE

SINGLE FAMILY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL

ZONING

TALLYN'S REACH P.U.D. -
MEDIUM DENSITY (PARCEL G)
SINGLE FAMILY RESIDENTIAL (PARCEL J)

AREA 'A' SUMMARY

AREA: 5.58 ACRES (243,206 SF)

OPEN SPACE CALCULATION:

TOTAL SITE:	=	243,206
BUILDINGS:	=	65,100 SF
DRIVEWAYS:	=	25,959 SF
SIDEWALK:	=	4,547 SF
OPEN SPACE PROVIDED:	=	128,564 SF (52%)
IMPERVIOUS AREA:	=	95,606

AREA 'B' SUMMARY

AREA: 6.67 ACRES (290,452 SF)

OPEN SPACE CALCULATION:

TOTAL SITE:	=	290,452
BUILDINGS:	=	77,973 SF
DRIVEWAYS:	=	25,500 SF
SIDEWALK:	=	10,682 SF
OPEN SPACE PROVIDED:	=	139,387 SF (48%)
IMPERVIOUS AREA:	=	95,606

BENCHMARKS

- BM#1 BURY BOLT ON HYDRANT NW CORNER S. 88TH STREET & SUGAR CREEK ELEVATION=165.62
- BM#2 BURY BOLT ON FIRST HYDRANT SOUTH FROM THE NE CORNER OF SITE ELEVATION=193.37
- BM#3 WEST DES MOINES STANDARD BM #35 @ INTERSECTION OF MILLS CIVIC PKWY AND SOUTH 88TH STREET, NORTHEAST CORNER OF INTERSECTION, 206 FEET EAST OF SOUTH 88TH STREET, 49 FEET NORTH OF THE CENTERLINE OF MILLS CIVIC PKWY, 2 FEET SOUTH OF THE FENCE LINE. ELEVATION=219.04
- BM#4 WEST DES MOINES STANDARD BM #87 3960 +/- FEET WEST OF INTERSECTION OF SOUTH 88TH STREET AND 335TH STREET (DALLAS COUNTY)(MILLS CIVIC PARKWAY), 3 FEET NORTH OF EAST/WEST FENCE, 10 FEET EAST OF NORTH/SOUTH FENCE, ON 335TH STREET (DALLAS COUNTY)(MILLS CIVIC PARKWAY) ACROSS FROM HOUSE #3307 AND #3309. ELEVATION=167.68

CONSTRUCTION SCHEDULE

ANTICIPATED START DATE = MARCH 2016
ANTICIPATED FINISH DATE = AUGUST 2016

INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2	DETAILS
3	SITE LAYOUT AND EASEMENT INFORMATION
4-5	DIMENSION PLAN
6-10	GRADING PLAN
11-12	UTILITY PLAN
13-14	LANDSCAPE PLAN

AREA 'A' DESCRIPTION

A PART OF OUTLOT 'M' AND STREET LOT 'F', CORRECTED MICHAEL'S LANDING PLAT 1, AN OFFICIAL PLAT IN THE CITY OF WEST DES MOINES, AND A PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 22, TOWNSHIP 78 NORTH, RANGE 26 WEST OF THE FIFTH PRINCIPAL MERIDIAN, DALLAS COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF OUTLOT 'M', CORRECTED MICHAEL'S LANDING PLAT 1: THENCE SOUTHEASTERLY ALONG THE NORTH LINE OF SAID OUTLOT 'M' AND A CURVE CONCAVE NORTHEASTERLY WHOSE RADIUS IS 4060.00 FEET, WHOSE ARC LENGTH IS 173.20 FEET AND WHOSE CHORD BEARS SOUTH 86°11'39" EAST, 173.19 FEET; THENCE SOUTH 89°24'59" EAST ALONG SAID NORTH LINE, 102.05 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 89°24'59" EAST ALONG SAID NORTH LINE, 61.23 FEET TO THE NORTHEAST CORNER OF SAID OUTLOT 'M'; THENCE SOUTH 89°24'59" EAST, 311.57 FEET; THENCE SOUTHEASTERLY ALONG A CURVE CONCAVE SOUTHWESTERLY WHOSE RADIUS IS 25.00 FEET, WHOSE ARC LENGTH IS 39.19 FEET AND WHOSE CHORD BEARS SOUTH 44°30'09" EAST, 35.30 FEET; THENCE SOUTHERLY ALONG A CURVE CONCAVE EASTERLY WHOSE RADIUS IS 835.00 FEET, WHOSE ARC LENGTH IS 247.91 FEET AND WHOSE CHORD BEARS SOUTH 08°05'38" EAST, 247.00 FEET; THENCE SOUTHERLY ALONG A CURVE CONCAVE WESTERLY WHOSE RADIUS IS 765.00 FEET, WHOSE ARC LENGTH IS 220.28 FEET AND WHOSE CHORD BEARS SOUTH 08°21'02" EAST, 219.52 FEET; THENCE SOUTH 00°06'05" EAST, 43.81 FEET; THENCE SOUTH 88°52'33" WEST, 84.09 FEET; THENCE SOUTH 00°10'35" EAST, 17.05 FEET; THENCE SOUTH 89°49'25" WEST, 150.97 FEET; THENCE SOUTHERLY ALONG A CURVE CONCAVE WESTERLY WHOSE RADIUS IS 375.00 FEET, WHOSE ARC LENGTH IS 24.78 FEET AND WHOSE CHORD BEARS SOUTH 02°23'48" EAST, 24.78 FEET; THENCE SOUTH 89°49'25" WEST, 50.00 FEET; THENCE NORTHERLY ALONG A CURVE CONCAVE WESTERLY WHOSE RADIUS IS 325.00 FEET, WHOSE ARC LENGTH IS 10.22 FEET AND WHOSE CHORD BEARS NORTH 01°27'15" WEST, 10.22 FEET; THENCE NORTH 89°58'48" WEST, 96.41 FEET; THENCE NORTH 00°00'00" EAST, 2.56 FEET; THENCE SOUTH 90°00'00" WEST, 89.76 FEET; THENCE NORTH 00°37'06" EAST, 565.81 FEET TO THE POINT OF BEGINNING AND CONTAINING 5.58 ACRES (242,095 SQUARE FEET).

AREA 'B' DESCRIPTION

A PART OF STREET LOT 'F', CORRECTED MICHAEL'S LANDING PLAT 1, AN OFFICIAL PLAT IN THE CITY OF WEST DES MOINES AND A PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 22, TOWNSHIP 78 NORTH, RANGE 26 WEST OF THE FIFTH PRINCIPAL MERIDIAN, DALLAS COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID STREET LOT 'F', CORRECTED MICHAEL'S LANDING PLAT 1; THENCE NORTH 00°29'50" EAST ALONG THE EAST LINE OF SAID STREET LOT 'F', 67.28 FEET TO THE POINT OF BEGINNING; THENCE NORTH 90°00'00" WEST, 549.67 FEET; THENCE NORTH 00°06'05" WEST, 15.70 FEET; THENCE NORTHERLY ALONG A CURVE CONCAVE WESTERLY WHOSE RADIUS IS 835.00 FEET, WHOSE ARC LENGTH IS 240.43 FEET AND WHOSE CHORD BEARS NORTH 08°21'02" WEST, 239.60 FEET; THENCE NORTHERLY ALONG A CURVE CONCAVE EASTERLY WHOSE RADIUS IS 765.00 FEET, WHOSE ARC LENGTH IS 226.76 FEET AND WHOSE CHORD BEARS NORTH 08°06'29" WEST, 225.93 FEET; THENCE NORTHEASTERLY ALONG A CURVE CONCAVE SOUTHEASTERLY WHOSE RADIUS IS 25.00 FEET, WHOSE ARC LENGTH IS 39.36 FEET AND WHOSE CHORD BEARS NORTH 45°29'01" EAST, 35.42 FEET; THENCE SOUTH 89°24'59" EAST, 545.43 FEET; THENCE SOUTH 44°27'35" EAST, 70.76 FEET TO THE WEST LINE OF THE ACQUISITION PLAT RECORDED IN BOOK 2008 PAGE 5204; THENCE SOUTH 00°28'50" WEST ALONG SAID WEST LINE AND THE SOUTHERLY EXTENSION THEREOF, 445.22 FEET TO THE POINT OF BEGINNING AND CONTAINING 6.67 ACRES (290,452 SQUARE FEET).

GENERAL LEGEND

PROPOSED	EXISTING
PROJECT BOUNDARY	SANITARY MANHOLE
LOT LINE	WATER VALVE BOX
SECTION LINE	FIRE HYDRANT
CENTER LINE	WATER CURB STOP
RIGHT OF WAY	WELL
PERMANENT EASEMENT	STORM SEWER MANHOLE
TEMPORARY EASEMENT	STORM SEWER SINGLE INTAKE
TYPE SW-501 STORM INTAKE	STORM SEWER DOUBLE INTAKE
TYPE SW-503 STORM INTAKE	FLARED END SECTION
TYPE SW-505 STORM INTAKE	ROOF DRAIN/ DOWNSPOUT
TYPE SW-506 STORM INTAKE	DECIDUOUS TREE
TYPE SW-513 STORM INTAKE	CONIFEROUS TREE
TYPE SW-401 STORM MANHOLE	DECIDUOUS SHRUB
TYPE SW-402 STORM MANHOLE	CONIFEROUS SHRUB
TYPE SW-301 SANITARY MANHOLE	ELECTRIC POWER POLE
STORM/SANITARY CLEANOUT	GUY ANCHOR
WATER VALVE	STREET LIGHT
FIRE HYDRANT ASSEMBLY	POWER POLE W/ TRANSFORMER
SIGN	UTILITY POLE W/ LIGHT
DETECTABLE WARNING PANEL	ELECTRIC BOX
STORM SEWER STRUCTURE NO.	ELECTRIC TRANSFORMER
STORM SEWER PIPE NO.	ELECTRIC MANHOLE OR VAULT
SANITARY SEWER STRUCTURE NO.	TRAFFIC SIGN
SANITARY SEWER PIPE NO.	TELEPHONE JUNCTION BOX
SANITARY SEWER WITH SIZE	TELEPHONE MANHOLE/VAULT
SANITARY SERVICE	TELEPHONE POLE
STORM SEWER	GAS VALVE BOX
STORM SERVICE	CABLE TV JUNCTION BOX
WATERMAIN WITH SIZE	CABLE TV MANHOLE/VAULT
WATER SERVICE	MAIL BOX
SAWCUT (FULL DEPTH)	BENCHMARK
SILT FENCE	SOIL BORING
	UNDERGROUND TV CABLE
	GAS MAIN
	FIBER OPTIC
	UNDERGROUND TELEPHONE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	FIELD TILE
	SANITARY SEWER W/ SIZE
	STORM SEWER W/ SIZE
	WATER MAIN W/ SIZE

REFER TO GEOTECHNICAL EXPLORATION REPORT NO. 141355 DATED FEBRUARY 27, 2015 PREPARED BY ALLENDER BUTZKE ENGINEERS, INC. FOR GEOTECHNICAL REQUIREMENTS.

THE PROJECT REQUIRES AN IOWA NPDES PERMIT #2 AND CITY OF WEST DES MOINES GRADING PERMIT. CIVIL DESIGN ADVANTAGE WILL PROVIDE THE PERMITS AND THE INITIAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE CONTRACTORS USE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING THE SWPPP THROUGHOUT CONSTRUCTION AND MEETING LOCAL, STATE AND FEDERAL REQUIREMENTS.

ALL CONSTRUCTION MATERIALS, DUMPSTERS, DETACHED TRAILERS OR SIMILAR ITEMS ARE PROHIBITED ON PUBLIC STREETS OR WITHIN THE PUBLIC R.O.W.

THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS, THE 1993 DES MOINES METRO DESIGN STANDARDS WITH THE WEST DES MOINES ADDENDA, AND SUDAS AND WEST DES MOINES WATER WORKS GENERAL SUPPLEMENTAL SPECIFICATIONS FOR WATER INFRASTRUCTURE SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.

THIS DESIGN SPECIFICALLY PREPARED FOR USE AT THE LOCATION SHOWN. USE IN ANY OTHER MANNER EXCEEDS THE INTENDED PURPOSE OF THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS.

PRELIMINARY

FOR CONSTRUCTION

DATE _____

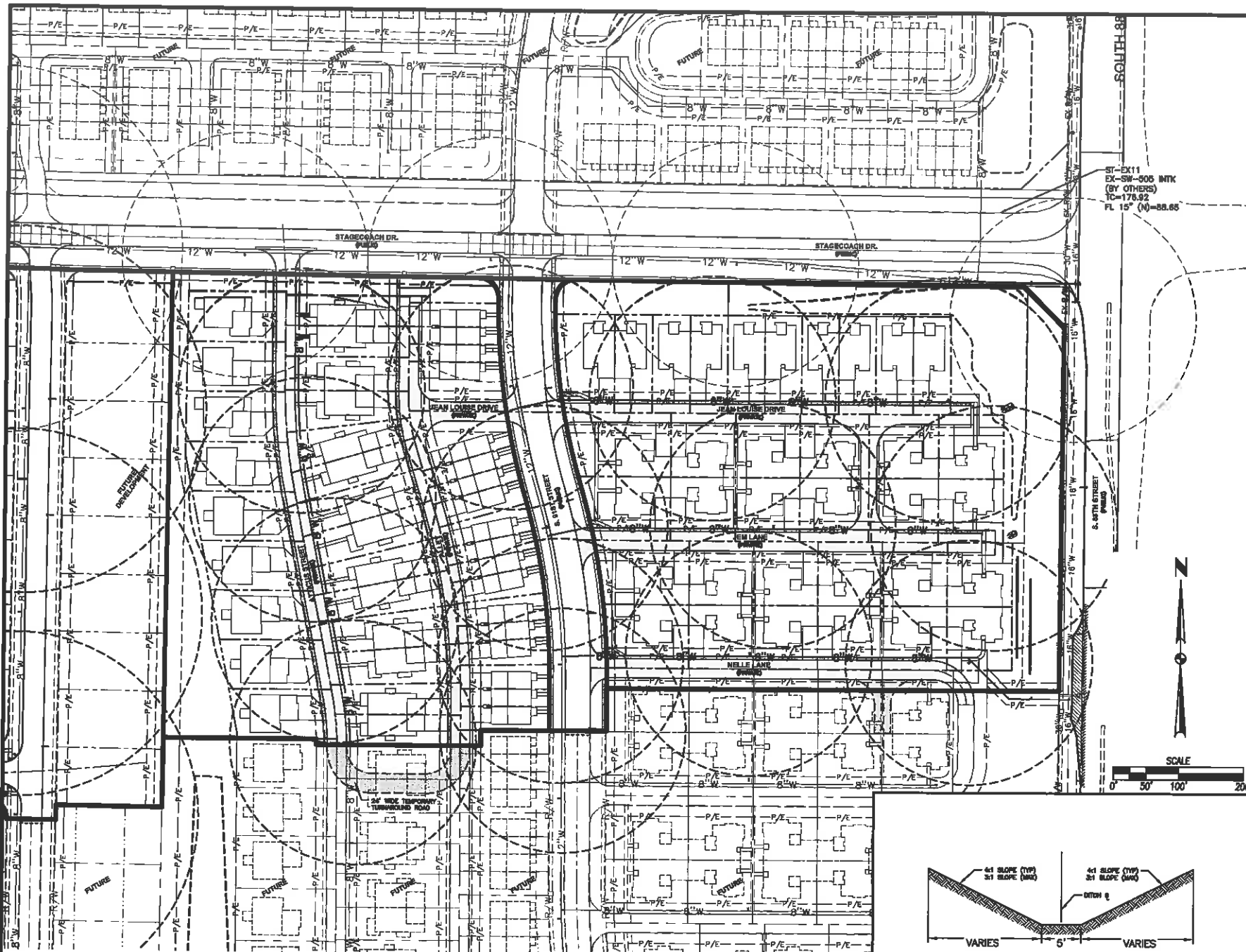
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2016
PAGES OR SHEETS COVERED BY THIS SEAL:
ALL SHEETS



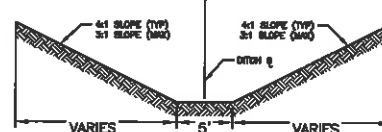
UTILITY WARNING

ANY UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN.

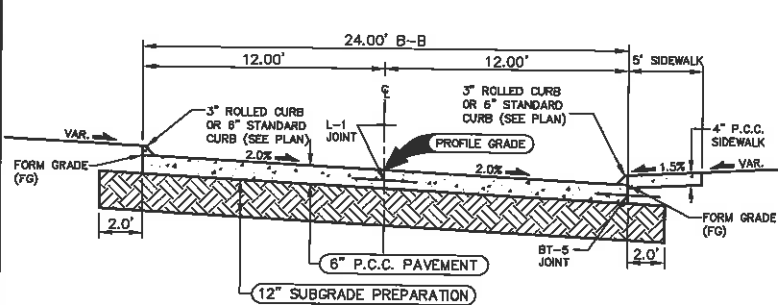
FILE: H:\2016\1504\1504-0001\1504-0001-0001.dwg DATE PLOTTED: 5/11/2016 11:18 AM COMMENT: ONE PLOTTED BY: JESSE SHULTZ TECH



HYDRANT COVERAGE PLAN (150' RADIUS)

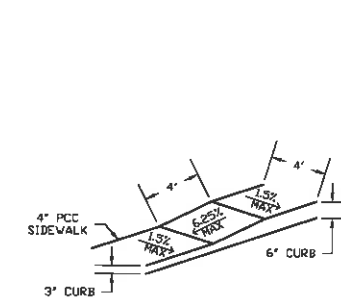


TYPICAL SWALE DETAILS

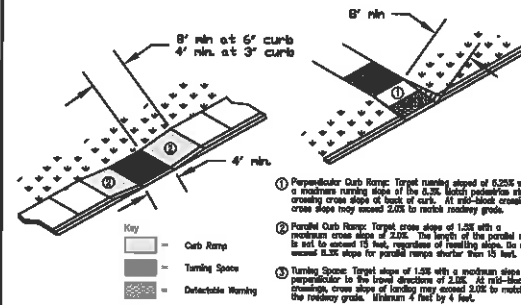


NOTE:
1. 12" SUBGRADE PREPARATION TO BE PREPARED IN 2 - 6" LIFTS.

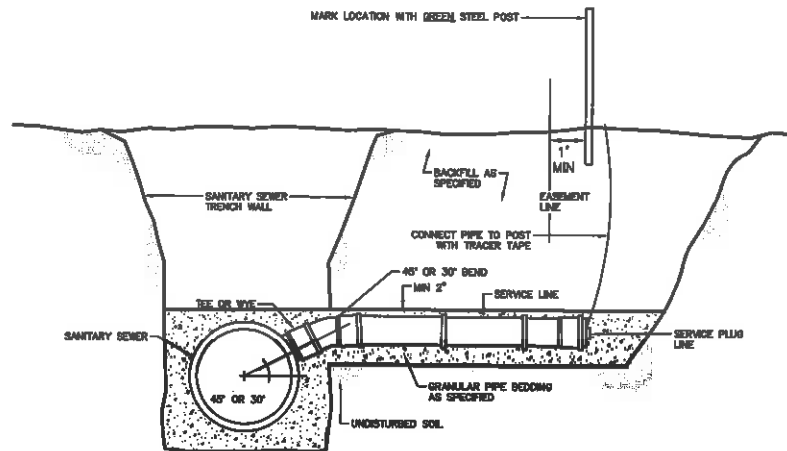
TYPICAL SECTION - 24' P.C.C. PRIVATE ROADWAY



SIDEWALK @ CURB TRANSITION

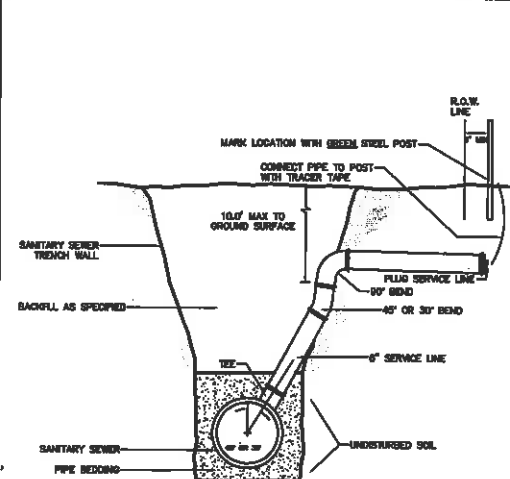


NOTE:
THE CONTRACTOR SHALL REQUEST AN ON-SITE INSPECTION WITH THE BUILDING DIVISION AT (515) 222-3630, PRIOR TO PLACEMENT OF ANY CONCRETE RAMPS.



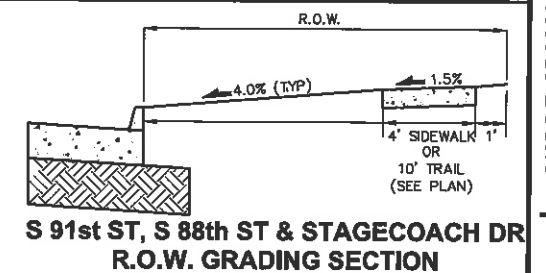
NOTE:
1. USE FOR SERVICE CONNECTION WHEN SANITARY SEWER DEPTH IS 12.0' OR LESS OR WHEN REQUIRED TO SERVE ADJACENT PROPERTY.

SANITARY SEWER SERVICE
CITY OF WEST DES MOINES DETAIL 4.5

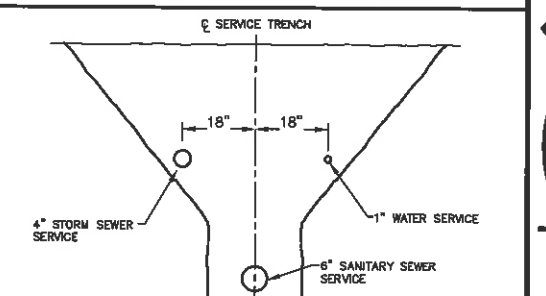


NOTE:
1. USE FOR SERVICE CONNECTION WHEN SANITARY SEWER DEPTH IS 12.0' OR UNLESS ADDITIONAL DEPTH IS NECESSARY TO SERVE ADJACENT PROPERTY.

SANITARY SEWER SERVICE RISER
CITY OF WEST DES MOINES DETAIL 4.6

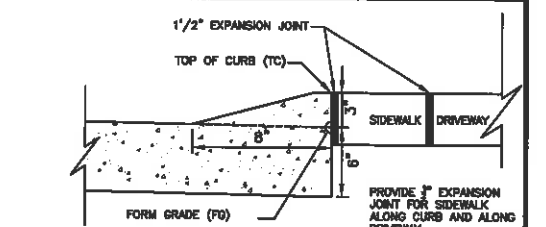


S 91st ST, S 88th ST & STAGECOACH DR
R.O.W. GRADING SECTION

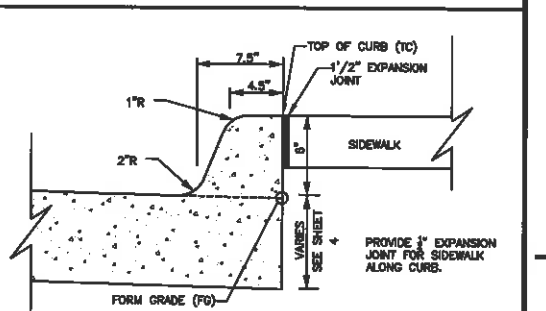


NOTE:
EXTEND SANITARY, WATER AND STORM SERVICES TO RIGHT OF WAY LINE. MARK ENDS OF SERVICES WITH STEEL POSTS. CONTRACTOR SHALL COORDINATE ALL SERVICE LINE CROSSINGS WITH MAIN UTILITIES.

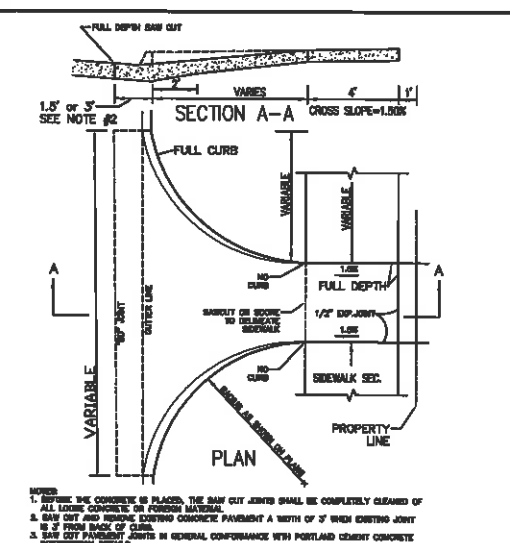
TYPICAL SERVICE INSTALLATION DETAILS



INTEGRAL 3" ROLLED CURB DETAIL



6" P.C.C. INTEGRAL CURB



NOTES:
1. BEFORE ANY CONCRETE IS PLACED, THE SAW CUT JOINT SHALL BE COMPLETELY CLEANED OF ALL LOOSE CONCRETE OR FOREIGN MATERIAL.
2. SAW CUT AND REPAIR EXISTING CONCRETE PAVEMENT A MINIMUM OF 3" FROM EXISTING JOINT.
3. SAW CUT PAVEMENT JOINTS IN GENERAL CONFORMANCE WITH PORTLAND CEMENT CONCRETE INTERSECTION DETAIL.

DRIVEWAY DETAIL
CITY OF WEST DES MOINES DETAIL

DATE	REVISIONS
12/08/15 <td></td>	
02/28/16 <td></td>	
02/03/16 <td></td>	

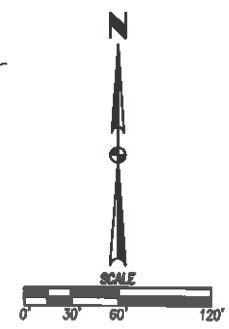
3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

TECH:
ENGINEER:

WEST DES MOINES, IOWA

MILL RIDGE TOWNHOMES - PHASE 1
DETAILS

REFER TO SEPARATE PUBLIC IMPROVEMENT PLANS FOR PUBLIC SANITARY SEWER, PUBLIC STORM SEWER, PUBLIC WATER MAIN AND PUBLIC STREET INFORMATION.



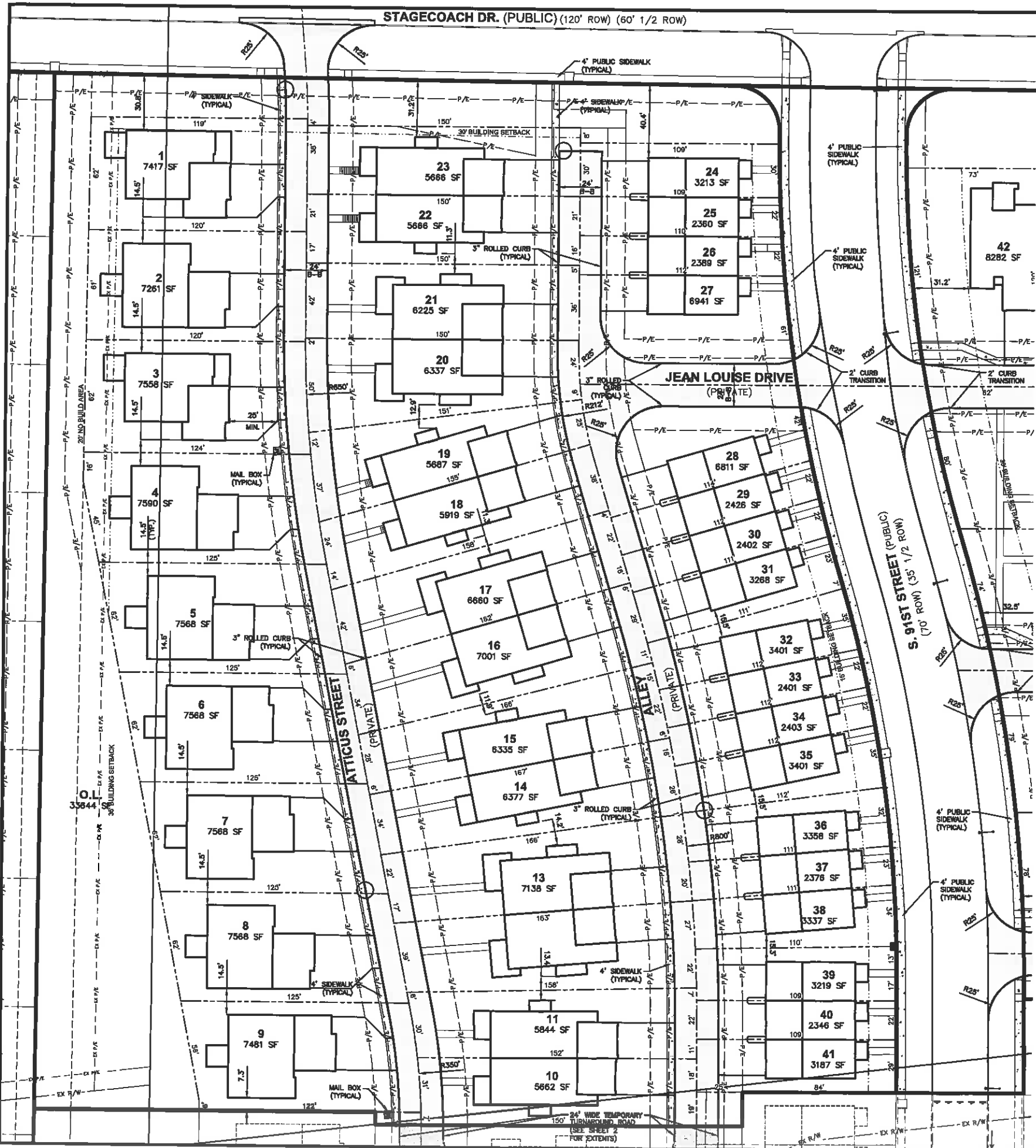
REVISIONS	DATE
1	02/28/16
2	03/03/16
3	12/08/15

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410



MILL RIDGE TOWNHOMES - PHASE 1
SITE LAYOUT AND EASEMENT INFORMATION

STAGECOACH DR. (PUBLIC) (120' ROW) (60' 1/2 ROW)



GENERAL NOTES

1. THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARDS FOR SUBDIVISIONS AND THE WEST DES MOINES WATER WORKS STANDARD SPECIFICATIONS FOR SUBDIVISIONS SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL COMPLY WITH ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
3. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
4. PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER, ENGINEER, AND/OR ARCHITECT, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
5. AT LEAST ONE WEEK PRIOR TO ANY CONSTRUCTION WITHIN PUBLIC R.O.W./EASEMENTS AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, THE CONTRACTOR SHALL CONTACT THE WDM CONSTRUCTION DIVISION "CLINT CARPENTERS" (222-3486) TO OBTAIN APPLICABLE CITY PERMITS THAT MAY BE NECESSARY.
6. ALL CONSTRUCTION WITHIN PUBLIC R.O.W./EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS, DSM METRO DESIGN STANDARDS AND WDM ADDENDUMS.
7. ALL DIMENSIONS ARE TO BACK OF CURB, BUILDING FACE OR PROPERTY LINE UNLESS OTHERWISE NOTED.
8. CONTRACTOR TO VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
9. PLACE 3/4" INCH EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDING. PLACE 1/2" INCH EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C. PAVEMENT. REMOVE ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY.
10. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
11. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
12. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
13. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
14. THE CONTRACTOR MAY BE REQUIRED TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY, AS DIRECTED BY THE ENGINEER OR THE CITY.
15. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT, INCLUDING STAGING OF CONSTRUCTION DETAILS.
16. REFER TO PUBLIC IMPROVEMENT PLANS FOR CONCRETE REMOVAL FOR DRIVEWAY APPROACHES.
17. ALL PERMITS AND ADDITIONAL FEES REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACTOR BID.
18. NO OUTDOOR DUMPSTERS ARE PROPOSED AT THIS TIME.
19. TEMPORARY TURNAROUNDS SHALL BE ABLE TO HANDLE A MINIMUM VEHICLE OF 75,000 POUNDS.

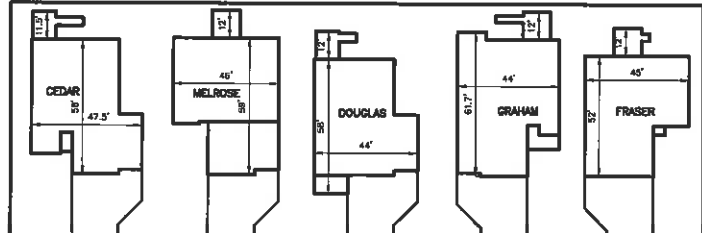
TRAFFIC CONTROL NOTES

1. ALL APPLICABLE CITY PERMITS, INCLUDING BUT NOT LIMITED TO CLOSURE PERMITS, SHALL BE OBTAINED PRIOR TO ANY CONSTRUCTION WITHIN CITY R.O.W. OR LANE CLOSURES.
2. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. PERMANENT SIGNING THAT CONVEYS A MESSAGE CONTRARY TO THE MESSAGE OF TEMPORARY SIGNING AND NOT APPLICABLE TO THE WORKING CONDITIONS SHALL BE COVERED BY THE CONTRACTOR WHEN DIRECTED BY THE CITY.
4. THE CONTRACTOR SHALL COORDINATE HIS TRAFFIC CONTROL WITH OTHER CONSTRUCTION PROJECTS IN THE AREA.
5. SIDEWALK/ PATH CLOSED SIGNS REQUIRED FOR ALL SIDEWALK CLOSURES. SIGNAGE AND TEMPORARY PEDESTRIAN ROUTE THROUGH CONSTRUCTION AREA SHALL MEET THE REQUIREMENTS OF PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG), SECTION R203 AND IOWA DOT DESIGN MANUAL, CHAPTER 12A-4.
6. THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
7. ALL SIGNING AND LANE STRIPING SHALL COMPLY WITH MUTCD. MAINTENANCE AND REPLACEMENT OF THE SIGNING AND STRIPING WILL BE THE RESPONSIBILITY OF THE APPLICANT.

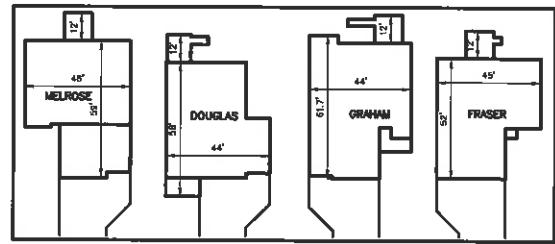
PAVEMENT THICKNESS (NON-REINFORCED)

1. SIDEWALKS 4" P.C.C.
2. SIDEWALKS IN DRIVEWAYS 6" P.C.C.
3. PRIVATE STREETS 6" P.C.C.
4. DRIVEWAYS 6" P.C.C.

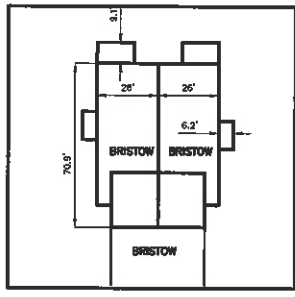
REFER TO SEPARATE PUBLIC IMPROVEMENT PLANS FOR PUBLIC SANITARY SEWER, PUBLIC STORM SEWER, PUBLIC WATER MAIN AND PUBLIC STREET INFORMATION.



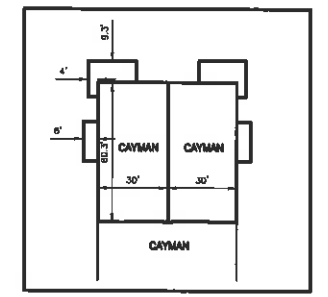
**TYPICAL TOWNHOME UNITS
LOTS 1 AND 3**



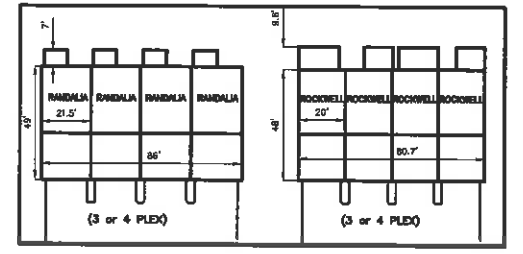
**TYPICAL TOWNHOME UNITS
LOTS 2 AND 4-9**



**TYPICAL TOWNHOME UNITS
LOTS 10, 11, 14, 15, 18, 19, 22 AND 23**



**TYPICAL TOWNHOME UNITS
LOTS 12, 13, 16, 17, 20 AND 21**



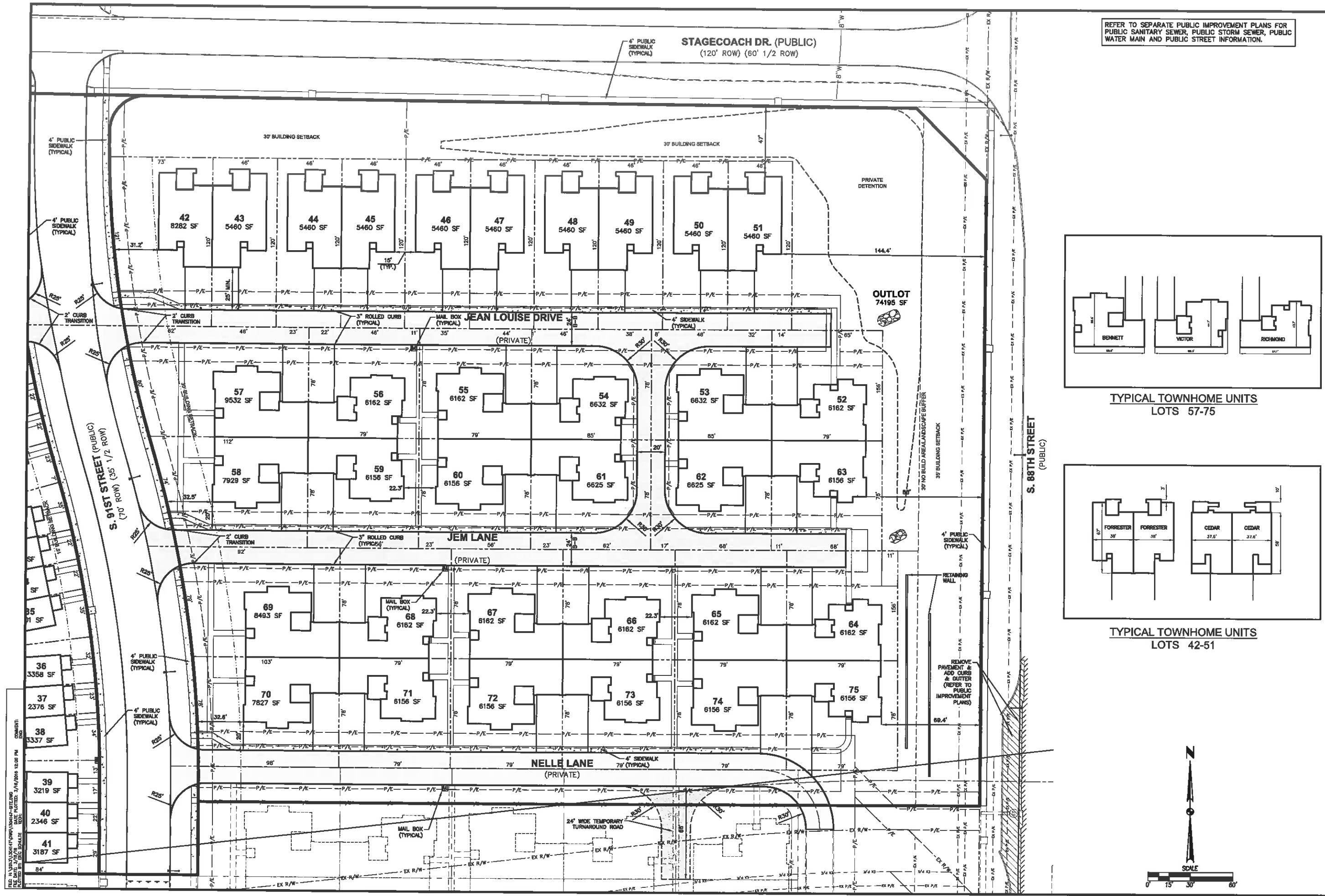
**TYPICAL TOWNHOME UNITS
LOTS 21-41**

DATE	REVISIONS
02/28/16	
02/03/16	
12/08/15	

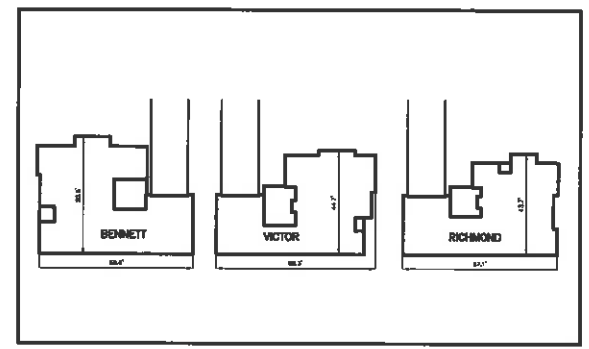
3405 S.E. CROSSROADS DRIVE, SUITE G
PHONE: (515) 369-4400 FAX: (515) 369-4410
TECH: ENGINEER:



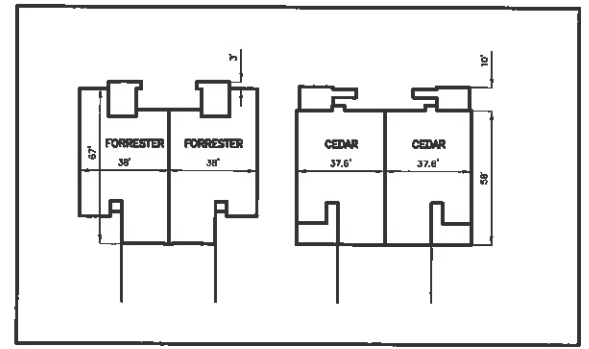
MILL RIDGE TOWNHOMES - PHASE 1
AREA A - DIMENSION PLAN
WEST DES MOINES, IOWA



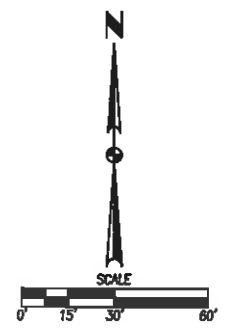
REFER TO SEPARATE PUBLIC IMPROVEMENT PLANS FOR PUBLIC SANITARY SEWER, PUBLIC STORM SEWER, PUBLIC WATER MAIN AND PUBLIC STREET INFORMATION.



TYPICAL TOWNHOME UNITS
LOTS 57-75



TYPICAL TOWNHOME UNITS
LOTS 42-51



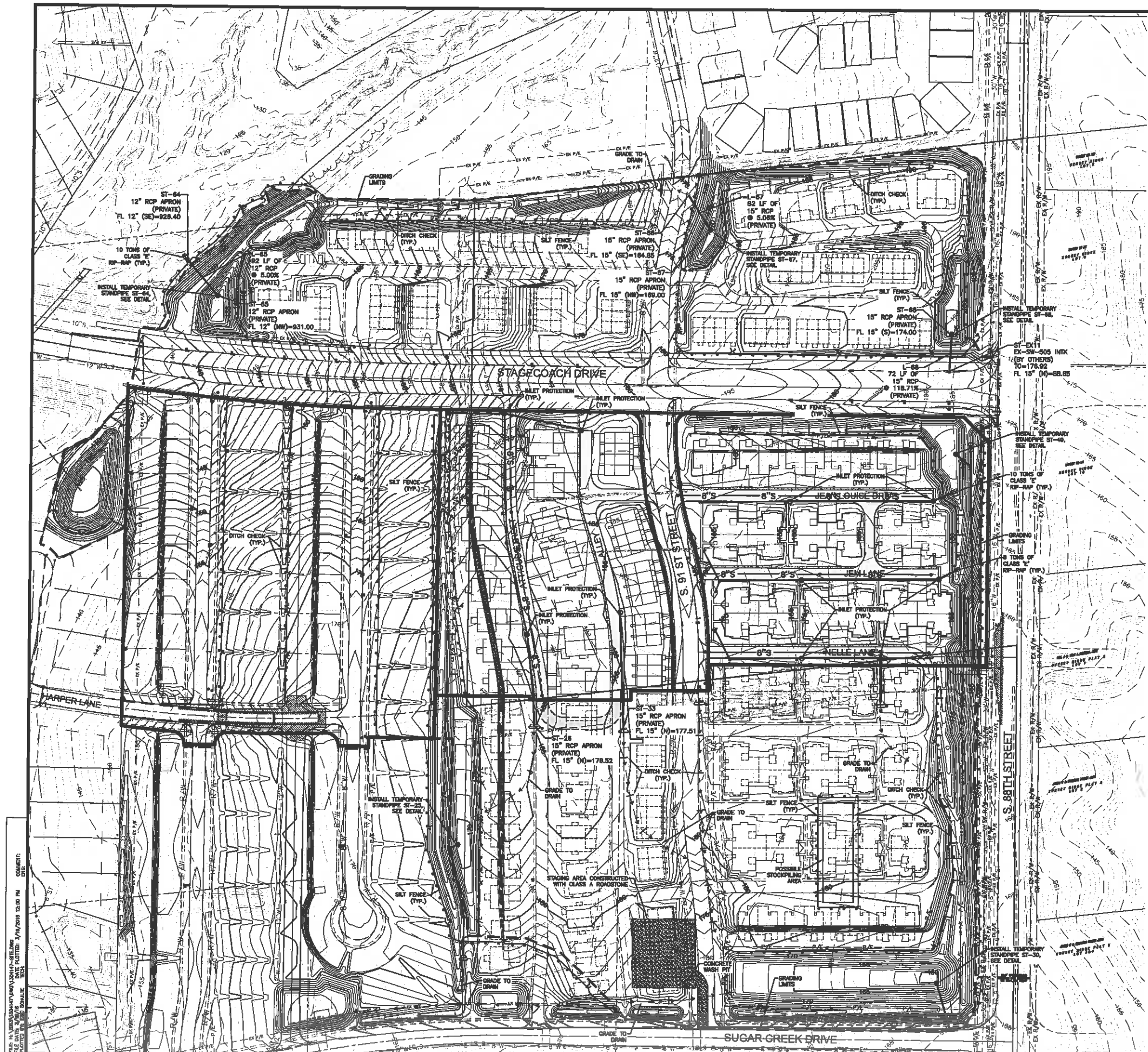
REVISIONS	DATE
1	02/28/16
2	02/03/16
3	12/08/15

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: **CSA**
CIVIL DESIGN ADVANTAGE
WEST DES MOINES, IOWA

5 MILL RIDGE TOWNHOMES - PHASE 1
AREA B - DIMENSION PLAN

14
1304147

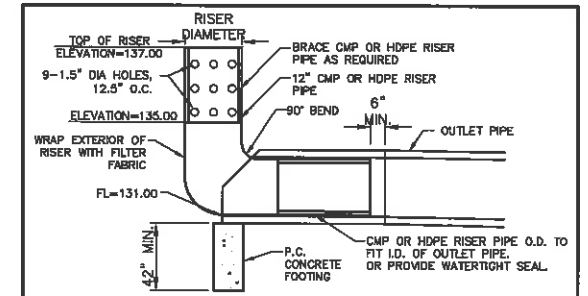
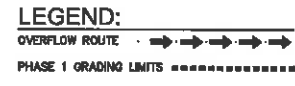


REFER TO SEPARATE PUBLIC IMPROVEMENT PLANS FOR PUBLIC SANITARY SEWER, PUBLIC STORM SEWER, PUBLIC WATER MAIN AND PUBLIC STREET INFORMATION.

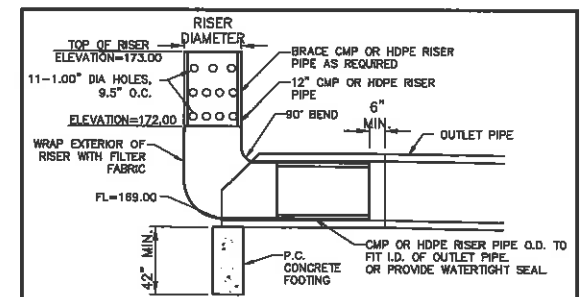
GRADING NOTES

1. PRIOR TO ANY GRADING ON SITE TAKES PLACE, A COPY OF THE NPDES PERMIT, AUTHORIZED BY THE IOWA DNR, SHALL BE PROVIDED TO THE CITY CHIEF BUILDING INSPECTOR, roel.vongenderen@dmr.iowa.gov OR FAX 515-273-0602.
2. CONTRACTOR SHALL STRIP ALL DELETERIOUS MATERIAL. THE TOP 6" OF TOPSOIL IS TO BE STOCKPILED AND RESPREAD AFTER GRADING IS COMPLETE. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A SUITABLE TOPSOIL STOCKPILE SITE IN ORDER TO ATTAIN FINAL CERTIFICATE OF OCCUPANCY APPROVAL. DOCUMENTATION WILL BE REQUIRED FROM THE GENERAL CONTRACTOR VIA THE GRADING CONTRACTOR/SOIL EROSION CONTROL CONTRACTOR OR THE PROJECT CIVIL ENGINEER THAT THE PROJECT MEETS THE CURRENT TOPSOIL PRESERVATION REQUIREMENTS OF THE IOWA DEPARTMENT OF NATURAL RESOURCES (DNR).
3. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
4. ALL SPOT ELEVATIONS ARE FOR GRADE (FO) OR TOP-OF-SLAB (TS) UNLESS OTHERWISE NOTED.
5. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS.
6. ALL SIDEWALK CROSS SLOPES SHALL BE A MAXIMUM OF 2.00%.
7. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
8. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
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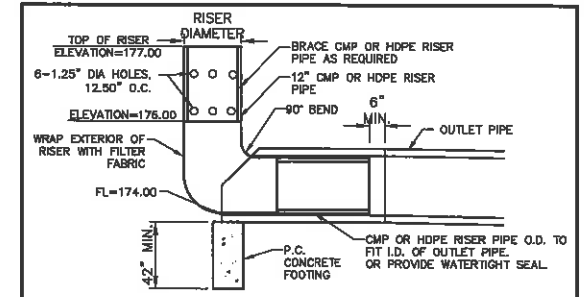
G.F.E. = GARAGE FLOOR ELEVATION AT THE OUTSIDE FACE OF GARAGE DOOR.



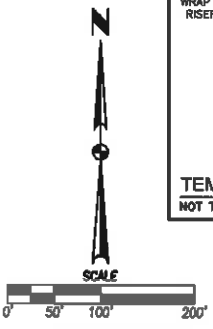
TEMPORARY STAND PIPE DETAIL, ST-65
NOT TO SCALE



TEMPORARY STAND PIPE DETAIL, ST-67
NOT TO SCALE



TEMPORARY STAND PIPE DETAIL, ST-68
NOT TO SCALE



PREP. BY: [Name], DATE: [Date], TIME: [Time]
 CHECKED BY: [Name], DATE: [Date], TIME: [Time]
 PRINTED BY: [Name], DATE: [Date], TIME: [Time]

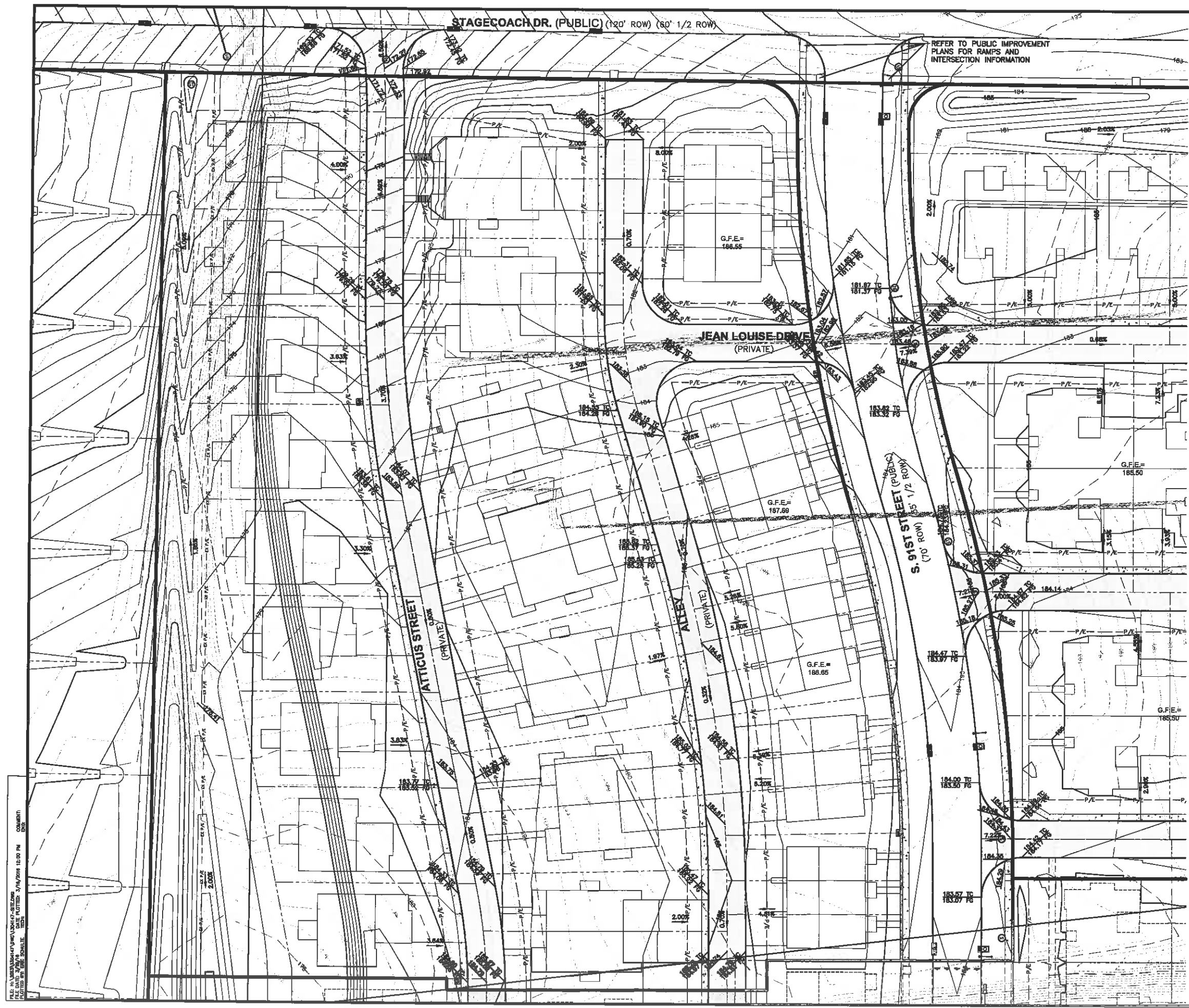
MILL RIDGE TOWNHOMES - PHASE 1
PHASE 1 LIMITS OF GRADING AND EROSION CONTROL
 CIVIL DESIGN ADVANTAGE
 WEST DES MOINES, IOWA

3405 S.E. CROSSROADS DRIVE, SUITE G
 PHONE: (515) 368-4400 FAX: (515) 369-4410
 ENGINEER:

DATE	REVISIONS
02/26/16	
02/23/16	
12/09/15	

SITE PLAN SUBMITTAL #1
 SITE PLAN SUBMITTAL #2
 SITE PLAN SUBMITTAL #3

6/14
 1304147



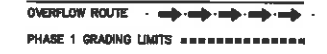
REFER TO SEPARATE PUBLIC IMPROVEMENT PLANS FOR PUBLIC SANITARY SEWER, PUBLIC STORM SEWER, PUBLIC WATER MAIN AND PUBLIC STREET INFORMATION.

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3. IN ORDER TO ATTAIN FINAL CERTIFICATE OF OCCUPANCY APPROVAL, DOCUMENTATION WILL BE REQUIRED FROM THE GENERAL CONTRACTOR VIA THE GRADING CONTRACTOR/SOIL EROSION CONTROL CONTRACTOR/OR THE PROJECT CIVIL ENGINEER THAT THE PROJECT MEETS THE CURRENT TOPSOIL PRESERVATION REQUIREMENTS OF THE IOWA DEPARTMENT OF NATURAL RESOURCES (DNR).
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7. ALL SIDEWALK CROSS SLOPES SHALL BE A MAXIMUM OF 2.00%.
8. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
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10. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
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12. FINAL FINISH GRADING TO BE APPROVED BY THE ARCHITECT AND CIVIL ENGINEER. MATCH EXISTING GRADES AT THE INTERFACE OF NEW AND EXISTING GRADES OR PAVING.
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G.F.E. = GARAGE FLOOR ELEVATION AT THE OUTSIDE FACE OF GARAGE DOOR.

LEGEND:



DATE: 3/16/2018
 TIME: 10:30 AM
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PLOTTED BY: [Name]

DATE	02/28/16
REVISIONS	
SITE PLAN SUBMITTAL #3	02/03/16
SITE PLAN SUBMITTAL #1	12/08/15

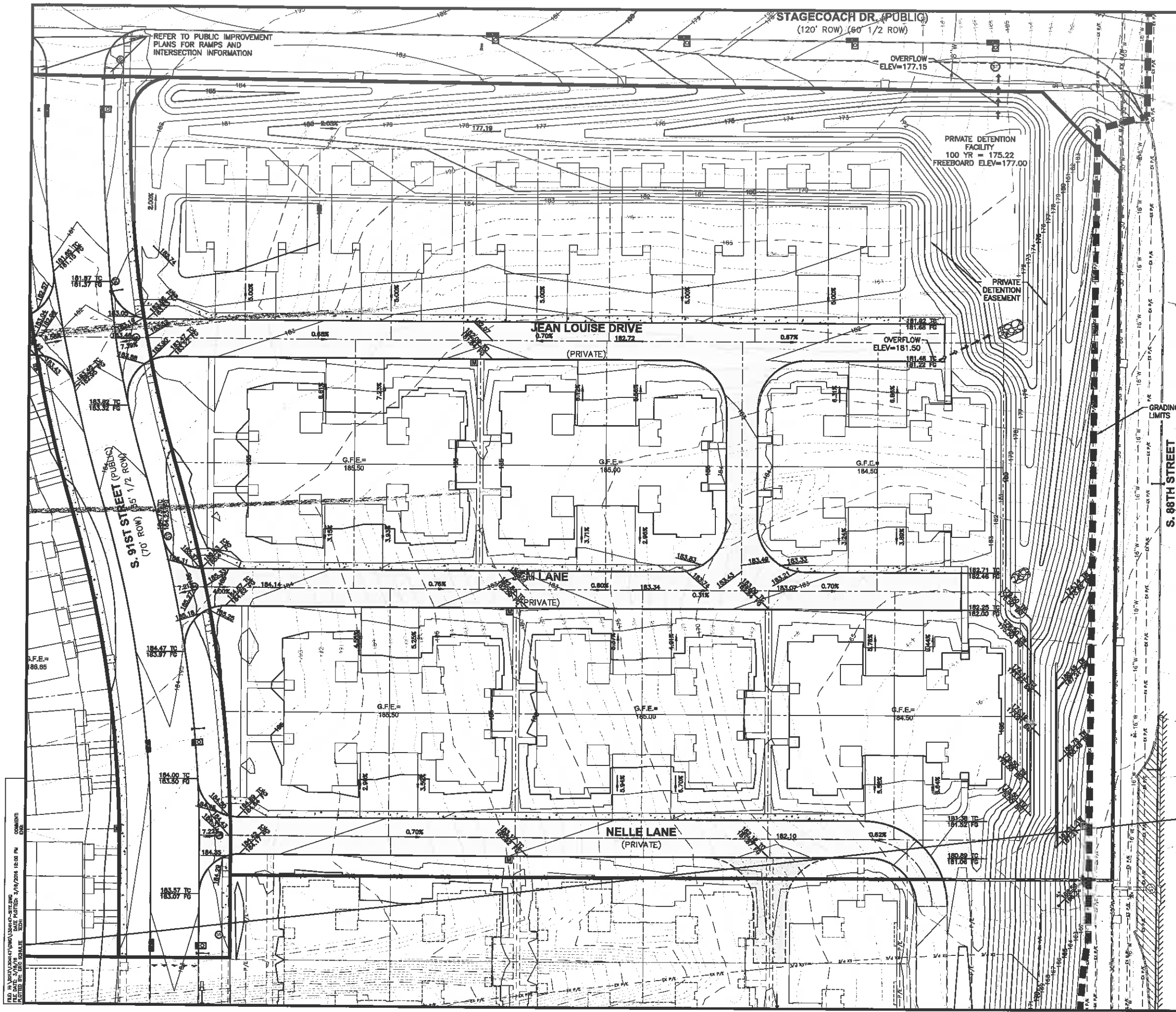
3405 S.E. CROSSROADS DRIVE, SUITE G
 GRIMES, IOWA 50111
 PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: [Signature] TECH: [Signature]

MILL RIDGE TOWNHOMES - PHASE 1
AREA A - GRADING PLAN

WEST DES MOINES, IOWA

7/14
 1304147

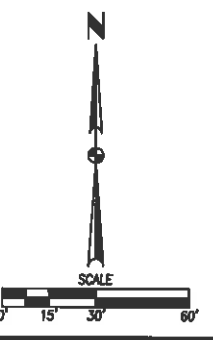
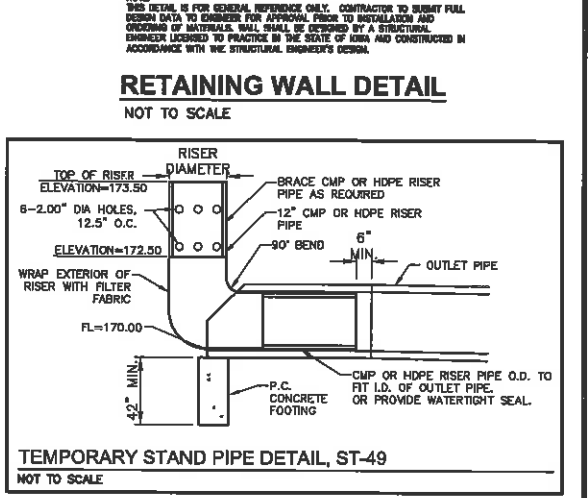
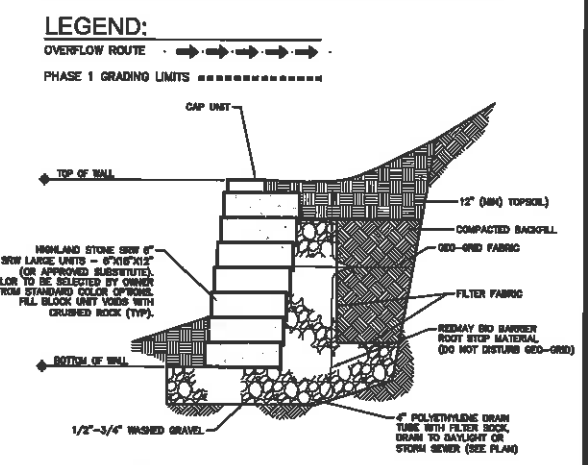


REFER TO PUBLIC IMPROVEMENT PLANS FOR PUBLIC SANITARY SEWER, PUBLIC STORM SEWER, PUBLIC WATER MAIN AND PUBLIC STREET INFORMATION.

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G.F.E. = GARAGE FLOOR ELEVATION AT THE OUTSIDE FACE OF GARAGE DOOR.



DATE	02/28/16
REVISIONS	
SITE PLAN SUBMITTAL #2	02/28/16
SITE PLAN SUBMITTAL #1	12/08/15

3405 S.E. CROSSROADS DRIVE, SUITE G
 PHONE: (515) 369-4400 FAX: (515) 369-4410

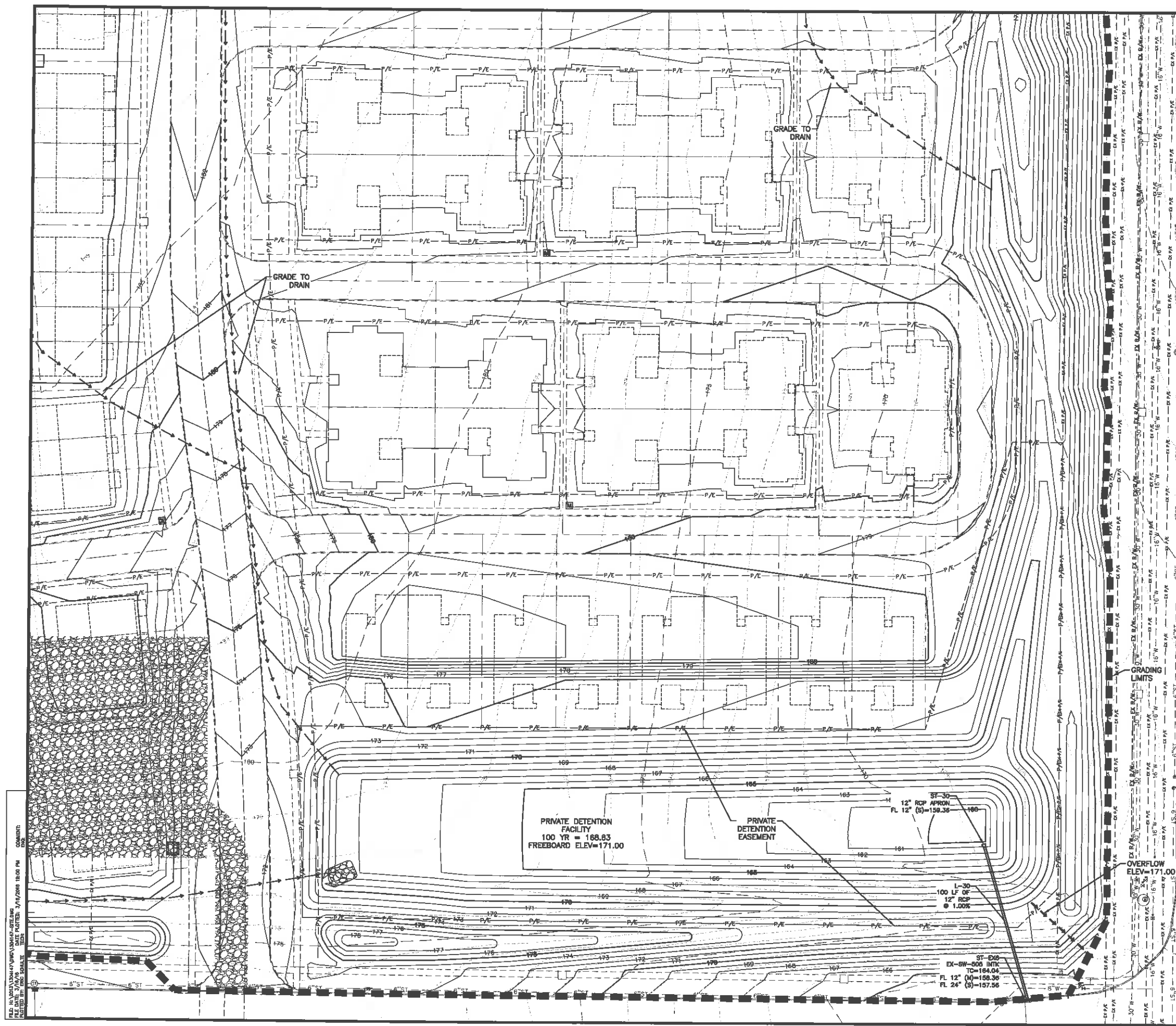
TECH: _____

ENGINEER: _____

EA CIVIL DESIGN ADVANTAGE

MILL RIDGE TOWNHOMES - PHASE 1
AREA B - GRADING PLAN
 WEST DES MOINES, IOWA

08/14
 1304147



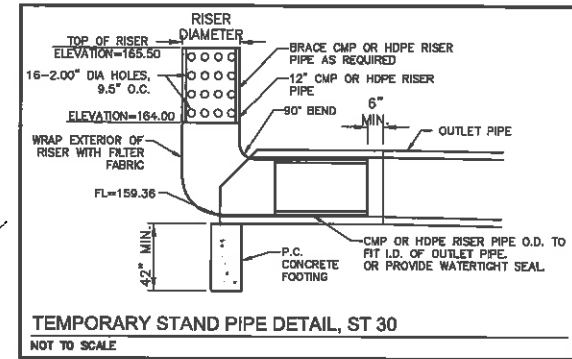
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6. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS.
7. ALL SIDEWALK CROSS SLOPES SHALL BE A MAXIMUM OF 2.00%.
8. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
9. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAIL ROADS TO PREVENT THE SPREAD OF DUST.
11. SEE SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR DETAILS ON EROSION CONTROL.
12. FINAL FINISH GRADING TO BE APPROVED BY THE ARCHITECT AND CIVIL ENGINEER. MATCH EXISTING GRADES AT THE INTERFACE OF NEW AND EXISTING GRADES OR PAVING.
13. SIDEWALKS: MAINTAIN A 4.75% MAXIMUM LONGITUDINAL SLOPES ON ALL PAVED WALKWAYS. ALL WALKS TO HAVE 1.5% TRANSVERSE SLOPE IN THE DIRECTION OF NATURAL DRAINAGE. SAW CUT JOINTS AS SOON AS CONCRETE HAS SET. SAW CUTS TO BE 1/8" TO 1/4" WIDE; DEPTH: LONGITUDINAL 1/3, TRANSVERSE 1/4.

G.F.E. = GARAGE FLOOR ELEVATION AT THE OUTSIDE FACE OF GARAGE DOOR.

LEGEND:



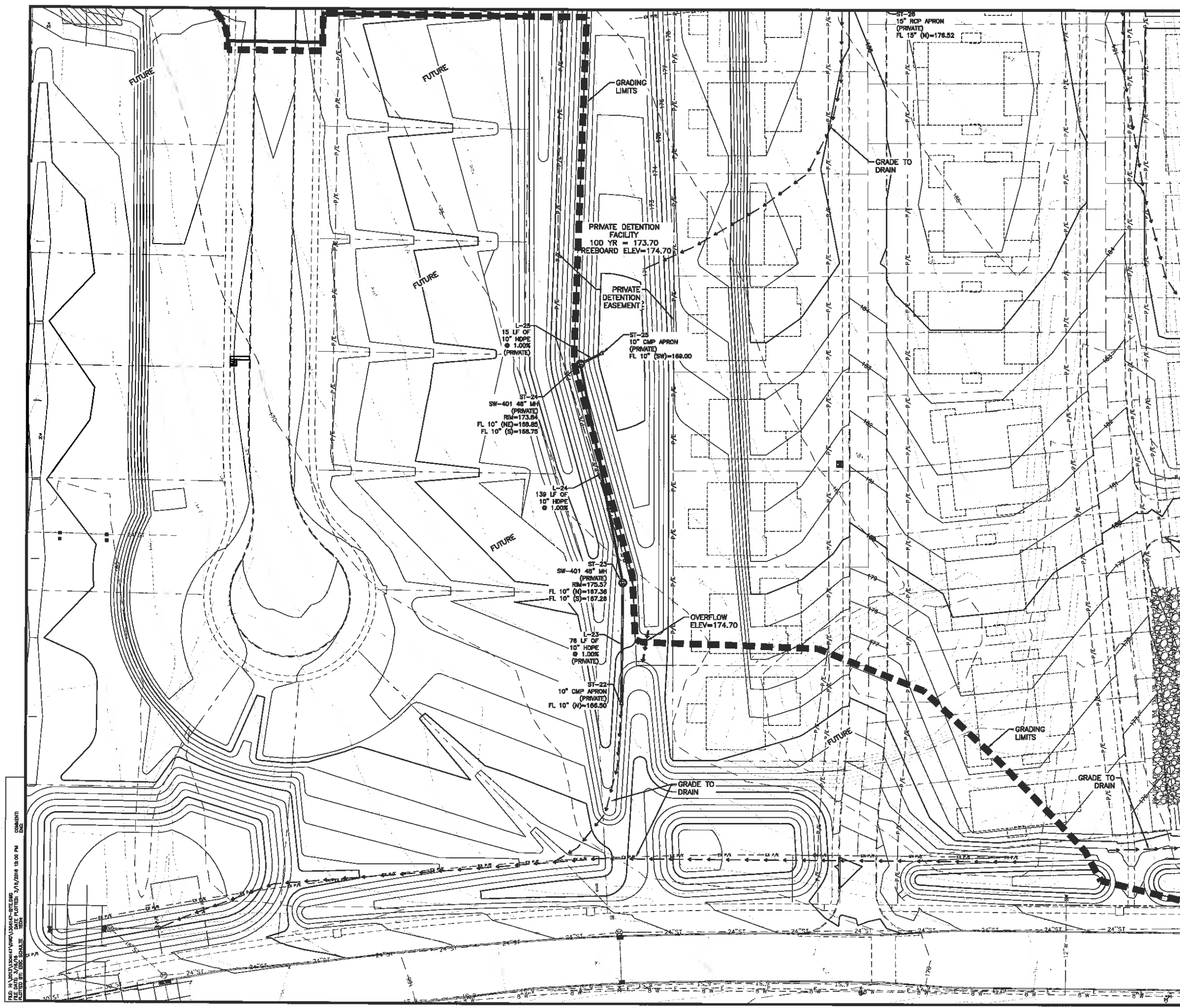
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 PLOTTED BY: ENG SCHAPE TECH

DATE	02/28/16	02/03/16	12/08/15
REVISIONS			
SITE PLAN SUBMITTAL #3			
SITE PLAN SUBMITTAL #2			
SITE PLAN SUBMITTAL #1			

3405 S.E. CROSSROADS DRIVE, SUITE G
 PHONE: (515) 365-4400 FAX: (515) 369-4410
 TECH: _____

9 MILL RIDGE TOWNHOMES - PHASE 1
14 GRADING PLAN
 1304147

WEST DES MOINES, IOWA
 CIVIL DESIGN ADVANTAGE ENGINEER



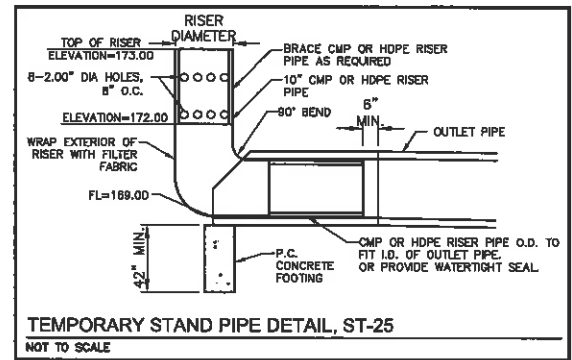
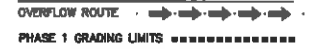
REFER TO SEPARATE PUBLIC IMPROVEMENT PLANS FOR PUBLIC SANITARY SEWER, PUBLIC STORM SEWER, PUBLIC WATER MAIN AND PUBLIC STREET INFORMATION.

GRADING NOTES

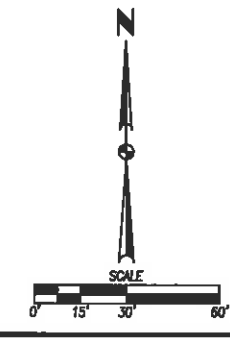
1. PRIOR TO ANY GRADING ON SITE TAKES PLACE, A COPY OF THE NPDES PERMIT, AUTHORIZED BY THE IOWA DNR, SHALL BE PROVIDED TO THE CITY CHIEF BUILDING INSPECTOR, rod.vanegas@dmr.iowa.gov OR FAX 515-273-0502.
2. CONTRACTOR SHALL STRIP ALL DELETERIOUS MATERIAL THE TOP 6" OF TOPSOIL IS TO BE STOCKPILED AND REAPPLIED AFTER GRADING IS COMPLETE. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A SUITABLE TOPSOIL STOCKPILE SITE.
3. IN ORDER TO ATTAIN FINAL CERTIFICATE OF OCCUPANCY APPROVAL, DOCUMENTATION WILL BE REQUIRED FROM THE GENERAL CONTRACTOR MA THE GRADING CONTRACTOR/ SOIL EROSION CONTROL CONTRACTOR/ OR THE PROJECT CIVIL ENGINEER THAT THE PROJECT MEETS THE CURRENT TOPSOIL PRESERVATION REQUIREMENTS OF THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR).
4. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
5. ALL SPOT ELEVATIONS ARE FOR GRADE (FG) OR TOP-OF-SLAB (TS) UNLESS OTHERWISE NOTED.
6. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS.
7. ALL SIDEWALK CROSS SLOPES SHALL BE A MAXIMUM OF 2.00%.
8. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
9. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
11. SEE SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR DETAILS ON EROSION CONTROL.
12. FINAL FINISH GRADING TO BE APPROVED BY THE ARCHITECT AND CIVIL ENGINEER. MATCH EXISTING GRADES AT THE INTERFACE OF NEW AND EXISTING GRADES OR PAVING.
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G.F.E. = GARAGE FLOOR ELEVATION AT THE OUTSIDE FACE OF GARAGE DOOR.

LEGEND:



DATE: 7/16/2016 10:00 AM
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE PLOTTED: 7/16/2016 10:00 AM
 PLOT SCALE: 1"=40'



<p>DATE: 02/26/16</p> <p>REVISIONS:</p> <p>02/26/16 SITE PLAN SUBMITTAL #3</p> <p>02/23/16 SITE PLAN SUBMITTAL #2</p> <p>12/08/15 SITE PLAN SUBMITTAL #1</p>	<p>3405 S.E. CROSSROADS DRIVE, SUITE G GRIMES, IOWA 50111 PHONE: (515) 369-4400 FAX: (515) 369-4410</p> <p>ENGINEER: [Name]</p> <p>TECH: [Name]</p>
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CIVIL DESIGN ADVANTAGE

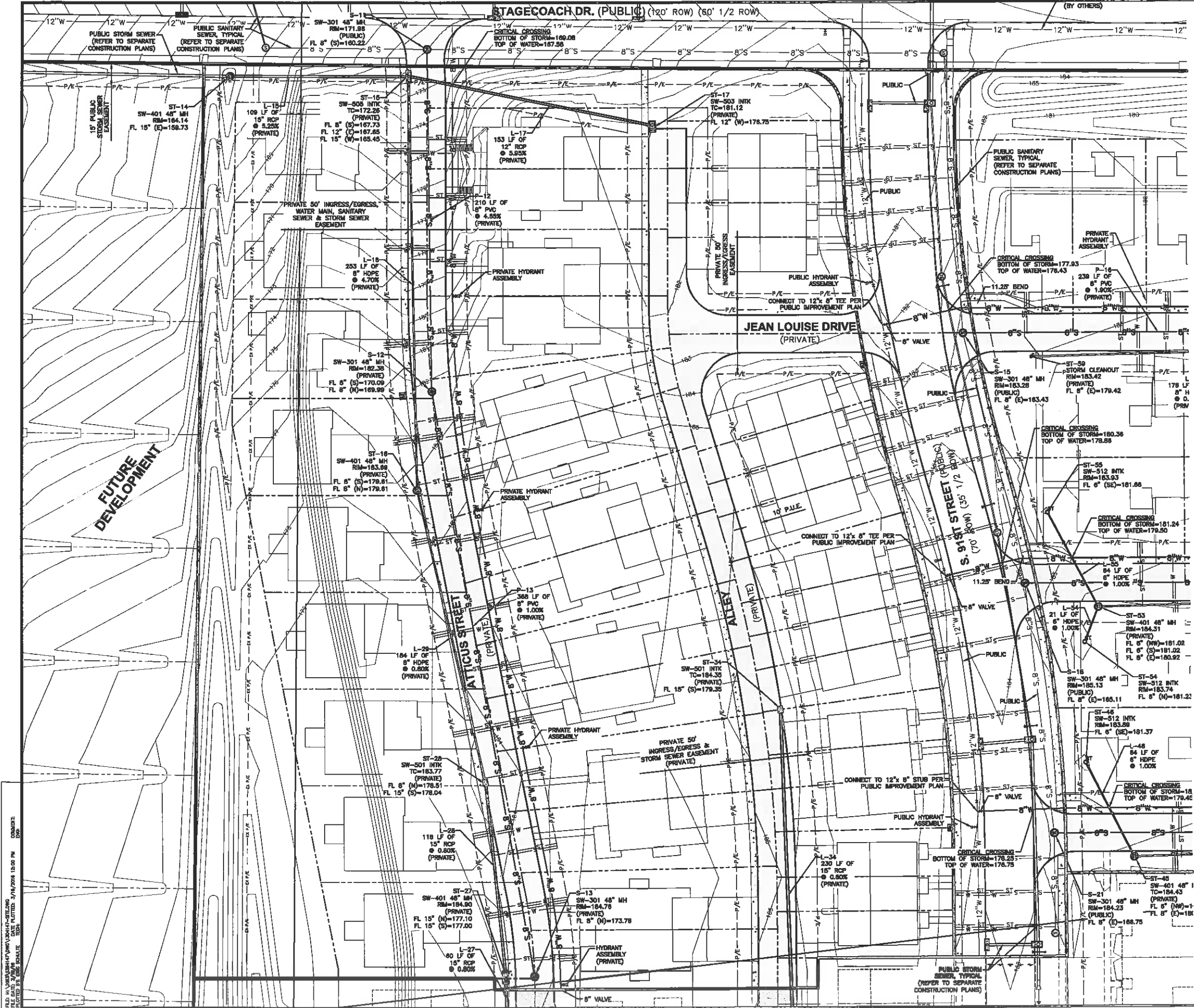
WEST DES MOINES, IOWA

MILL RIDGE TOWNHOMES - PHASE 1

GRADING PLAN

10/14

1304147



REFER TO SEPARATE PUBLIC IMPROVEMENT PLANS FOR PUBLIC SANITARY SEWER, PUBLIC STORM SEWER, PUBLIC WATER MAIN AND PUBLIC STREET INFORMATION.

UTILITY NOTES

- REFER TO MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR UTILITY SERVICE SIZES AND EXACT LOCATIONS. REFER TO ELECTRICAL PLANS FOR ELECTRIC AND TELEPHONE SERVICE CONSTRUCTION DETAILS. REFER TO MECHANICAL PLANS FOR GAS SERVICE CONSTRUCTION DETAILS.
- FIELD VERIFY ELEVATIONS AND LOCATIONS OF ALL CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETE.
- ALL UTILITIES SHALL BE STUBBED TO 5 FEET FROM BUILDINGS. REFER TO MEP PLANS FOR DESIGN FROM 5' OUTSIDE OF BUILDING FACE.
- ADJUST ALL MAINHOLES AND INTAKES TO FINISHED GRADES.
- ALL SANITARY SEWER AND WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF WEST DES MOINES PLUMBING CODE.
- 12" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATER MAIN. 18" MINIMUM VERTICAL CLEARANCE BETWEEN STORM SEWER AND WATER MAIN.
- MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER MAINS.
- WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES, UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGES THEREOF. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK. THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT 800-292-8888 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
- PRIVATE UTILITIES TO BE INSTALLED PER THE CITY OF WEST DES MOINES STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2012 UNIFORM PLUMBING CODE. CONTACT BUILDING INSPECTION A MINIMUM OF 24 HOURS IN ADVANCE FOR UTILITY INSTALLATION INSPECTIONS.
- OWNER IS RESPONSIBLE FOR MAINTENANCE OF PRIVATE UTILITIES.
- CONTRACTOR SHALL PREVENT ENTRY OF MUD, DEBRIS AND OTHER MATERIAL INTO NEW AND EXISTING SEWER SYSTEMS. SHOULD ANY CONTAMINATION OCCUR DURING CONSTRUCTION, THE CONTRACTOR SHALL CLEAN AT NO COST TO THE OWNER. INSTALL SILT FENCE AT ALL PERMANENT STORM SEWER INLETS.
- ALL SANITARY SEWERS SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH THE WDM STANDARD CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS.
- ALL SANITARY SEWER MH'S WITHIN PAVING SHALL HAVE A 3 PIECE CASTING. IF AN EXISTING PUBLIC SANITARY SEWER MH IS REPLACED WITH A 3 PIECE CASTING PUBLIC WORKER WILL BE CONTACTED TO PICK UP THE OLD CASTING. CONTACT JASON SCHLICKBERND ENGINEERING SERVICES 222-3620.

WEST DES MOINES WATER WORKS NOTES

- ALL WATER WORK, PUBLIC OR PRIVATE, SHALL BE DONE IN ACCORDANCE WITH SUDAS AND WEST DES MOINES WATER WORKS GENERAL SUPPLEMENTAL SPECIFICATIONS.
- CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS AT LEAST ONE WEEK PRIOR TO CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
- CONTACT BUILDING INSPECTION (315-222-3630) A MINIMUM OF 24 HOURS IN ADVANCE FOR PRIVATE UTILITY INSPECTIONS.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE WEST DES MOINES WATER WORKS AND CITY'S CROSS-CONNECTION CONTROL/CONTAINMENT PROVISION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION OF AN APPROVED BACKFLOW PREVENTION ASSEMBLY(S) FOR CONTAINMENT IN ALL NEW CONSTRUCTION. BACKFLOW PREVENTION TO BE INSTALLED PER CITY ORDINANCE 1297, 54-199B. CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS, RALPH HERTZBERG, ENGINEERING TECHNICIAN (515)-222-3465 A MINIMUM OF 24 HOURS AFTER INSTALLATION AND TESTING OF ALL BACKFLOW DEVICES TO SCHEDULE FINAL INSPECTION.
- BUILDING FIRE SPRINKLER AND FIRE ALARM SYSTEM SHALL BE DESIGNED PER WEST DES MOINES FIRE CODE. SCHEDULE A PRESSURE AND FLOW TEST PRIOR TO DESIGNING FIRE SUPPRESSION SYSTEMS.
- WATER SHALL BE PROVIDED TO PROPERTY VIA PRIVATE WATER MAIN. OWNER SHALL ALLOW WEST DES MOINES WATER WORKS ACCESS TO THE METERS AND VALVES AS NEEDED FOR EMERGENCY MAINTENANCE AND SHUT OFF IN THE EVENT OF NON-PAYMENT.

NOTE:

CONTRACTOR SHALL COORDINATE ALL TRANSFORMER PAD LOCATIONS, INCLUDING BUILDING SEPARATION, WITH MID AMERICAN ENERGY PRIOR TO TRANSFORMER PAD CONSTRUCTION.

LIGHTING NOTES:

REFER TO SEE LIGHTING PLAN (PHOTOMETRIC PLAN) FOR MORE INFORMATION. ALL LIGHTING MUST BE DOWN-CAST, CUT-OFF TYPE FIXTURES. WALL PACK LIGHT WITHOUT SHIELDS TO DIRECT LIGHT DOWN TO ITS INTENDED TARGET ARE PROHIBITED.

PRIVATE WATER MAIN QUANTITIES

HYDRANTS ASSEMBLY	12 EA
8" VALVE	8 EA
8" WATER MAIN	2,300 LF
1" WATER SERVICE	1,176 LF



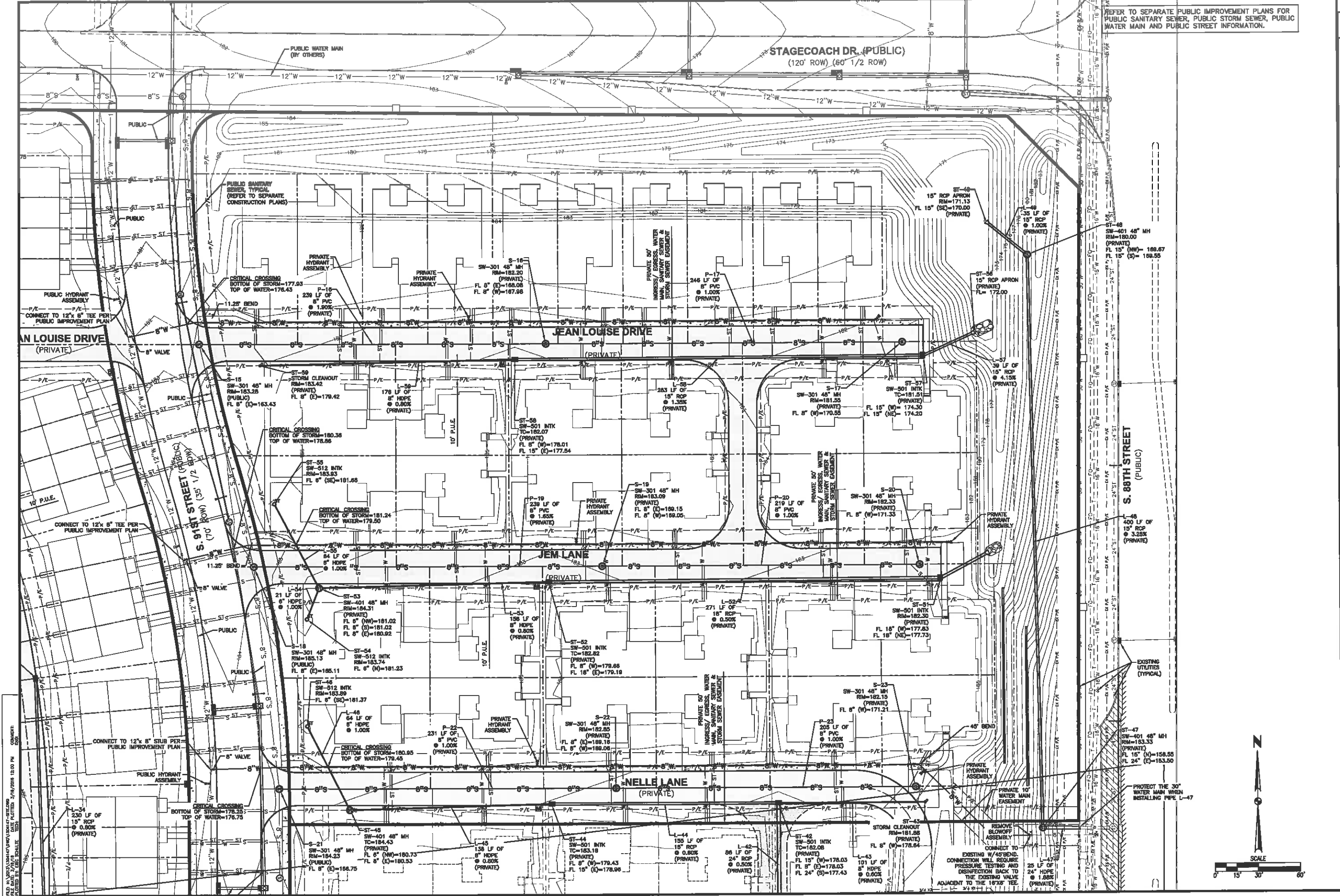
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 DRAWN BY: J. H. WILSON
 CHECKED BY: J. H. WILSON
 PLOTTED BY: J. H. WILSON
 SCALE: AS SHOWN

DATE	
REVISIONS	
SITE PLAN SUBMITTAL #3	02/26/16
SITE PLAN SUBMITTAL #2	02/26/16
SITE PLAN SUBMITTAL #1	12/08/15

3405 S.E. CROSSROADS DRIVE, SUITE G
 MILL RIDGE TOWNHOMES - PHASE 1
 AREA A - UTILITY PLAN
 WEST DES MOINES, IOWA
 PHONE: (515) 369-4400 FAX: (515) 369-4410
 TECH: [blank]
 ENGINEER: [blank]



CIVIL DESIGN ADVANTAGE
 WEST DES MOINES, IOWA



REFER TO SEPARATE PUBLIC IMPROVEMENT PLANS FOR PUBLIC SANITARY SEWER, PUBLIC STORM SEWER, PUBLIC WATER MAIN AND PUBLIC STREET INFORMATION.

DATE	REVISIONS
02/28/18	
02/03/18	
12/08/15	

3405 S.E. CROSSROADS DRIVE, SUITE G
 GRIMES, IOWA 50111
 PHONE: (515) 369-4400 FAX: (515) 369-4410

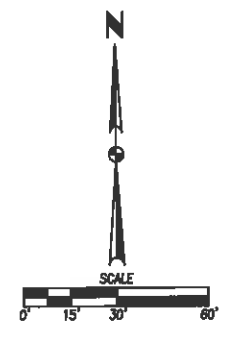


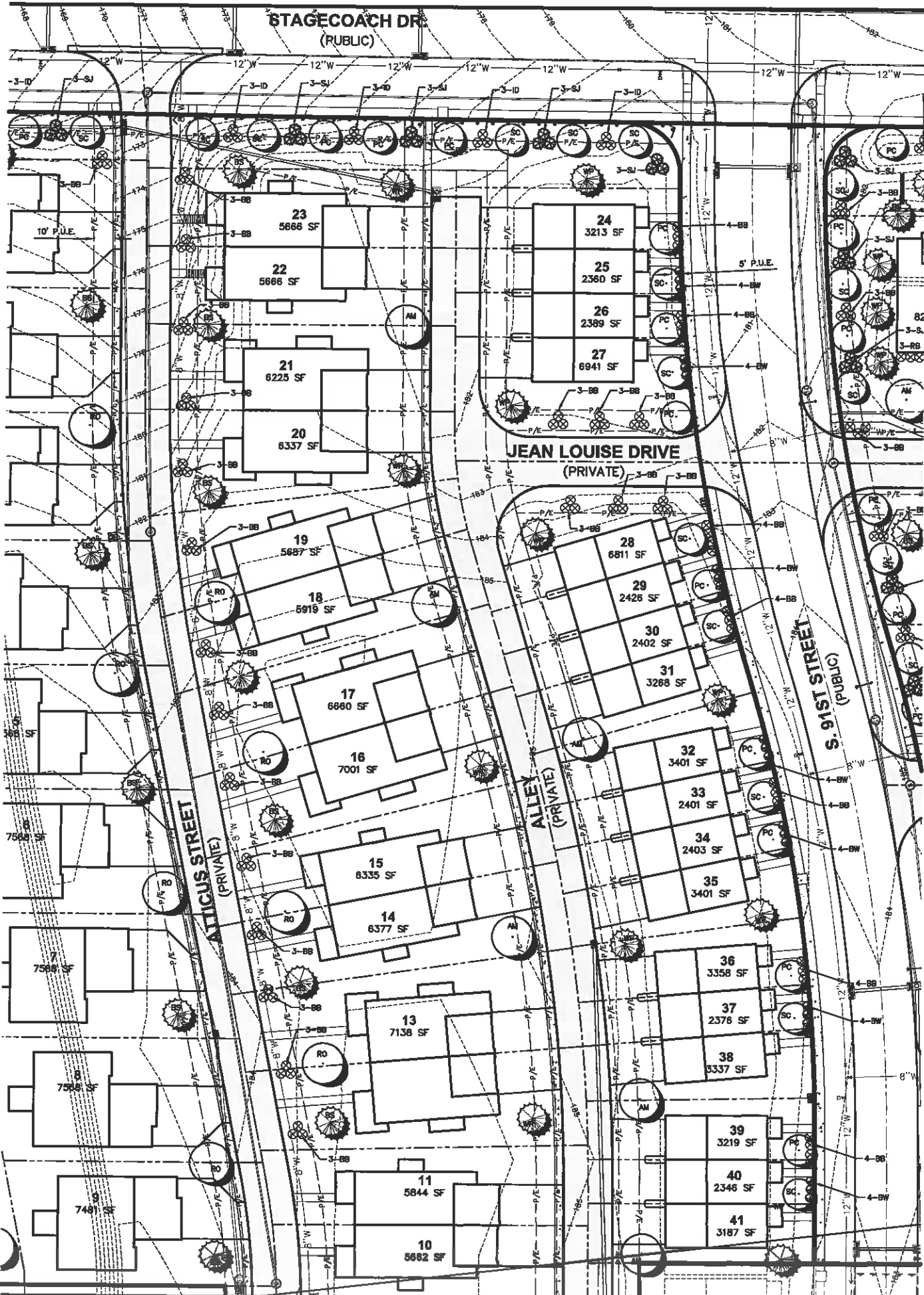
MILL RIDGE TOWNHOMES - PHASE 1
AREA B - UTILITY PLAN
 WEST DES MOINES, IOWA

12/14
 1304147

TECH:

ENGINEER:





LANDSCAPE NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. ALL CONSTRUCTION SHALL CONFORM TO THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARDS FOR SUBDIVISIONS.
3. TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1.
4. ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, VOIDS AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS; TRUE TO HEIGHT, SHAPE AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
5. SOO ALL AREAS ADJACENT TO BUILDINGS, SEED TYPE(S) ALL OTHER DISTURBED AREAS.
6. BACKFILL TO TOP OF CURB (MINUS 1 1/2" FOR SOO, P RED.)
7. WEED PREVENTER(PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
8. SHREDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES, SHRUBS AND IN ALL PLANTING BEDS TO A (MIN) DEPTH OF 3". ALL GROUPS OF MORE THAN ONE SHRUB SHALL BE MULCHED IN A CONTINUOUS BED, SEPARATED FROM TURF BY A 3" SPADE-CUT EDGE. MULCH AROUND ALL CONIFEROUS TREES SHALL BE A 10" DIAMETER CIRCLE. ALL EDGERS SHALL BE SPADE-CUT EDGE.
9. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
10. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
11. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
12. CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER FOR APPROVAL.
13. NO OVERSTORY TREES SHALL BE PLANTED IN ANY CITY OF WEST DES MOINES PUBLIC UTILITY EASEMENT.

SCREENING

ALL MECHANICAL UNITS VISIBLE FROM A PUBLIC STREET SHALL BE SCREENED BY THE USE OF AN EVERGREEN SCREEN.

PLANT SUBSTITUTIONS

- (2) ORNAMENTAL TREES = (1) OVERSTORY TREE OR EVERGREEN
- (10) SHRUBS = (1) UNDERSTORY TREE

• NO MORE THAN 50% OF THE REQUIRED PLANT TYPE MAY BE SUBSTITUTED.

• AT LEAST 35% OF TREES REQUIRED ON SITE (SUM OF OPEN SPACE, BUFFER AND PARKING LOT TREES) SHALL BE EVERGREEN.

TOTAL TREES REQUIRED = 118
 EVERGREENS REQUIRED = 42 (35%)
 EVERGREENS PROVIDED = 42

MINIMUM PLANT SIZES

DECIDUOUS OVERSTORY TREES	= 2" CAL
DECIDUOUS OVERSTORY TREES (CLUMP)	= 1" CAL
EVERGREEN TREES	= 6' HEIGHT
ORNAMENTAL TREES	= 1.5" CAL
DECIDUOUS SHRUBS (8"+)	= 36" HEIGHT
DECIDUOUS SHRUBS (5"-8")	= 24" HEIGHT
DECIDUOUS SHRUBS (0-5")	= 15" HEIGHT

OPEN SPACE REQUIREMENTS

• (2) TREES PER 3000 SF OF REQUIRED OPEN SPACE

• (3) SHRUBS PER 3000 SF OF REQUIRED OPEN SPACE

SITE AREA = 243,208 SF
 OPEN SPACE REQUIRED = 80,802 (25%)
 OPEN SPACE PROVIDED = 126,564 SF (52%)

TREES REQUIRED = 41
 TREES PROVIDED = 41

SHRUBS REQUIRED = 81
 SHRUBS PROVIDED = 83

30' BUFFER REQUIREMENTS (EAST PROPERTY LINE)

• A LANDSCAPED BERM AREA OF NOT LESS THAN 30 FEET IN WIDTH COMPRISED OF 1 OVERSTORY TREE OR EVERGREEN TREE, 2 UNDERSTORY TREES & 6 SHRUBS PER 35 LAF.T. OF BUFFER.

• 50% OF TREES SHALL BE EVERGREEN

• NO BUILDING OR STRUCTURE, EXCEPT GROUND SIGNAGE ALLOWED BY CODE, MAY BE LOCATED WITHIN A DESIGNATED BUFFER.

BUFFER LENGTH = 575'

OVERSTORY/ EVERGREEN TREES REQUIRED = 17
 UNDERSTORY TREE REQUIRED = 33
 SHRUBS REQUIRED = 98

OVER STORY/ EVERGREEN TREES PROVIDED = 18
 UNDERSTORY TREE PROVIDED = 35
 SHRUBS PROVIDED = 100

PLANT SCHEDULE (WEST BUFFER)

CODE/TYPE EVERGREEN TREES		SIZE	COND
EP 1 1	EASTERN WHITE PINE	6" HT.	BAB
EP 1 2	COLORADO BLUE SPRUCE	6" HT.	BAB

CODE/TYPE UNDERSTORY TREES		SIZE	COND
UL 21	EASTERN REDBUD	1.5" CAL	BAB
UL 14	LITTLE LEAF LINDEN	1.5" CAL	BAB

CODE/TYPE SHRUBS		SIZE	COND
BR 1 3	BURNING BUSH	36" HT.	CONT
AV 1 1	ARBORETOUR VIBURNUM	36" HT.	CONT
RD 1 2	REDWOOD DOGWOOD	36" HT.	CONT
SJ 20	SEA GREEN JUNCER	24" HT.	CONT

PLANT SCHEDULE (OPEN SPACE)

CODE/TYPE OVERSTORY TREES		SIZE	COND
RO 1 2	RED OAK	2" CAL	BAB
AM 1 2	AUTUMN BLAZE MAPLE	2" CAL	BAB

CODE/TYPE EVERGREEN TREES		SIZE	COND
EP 1 1	EASTERN WHITE PINE	6" HT.	BAB
EP 1 2	COLORADO BLUE SPRUCE	6" HT.	BAB

CODE/TYPE SHRUBS		SIZE	COND
BR 1 3	BURNING BUSH	36" HT.	CONT

CODE/TYPE ORNAMENTAL TREES		SIZE	COND
PC 1 2	PRAIRIE FIRE CRAB	1.5" CAL	BAB
SC 1 2	SPRING SNOW CRAB	1.5" CAL	BAB

CODE/TYPE SHRUBS		SIZE	COND
BR 20	BURNING BUSH	36" HT.	CONT
BR 20	WINTERGREEN BOXWOOD	15" HT.	CONT

PLANT SCHEDULE (STAGECOACH DR. STREETSCAPE)

CODE/TYPE ORNAMENTAL TREES		SIZE	COND
PC 1 2	PRAIRIE FIRE CRAB	1.5" CAL	BAB
SC 1 2	SPRING SNOW CRAB	1.5" CAL	BAB

CODE/TYPE SHRUBS		SIZE	COND
SJ 19	SEA GREEN JUNCER	24" HT.	CONT
IB 1 1	IVORY HALO DOGWOOD	36" HT.	CONT

STREETSCAPE REQUIREMENTS

STAGECOACH DRIVE (400')

1 TREE AND 3 SHRUBS PER 35' LF OF STREET FRONTAGE
 TREES REQUIRED = 12
 SHRUBS REQUIRED = 36
 TREES PROVIDED = 12
 SHRUBS PROVIDED = 36

SOUTH 91st STREET (532')

1 TREE AND 3 SHRUBS PER 35' LF OF STREET FRONTAGE
 TREES REQUIRED = 15
 SHRUBS REQUIRED = 45
 TREES PROVIDED = 17
 SHRUBS PROVIDED = 56

STREET TREE REQUIREMENTS

STREET TREES SHALL BE PLACED AT A MINIMUM OF 40' ON CENTER. STREET TREES MAY COUNT TOWARDS THE STREETSCAPE REQUIREMENT.

PLANT SCHEDULE

CODE/TYPE OVERSTORY TREES		SIZE	COND
AM 1 X	AUTUMN BLAZE MAPLE	2" CAL	BAB
CM 1 X	CRIMSON KING MAPLE	2" CAL	BAB
SH 1 X	SHADBLOW HONEYLOCUST	2" CAL	BAB
SH 1 X	SANBUSH HONEYLOCUST	2" CAL	BAB
SH 1 X	SHADBLAW HONEYLOCUST	2" CAL	BAB
RO 1 X	RED OAK	2" CAL	BAB
WO 1 X	WHITE OAK	2" CAL	BAB
SO 1 X	SWAMP WHITE OAK	2" CAL	BAB
RO 1 X	RED OAK	2" CAL	BAB
PA 1 X	PATMORE GREEN ASH	2" CAL	BAB
PA 1 X	AUTUMN PURPLE ASH	2" CAL	BAB
AL 1 X	AMERICAN LINDEN	2" CAL	BAB
BL 1 X	BOULEVARD LINDEN	2" CAL	BAB
FR 1 X	FRANCO LINDEN	2" CAL	BAB
IL 1 X	LITTLELEAF LINDEN	2" CAL	BAB
GL 1 X	GREENSPICE LINDEN	2" CAL	BAB
DB 1 X	DOUGLAS FIR	2" CAL	BAB

CODE/TYPE ORNAMENTAL TREES		SIZE	COND
PC 1 X	PRAIRIE FIRE CRAB	1.5" CAL	BAB
SC 1 X	SPRING SNOW CRAB	1.5" CAL	BAB
OP 1 X	ORANGE PEAR	1.5" CAL	BAB
BP 1 X	BROADFOOT PEAR	1.5" CAL	BAB
EL 1 X	EASTERN REDBUD	1.5" CAL	BAB
HP 1 X	HENRY PUM	1.5" CAL	BAB
PD 1 X	PAGODA DOGWOOD	1.5" CAL	BAB
CC 1 X	CORONADO GREEN SPRUCE	1.5" CAL	BAB
CC 1 X	CARDINAL GRAB	1.5" CAL	BAB

CODE/TYPE EVERGREEN TREES		SIZE	COND
DF 1 X	DOUGLAS FIR	6" HT.	BAB
EP 1 X	EASTERN WHITE PINE	6" HT.	BAB
EP 1 X	COLUMBIAN WHITE PINE	6" HT.	BAB
EP 1 X	PONDICUSA PINE	6" HT.	BAB
SP 1 X	SCOTCH PINE	6" HT.	BAB
CS 1 X	COLORADO BLUE SPRUCE	6" HT.	BAB
BS 1 X	BLACK HILLS SPRUCE	6" HT.	BAB
CS 1 X	COLORADO GREEN SPRUCE	6" HT.	BAB
FB 1 X	FAT ALBERT SPRUCE	6" HT.	BAB

MILL RIDGE TOWNHOMES - PHASE 1
AREA A - LANDSCAPE PLAN

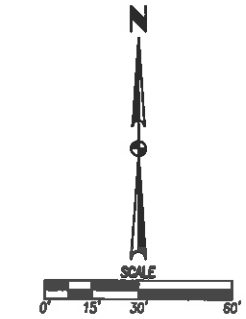
WEST DES MOINES, IOWA

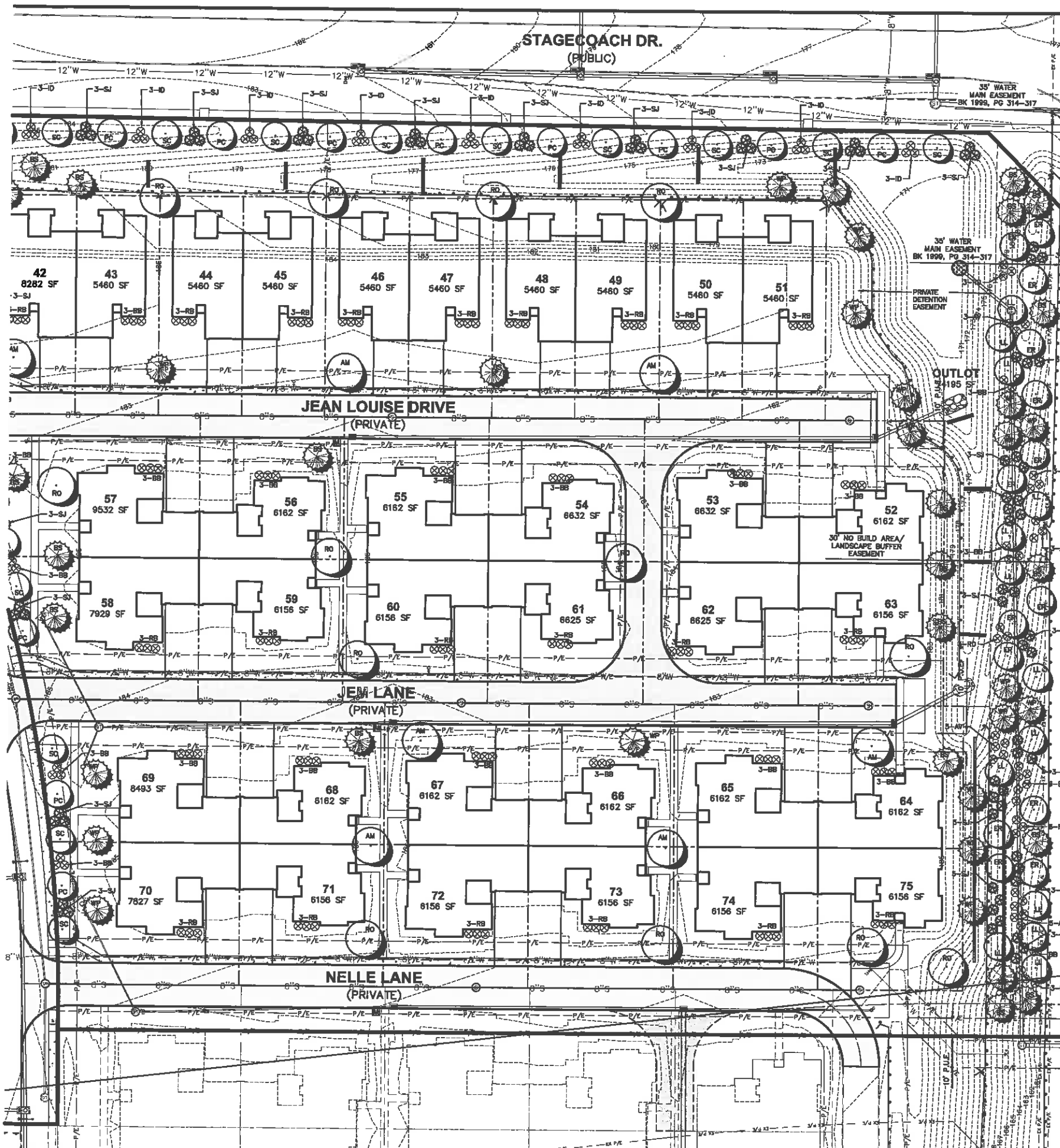
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ESA
CIVIL DESIGN ADVANTAGE

3405 S.E. CROSSROADS DRIVE, SUITE G
 GRIMES, IOWA 50111
 PHONE: (515) 389-4400 FAX: (515) 389-4410

ENGINEER:
 TECH:





LANDSCAPE NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. ALL CONSTRUCTION SHALL CONFORM TO THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARDS FOR SUBDIVISIONS.
3. TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK AND 280.1
4. ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, Voids AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS; TRUE TO HEIGHT, SHAPE AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
5. SOO ALL AREAS ADJACENT TO BUILDINGS, SEED (TYPE) ALL OTHER DISTURBED AREAS.
6. BACKFILL TO TOP OF CURB (MINUS 1 1/2" FOR SOO, IF REQ.)
7. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
8. SHREDDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES, SHRUBS AND IN ALL PLANTING BEDS TO A (MIN) DEPTH OF 3". ALL GROUPS OF MORE THAN ONE SHRUB SHALL BE MULCHED IN A CONTINUOUS BED, SEPARATED FROM TURF BY A 3" SPADE-CUT EDGE. MULCH AROUND ALL CONIFEROUS TREES SHALL BE A 10" DIAMETER CIRCLE. ALL EDGING SHALL BE SPADE-CUT EDGE.
9. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY; THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
10. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
11. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
12. CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER FOR APPROVAL.
13. NO OVERSTORY TREES SHALL BE PLANTED IN ANY CITY OF WEST DES MOINES PUBLIC UTILITY EASEMENT.

SCREENING

ALL MECHANICAL UNITS VISIBLE FROM A PUBLIC STREET SHALL BE SCREENED BY THE USE OF AN EVERGREEN SCREEN.

PLANT SUBSTITUTIONS

- (2) ORNAMENTAL TREES = (1) OVERSTORY TREE OR EVERGREEN
 - (10) SHRUBS = (1) UNDERSTORY TREE
- NO MORE THAN 50% OF THE REQUIRED PLANT TYPE MAY BE SUBSTITUTED.

AT LEAST 35% OF TREES REQUIRED ON SITE (SUM OF OPEN SPACE, BUFFER AND PARKING LOT TREES) SHALL BE EVERGREEN.

TOTAL TREES REQUIRED = 122
 EVERGREENS REQUIRED = 43 (35%)
 EVERGREENS PROVIDED = 46

MINIMUM PLANT SIZES

DECIDUOUS OVERSTORY TREES	= 2" CAL
DECIDUOUS OVERSTORY TREES (CLUMP)	= 1" CAL
EVERGREEN TREES	= 4" HEIGHT
ORNAMENTAL TREES	= 1.5" CAL
DECIDUOUS SHRUBS (5'+)	= 30" HEIGHT
DECIDUOUS SHRUBS (3'-5')	= 24" HEIGHT
DECIDUOUS SHRUBS (0-3')	= 15" HEIGHT

OPEN SPACE REQUIREMENTS

- (2) TREES PER 3000 SF OF REQUIRED OPEN SPACE
- (3) SHRUBS PER 3000 SF OF REQUIRED OPEN SPACE

SITE AREA = 290,452 SF
 OPEN SPACE REQUIRED = 72,115 (25%)
 OPEN SPACE PROVIDED = 136,367SF (48%)

TREES REQUIRED = 49
 TREES PROVIDED = 50

SHRUBS REQUIRED = 73
 SHRUBS PROVIDED = 98

30' BUFFER REQUIREMENTS (WEST PROPERTY LINE)

- A LANDSCAPED BERM AREA OF NOT LESS THAN 30 FEET IN WIDTH COMPRISED OF 1 OVERSTORY TREE OR EVERGREEN TREE, 2 UNDERSTORY TREES & 6 SHRUBS PER 35 LN.F.T. OF BUFFER.
- 50% OF TREES SHALL BE EVERGREEN
- NO BUILDING OR STRUCTURE, EXCEPT GROUND SIGNAGE ALLOWED BY CODE, MAY BE LOCATED WITHIN A DESIGNATED BUFFER.

BUFFER LENGTH = 470'
 OVERSTORY/ EVERGREEN TREES REQUIRED = 14
 UNDERSTORY TREE REQUIRED = 27
 SHRUBS REQUIRED = 84

OVER STORY/ EVERGREEN TREES PROVIDED = 15
 UNDERSTORY TREE PROVIDED = 27
 SHRUBS PROVIDED = 84

PLANT SCHEDULE (EAST BUFFER)

CODE	QUANTITY	EVERGREEN TREES	SIZE	COND
EP	14	EASTERN WHITE PINE	1.5" CAL	BAG
ES	14	COLORADO BLUE SPRUCE	1.5" CAL	BAG
UD	14	EASTERN REDBUD	1.5" CAL	BAG
UL	13	LITTLE LEAF LINDEN	1.5" CAL	BAG
CODE	QUANTITY	SHRUBS	SIZE	COND
BB	16	BURNING BUSH	30" HT.	CONT
AV	17	ARROWWOOD VIBURNUM	30" HT.	CONT
RO	14	ROSE GLOW BARBERRY	30" HT.	CONT
SL	30	SEA GREEN JUMPER	24" HT.	CONT

PLANT SCHEDULE (OPEN SPACE)

CODE	QUANTITY	OVERSTORY TREES	SIZE	COND
RO	13	RED OAK	2" CAL	BAG
AM	17	AUTUMN GLAZE MAPLE	2" CAL	BAG
CODE	QUANTITY	EVERGREEN TREES	SIZE	COND
EP	17	EASTERN WHITE PINE	1.5" CAL	BAG
ES	13	COLORADO BLUE SPRUCE	1.5" CAL	BAG
CODE	QUANTITY	SHRUBS	SIZE	COND
BB	36	BURNING BUSH	30" HT.	CONT
RO	14	ROSE GLOW BARBERRY	30" HT.	CONT

PLANT SCHEDULE (S. 91ST STREETSCAPE)

CODE	QUANTITY	ORNAMENTAL TREES	SIZE	COND
PD	7	PRARIE FIRE GRAB	1.5" CAL	BAG
SC	8	SPRING SNOW GRAB	1.5" CAL	BAG
CODE	QUANTITY	SHRUBS	SIZE	COND
BB	21	DWARF BURNING BUSH	30" HT.	CONT
SL	21	SEA GREEN JUMPER	24" HT.	CONT

PLANT SCHEDULE (STAGECOACH DR. STREETSCAPE)

CODE	QUANTITY	ORNAMENTAL TREES	SIZE	COND
PD	9	PRARIE FIRE GRAB	1.5" CAL	BAG
SC	9	SPRING SNOW GRAB	1.5" CAL	BAG
CODE	QUANTITY	SHRUBS	SIZE	COND
SL	27	SEA GREEN JUMPER	24" HT.	CONT
LD	9	LORRY HALO DOGWOOD	30" HT.	CONT

STREETSCAPE REQUIREMENTS

STAGECOACH DRIVE (615')
 1 TREE AND 3 SHRUBS PER 35' LF OF STREET FRONTAGE.
 TREES REQUIRED = 18
 SHRUBS REQUIRED = 53
 TREES PROVIDED = 18
 SHRUBS PROVIDED = 54

SOUTH 91ST STREET (483')
 1 TREE AND 3 SHRUBS PER 35' LF OF STREET FRONTAGE.
 TREES REQUIRED = 14
 SHRUBS REQUIRED = 42
 TREES PROVIDED = 15
 SHRUBS PROVIDED = 42

STREET TREE REQUIREMENTS

STREET TREES SHALL BE PLACED AT A MINIMUM OF 40' ON CENTER. STREET TREES MAY COUNT TOWARDS THE STREETSCAPE REQUIREMENT.

PLANT SCHEDULE

CODE QUANTITY **OVERSTORY TREES**

AM	X	AUTUMN GLAZE MAPLE	2" CAL	BAG
AM	X	CRIMSON KING MAPLE	2" CAL	BAG
SC	X	SKYLINE HONEYLOCUST	2" CAL	BAG
SC	X	SUNBURST HONEYLOCUST	2" CAL	BAG
SC	X	SHARPMANTER HONEYLOCUST	2" CAL	BAG
RO	X	RED OAK	2" CAL	BAG
WD	X	WHITE OAK	2" CAL	BAG
SO	X	SWAMP WHITE OAK	2" CAL	BAG
BA	X	BUR OAK	2" CAL	BAG
PA	X	PATMORE GREEN ASH	2" CAL	BAG
PA	X	AUTUMN PURPLE ASH	2" CAL	BAG
AL	X	AMERICAN LINDEN	2" CAL	BAG
BL	X	BOWLEAF LINDEN	2" CAL	BAG
LL	X	LITTLELEAF LINDEN	2" CAL	BAG
LL	X	LITTLELEAF LINDEN	2" CAL	BAG
GL	X	GREENSPICE LINDEN	2" CAL	BAG
RB	X	RIVER BIRCH	2" CAL	BAG

CODE QUANTITY **ORNAMENTAL TREES**

PC	X	PRARIE FIRE GRAB	1.5" CAL	BAG
SC	X	SPRING SNOW GRAB	1.5" CAL	BAG
OP	X	CHANTLER PEAR	1.5" CAL	BAG
MP	X	MIDLAND PEAR	1.5" CAL	BAG
EL	X	EASTERN REDBUD	1.5" CAL	BAG
NE	X	NEWPORT PLUM	1.5" CAL	BAG
PD	X	PAGODA DOGWOOD	1.5" CAL	BAG
SB	X	ALLGHEM SERVOBERRY	1.5" CAL	BAG
LD	X	LORRY HALO DOGWOOD	1.5" CAL	BAG

CODE QUANTITY **EVERGREEN TREES**

EP	X	EASTERN WHITE PINE	1.5" CAL	BAG
EP	X	EASTERN WHITE PINE	1.5" CAL	BAG
EP	X	EASTERN WHITE PINE	1.5" CAL	BAG
EP	X	EASTERN WHITE PINE	1.5" CAL	BAG
EP	X	EASTERN WHITE PINE	1.5" CAL	BAG
EP	X	EASTERN WHITE PINE	1.5" CAL	BAG
EP	X	EASTERN WHITE PINE	1.5" CAL	BAG
EP	X	EASTERN WHITE PINE	1.5" CAL	BAG
EP	X	EASTERN WHITE PINE	1.5" CAL	BAG
EP	X	EASTERN WHITE PINE	1.5" CAL	BAG

CODE QUANTITY **SHRUBS**

BB	X	BURNING BUSH	30" HT.	CONT
AV	X	ARROWWOOD VIBURNUM	30" HT.	CONT
RO	X	ROSE GLOW BARBERRY	30" HT.	CONT
SL	X	SEA GREEN JUMPER	24" HT.	CONT
BB	X	BURNING BUSH	30" HT.	CONT
AV	X	ARROWWOOD VIBURNUM	30" HT.	CONT
RO	X	ROSE GLOW BARBERRY	30" HT.	CONT
SL	X	SEA GREEN JUMPER	24" HT.	CONT
BB	X	BURNING BUSH	30" HT.	CONT
AV	X	ARROWWOOD VIBURNUM	30" HT.	CONT
RO	X	ROSE GLOW BARBERRY	30" HT.	CONT
SL	X	SEA GREEN JUMPER	24" HT.	CONT

CODE QUANTITY **PERENNIALS**

MR	X	MARSH GRASS	1.5" CAL	BAG
FR	X	FINE FEATHERED GRASS	1.5" CAL	BAG
PC	X	PLANE GRASS	1.5" CAL	BAG
PC	X	PLANE GRASS	1.5" CAL	BAG
ME	X	MAY NIGHT SALVA	1.5" CAL	BAG
SS	X	SUNSHINE FORSYTHIA	1.5" CAL	BAG
PA	X	PURPLE DOME ASTER	1.5" CAL	BAG
PA	X	PURPLE DOME ASTER	1.5" CAL	BAG
PA	X	PURPLE DOME ASTER	1.5" CAL	BAG
PA	X	PURPLE DOME ASTER	1.5" CAL	BAG
PA	X	PURPLE DOME ASTER	1.5" CAL	BAG

DATE: 02/28/16
 REVISIONS:
 SITE PLAN SUBMITTAL #5: 02/28/16
 SITE PLAN SUBMITTAL #2: 02/28/16
 SITE PLAN SUBMITTAL #1: 02/28/16

3405 S.E. CROSSROADS DRIVE, SUITE G
 GRIMES, IOWA 50111
 PHONE: (515) 369-4400 FAX: (515) 369-4410

TECH: ENGINEER: CIVIL DESIGN ADVANTAGE

MILL RIDGE TOWNHOMES - PHASE 1
AREA B - LANDSCAPE PLAN

WEST DES MOINES, IOWA

14/14
 1304147

