CITY OF WEST DES MOINES
STAFF REPORT COMMUNICATION

Meeting Date: May 16, 2022

ITEM: Stilwell Junior High, 1601 Vine Street – Approve Major Modification to Site Plan to allow a Building Addition and Outdoor Recreational Area – West Des Moines Community Schools – MaM-004975-2020

Resolution: Approval of Major Modification to Site Plan

Background: Anthony Harbaugh with Shive-Hattery Inc., on behalf of the applicant and property owner, West Des Moines Community Schools, requests approval of a Major Modification to Site Plan for the approximately 13.6-acre property located at 1601 Vine Street. The applicant proposes to construct an approximate 12,050-square foot building addition, parking modifications, and outdoor recreation area including basketball court, four-square, and seat walls.

Staff Review & Comment:

- *Financial Impact:* No City funding of the project. There will be staff time for processing of development application and inspections during construction.
- *Traffic Impact Study Findings:* Traffic analyses for the site were completed in February 2021 and July 2021. A summary of the key findings is below:
  - The existing geometry and traffic control on the surrounding streets are expected to have adequate capacity to accommodate the school's planned enrollment. If enrollment changes in the future and additional traffic is generated by the site, modifications to the adjacent streets may become necessary to maintain adequate traffic progression and traffic safety.
  - Due to the number of parents dropping off/picking up students and the lack of on-site stacking space, the parent traffic queue was observed to spillover onto Grand Avenue during the arrival and dismissal periods. These backups affect the street's capacity and create potential safety hazards on the public street system.

    The proposed modifications and new parking lot are expected to reduce the amount of on-street spillover by increasing the amount of on-site stacking. If spillover continues after the proposed modifications, in violation of City Code 9-15-6D ("off-street parking facilities shall accommodate the maneuvering and circulation of all vehicles on site, so as not to impair the movement of vehicles on public streets"), additional measures must be implemented. Potential measures were given in the February 2021 analysis.
- *Developer Responsibilities:*
  - *Grand Avenue Streetlights.* The property owner is required to install streetlights adjacent to Grand Avenue. The lighting plans have been approved by MidAmerican Energy and staff has received proof of payment ensuring the streetlights will be installed.
  - *Vine Street Streetlights.* The property owner is required to install streetlights adjacent to Vine Street at such time the overhead electric is placed underground. The property owner has executed a streetlight agreement that is being presented to City Council for acceptance.
- *Conditions of Approval:*
  - *Storm Water Management Agreement.* There is an on-site storm water detention area that requires an agreement with the city relating to how it is maintained. The proposed Storm Water Management Facility Maintenance Agreement is scheduled to go before the West

Des Moines School Board on May 9, 2022. Therefore, staff is recommending a condition of approval requiring the agreement be executed by the School Board and be approved and accepted by the City Council prior to the issuance of any building permits for the building additions. Additionally, staff is recommending the as-builts of the storm water improvements be provided prior to any occupancy, including temporary occupancy.

- *Public Storm Sewer Easement.* A 48" public storm sewer is proposed to run along the outside edge of the west parking lot. The proposed easement is also scheduled to go before the West Des Moines School Board on May 9, 2022. Therefore, staff is recommending a condition of approval requiring the easements be executed by the School Board and be approved and accepted by the City Council prior to the issuance of any building permits for the building addition. Staff is also recommending a condition of approval that the storm sewer be accepted prior to any occupancy permit.

- *Execution of Water Easements.* The applicant is proposing a 20' public water easement. The proposed water easement is scheduled to go before the School Board on May 9, 2022, and the West Des Moines Water Works Board on May 18, 2022. Therefore, staff is recommending a condition of approval be placed on this development request requiring the easement be approved by the School Board and West Des Moines Water Works prior to the issuance of any building permits for the proposed building addition.

- *Vesting of Entitlement:* Per City Code, entitlement (approval to construct or implement) shall remain in effect so long as substantial site work has progressed beyond grading and completion of structural foundations and twenty-five percent (25%) of the total building area has occurred above grade within twenty-four (24) months of the effective date of the approval, unless a greater time period is authorized at time of the original entitlement, or by approval of an extension of the original entitlement. It is the responsibility of the developer to be aware of this deadline and request an extension of the approval prior to the expiration date.

Outstanding Issues: There are no outstanding issues.

Plan and Zoning Commission Action:

Date:	May 9, 2022
Vote:	6-0, for approval with Commissioner Conlin absent
Recommendation:	Approve Major Modification to Site Plan

Recommendation: Approve the Major Modification to Site Plan request, subject to the applicant meeting all City Code requirements, and the following conditions of approval:

1. All easements and agreements benefited to the City shall be executed by the School Board and approved and accepted by the City Council prior to the issuance of any building permits for the building additions.
2. The water easement be approved by the School Board and West Des Moines Water Works prior to the issuance of any building permits for the proposed building addition.
3. The Storm Water Management Facility Maintenance Agreement be executed by the School Board and approved and accepted by the City Council prior to the issuance of any building permits for the building additions.
4. As-builts of the storm water improvements shall be provided and the storm sewer accepted by the City Council prior to the issuance of any occupancy permit, including temporary occupancy.

Lead Staff Member: **Bryce Johnson**

Approval Meeting Dates:

Plan and Zoning Commission	May 9, 2022
City Council:	May 16, 2022

Staff Report Reviews:

Plan & Zoning Commission	☒ Development Coordinator (or) ☒ Director	☒ Legal Department
City Council	☒ Director ☐ Appropriations/Finance	☒ Legal Department ☑ Agenda Acceptance

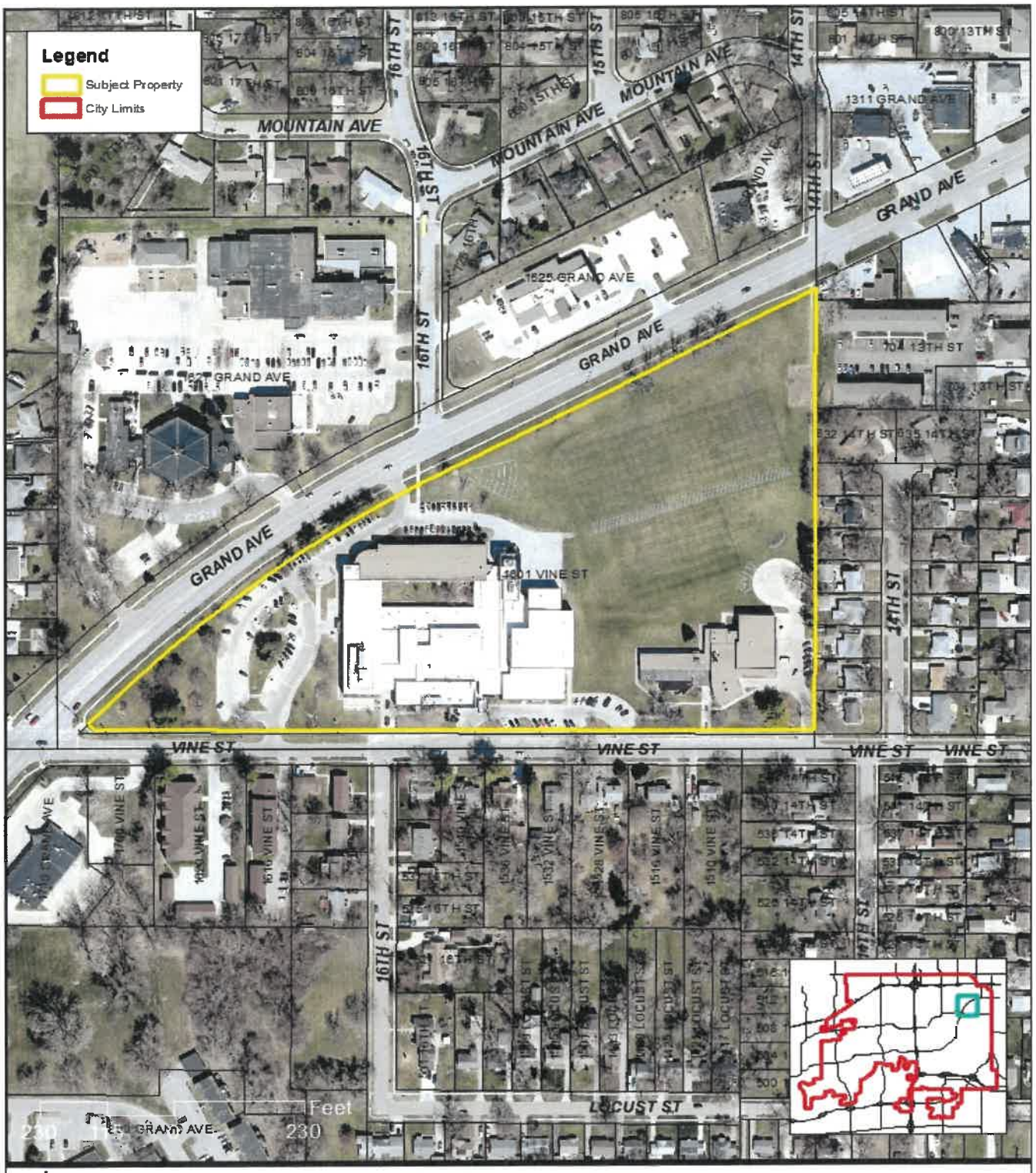
Publications (if applicable)

Published In:	Des Moines Register Community Section
Date(s) Published	n/a
Date(s) of Mailed Notices	n/a

Council Subcommittee Review (if applicable)

Subcommittee	Development & Planning
Date Reviewed	12/6/21
Recommendation	☒ Yes ☐ No ☐ Split

Location Map



Stilwell School MaM
Location Map

West Des Moines

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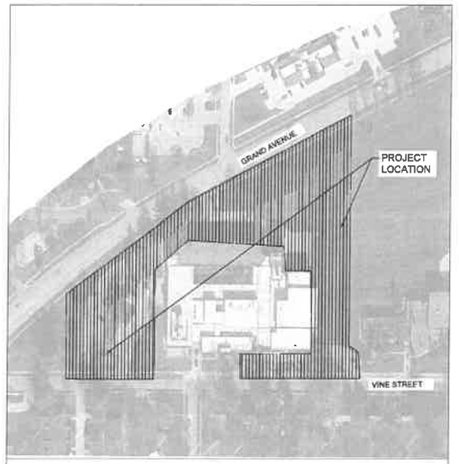
STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST
WEST DES MOINES, IOWA 50265
WDM CASE NO. MaM-004975-2020

VICINITY MAP
NTS



PROJECT MAP
NTS

OWNER:
WEST DES MOINES COMMUNITY SCHOOL DISTRICT
ATTN: KEVIN LONG
3550 MILLS CIVIC PKWY
WEST DES MOINES, IA 50265
(515) 633-5000

APPLICANT:
WEST DES MOINES COMMUNITY SCHOOL DISTRICT
ATTN: CHRISTINE MADURO
3550 MILLS CIVIC PKWY
WEST DES MOINES, IA 50265
(515) 633-5000

ZONING:
EXISTING: R-1 SINGLE FAMILY RESIDENTIAL
OVERLAY ZONING: AIRPORT OVERLAY ZONE - AZ, APPROACH ZONE
PROPOSED: R-1 SINGLE FAMILY RESIDENTIAL
COMPREHENSIVE PLAN DESIGNATION: SINGLE FAMILY RESIDENTIAL (SF)

THE IMPROVEMENTS SHALL CONFORM WITH THE BULK REGULATIONS FOR NON-RESIDENTIAL USES IN RESIDENTIAL ZONING DISTRICTS.

PAVEMENT THICKNESS:
DRIVE AISLES/PARKING AREAS: 6 INCH PCC
SIDEWALKS: 5 INCH PCC

LEGAL DESCRIPTION:
LOT 7 AND LOT 8, EXCEPT A PORTION OF SAID LOT 8 DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 8; THENCE N89°37'58"W ALONG THE SOUTH LINE OF SAID LOT 8, A DISTANCE OF 455.0 FEET TO THE SOUTHWEST CORNER OF SAID LOT 8, SAID POINT ALSO BEING ON THE EASTERLY RIGHT OF WAY LINE OF GRAND AVENUE, AS IT IS PRESENTLY ESTABLISHED; THENCE NORTHEASTERLY ALONG SAID RIGHT OF WAY LINE, ALSO BEING THE WESTERLY LINE OF SAID LOT 8, ON A 2232.00 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, WHOSE ARC LENGTH IS 25.72 FEET AND WHOSE CHORD BEARS N43°06'23"E, A DISTANCE OF 25.72 FEET; THENCE S44°46'50"E, 18.99 FEET; THENCE S89°37'58"E, 422.75 FEET TO A POINT ON THE EAST LINE OF SAID LOT 8; THENCE S13°13'58"E ALONG SAID LINE, 5.69 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.061 ACRES MORE OR LESS, ALL IN MOUNTAIN PLACE, AN OFFICIAL PLAT, WEST DES MOINES, POLK COUNTY, IOWA.

TOTAL SITE AREA: 590,496 SF

CITY BENCHMARK:
WDM #81 - INTERSECTION OF 19TH STREET (SOUTH) AND ASHWORTH ROAD, NORTH OF INTERSECTION, 3.5 FEET WEST OF CENTERLINE OF 19TH STREET EXTENDED, 26.5 FEET NORTH OF CENTERLINE OF ASHWORTH ROAD. - STANDARD BECHMARK
ELEVATION = 171.81 FEET (WDM DATUM) 945.82 FEET (NAVD88)

WDM #80 - INTERSECTION OF 13TH STREET (NORTH) AND ASHWORTH ROAD, NORTHEAST CORNER OF INTERSECTION, 28.3 FEET EAST OF THE CENTERLINE OF 13TH STREET, 26.6 FEET NORTH OF CENTERLINE OF ASHWORTH ROAD. - STANDARD BENCHMARK
ELEVATION = 122.76 FEET (WDM DATUM) 896.77 (NAVD88)

SITE SUMMARY:
PROJECT USE / TYPE: BUILDING ADDITION AND ASSOCIATED SITE IMPROVEMENTS

EXISTING SITE: 590,496 SF(PER PROPERTY LIMITS)
TOTAL PROJECT AREA: 273,274 SF (6.27 ACRES, PER CONSTRUCTION LIMITS)

EXISTING SITE IMPERVIOUS AREA: 228,931 SF (38.8 %)
EXISTING SITE PERVIOUS AREA: 361,567 SF (61.2 %)

PROPOSED SITE IMPERVIOUS AREA
TOTAL: 296,686 SF (51.6 %)
BUILDING: 121,415 SF (20.6 %)
PAVING: 182,996 SF (30.0 %)

PROPOSED SITE PERVIOUS AREA: 293,802 SF (49.7 %)

BUILDING SUMMARY:
EXISTING LEVEL 1: 90,533 SF
EXISTING LEVEL 2: 33,333 SF

LEVEL 1 PROPOSED ADDITIONS: 10,562 SF
LEVEL 2 PROPOSED ADDITIONS: 1,482 SF

COMBINED PROPOSED LEVEL 1: 101,095 SF (BUILDING FOOTPRINT)
COMBINED PROPOSED LEVEL 2: 34,815 SF

ENGINEER
SHIVE-HATTERY, INC.
ATTN: ANTHONY HARBAUGH
4125 WESTOWN PARKWAY, SUITE 100
WEST DES MOINES, IA 50266
(515) 223-8104

SETBACKS:
FRONT: 50' (FROM THE ULTIMATE STREET RIGHT-OF-WAY)
REAR: 50'
SIDE: 25'
MAXIMUM BUILDING HEIGHT: 40'

SITE ADDRESS:
1601 VINE ST
WEST DES MOINES, IA 50265

PARKING SUMMARY:
REQUIRED PARKING:
1 SPACE PER EMPLOYEE = 91 SPACES
1 SPACE PER 5 SEATS IN A GYMNASIUM AND AUDITORIUM = 181 SPACES
30 SPACE PICK UP/DROP OFF QUEUING LANE = 25 SPACES
TOTAL = 297, INCLUDING 7 ADA

EXISTING PARKING:
134 PARKING STALLS (5 ACCESSIBLE)
25 SPACES IN PICK UP/DROP OFF QUEUING LANE
TOTAL = 159, INCLUDING 5 ADA

PROPOSED PARKING:
272 PARKING STALLS (11 ADA)
25 SPACES IN PICK UP/DROP OFF QUEUING LANE
297 TOTAL, INCLUDING 11 ADA

LANDSCAPE SUMMARY:
-OFF STREET PARKING AREAS TO BE SCREENED FROM PUBLIC ROW TO A HEIGHT OF 3'
-ALL PARKING LOT ISLANDS NEED TREES PLANTED IN THEM
-2 TREES AND 3 SHRUBS REQUIRED PER 3,000 SF OF REQUIRED OPEN SPACE
-50% OF OPEN SPACE TREES SHALL BE EVERGREEN
-35% OF TOTAL SITE TREES SHALL BE EVERGREEN

REQUIRED OPEN SPACE: 147,625 SF (25%)
100 TREES REQUIRED
150 SHRUBS REQUIRED

EXISTING:
58 DECIDUOUS TREES
33 EVERGREEN TREES
30 SHRUBS

TREES TO BE REMOVED:
23 DECIDUOUS TREES
9 EVERGREEN TREES

PROPOSED:
63 DECIDUOUS TREES (50 ARE PARKING LOT TREES)
27 EVERGREEN TREES
223 SHRUBS

TOTAL:
98 DECIDUOUS + 51 EVERGREEN = 149 TREES
254 SHRUBS

EVERGREEN TREE PERCENTAGES:
OPEN SPACE: 51 / 99 = 52%, EXCEEDS REQUIREMENT OF 50%

TOTAL SITE: 51 / 149 = 35%, MEETS REQUIREMENT OF 35%

Sheet List Table

Sheet Number	Sheet Title
C000	COVER SHEET
C001	CONSTRUCTION NOTES
C001	DEMOLITION PLAN
C002	DEMOLITION ENLARGEMENT PLAN
C003	DEMOLITION ENLARGEMENT PLAN
C101	SITE PLAN
C102	SITE ENLARGEMENT PLAN
C103	SITE ENLARGEMENT PLAN
C200	EROSION CONTROL SITE PLAN
C201	GRADING PLAN
C202	GRADING ENLARGEMENT PLAN
C203	GRADING ENLARGEMENT PLAN
C204	GRADING ENLARGEMENT PLAN
C301	UTILITY PLAN
C302	UTILITY ENLARGEMENT PLAN
C303	UTILITY ENLARGEMENT PLAN
C501	CONSTRUCTION DETAILS
C502	CONSTRUCTION DETAILS
C503	UNDERGROUND DETENTION DETAILS
C504	UNDERGROUND DETENTION DETAILS
C505	BASKETBALL AND FOUR SQUARE DETAILS
L101	LANDSCAPE PLAN
L102	LANDSCAPE ENLARGEMENT PLAN
L103	LANDSCAPE ENLARGEMENT PLAN
L104	LANDSCAPE DETAILS

PLANS INCLUDED ARE FOR ILLUSTRATIVE PURPOSES ONLY – APPROVED PLANS ON FILE WITH THE CITY

LANDSCAPE ARCHITECT
LICENSED LANDSCAPE ARCHITECT
HOLLY C REID
00613
IOWA
06/30/2023

I HEREBY CERTIFY THAT THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND RESPONSIBLE CHARGE. I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA.

HOLLY C. REID
Printed or typed name

Apr 28 2022 3:05 PM
Date

PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL:
L100 SHEETS

CIVIL ENGINEER
LICENSED PROFESSIONAL ENGINEER
ANTHONY J. HARBAUGH
P26394
IOWA

I HEREBY CERTIFY THAT THE ENGINEERING DOCUMENT DESCRIBED BELOW 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.

Apr 27 2022 3:13 PM
Date

Printed or typed name: ANTHONY J. HARBAUGH
License Number: 26394
My License Renewal Date is: DECEMBER 31, 2023
PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL:
ALL SHEETS EXCEPT FOR L100 SHEETS

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.8104 | www.shive-hattery.com
Iowa | Illinois | Indiana

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

DRAWN: EDR
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 420900
FIELD BOOK: –
CLIENT NO: MaM-004975-2020

COVER SHEET

C000

GENERAL NOTES

1. THE LOCATIONS OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS PLOTTED ON THE DRAWINGS ARE APPROXIMATE ONLY AND WERE OBTAINED FROM RECORDS MADE AVAILABLE TO SHIVE-HATTERY, INC. THERE MAY BE OTHER EXISTING UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS NOT KNOWN TO SHIVE-HATTERY, INC. AND NOT SHOWN ON THIS DRAWING. THE VERIFICATION OF EXISTENCE OF, AND THE DETERMINATION OF THE EXACT LOCATION OF, UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR(S).
2. PRIOR TO CONSTRUCTION, UNCOVER EXISTING UTILITIES AT CRITICAL LOCATIONS TO VERIFY EXACT HORIZONTAL AND VERTICAL LOCATION.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL PUBLIC AND PRIVATE UTILITY LOCATES.
4. IOWA CODE 480, UNDERGROUND FACILITIES INFORMATION, REQUIRES VERBAL NOTICE TO IOWA ONE-CALL BY CALLING 811 OR 1-800-292-8989, NOT LESS THAN 48 HOURS BEFORE EXCAVATING, EXCLUDING WEEKENDS AND HOLIDAYS.
5. THE MEANS OF THE WORK AND THE SAFETY OF THE CONTRACTOR'S EMPLOYEES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
6. NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION FROM THE OWNER'S REPRESENTATIVE.
7. PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
8. MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.
9. SITE CLEAN-UP TO BE PERFORMED ON A DAILY BASIS. SIDEWALKS, PARKING LOTS, ROADWAYS, ETC. SHALL BE KEPT CLEAN AT ALL TIMES.
10. PROTECT ALL OPEN EXCAVATIONS.
11. REPLACE ANY PROPERTY MONUMENTS REMOVED OR DESTROYED BY CONSTRUCTION. MONUMENTS SHALL BE SET BY A LAND SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF IOWA.
12. ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT IS TO BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION TO BE ALLOWED FOR THE COMPLETION OF THIS WORK.
13. WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSE, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY SHIVE-HATTERY, INC. AT THE CONTRACTOR'S EXPENSE. WORK DONE CONTRARY TO THE INSTRUCTIONS OF SHIVE-HATTERY, INC., WORK DONE BEYOND THE LINES SHOWN ON THE PLANS OR ANY EXTRA WORK DONE WITHOUT AUTHORITY WILL NOT BE PAID FOR.
14. ALL DIMENSIONS TO BACK-OF-CURB UNLESS NOTED OTHERWISE.
15. CONTOURS AND SPOT ELEVATIONS SHOWN ARE TO FINISHED GRADE.
16. NO PONDING OF WATER WILL BE ACCEPTED ON ANY NEW PAVEMENT OR OVERLAY AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY ANY AREAS OF EXISTING OR PROPOSED PAVEMENTS THAT HAVE POTENTIAL TO POND WATER AND MAKE ANY ADJUSTMENTS NECESSARY TO ENSURE THAT WATER WILL POSITIVELY DRAIN ACROSS THE PAVING OR OVERLAY.
17. STAGING LOCATION FOR CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER.
18. THE CONTRACTOR TO PROVIDE EROSION CONTROL MEASURES NECESSARY TO PROTECT AGAINST SILTATION, EROSION, AND DUST POLLUTION ON THE PROJECT SITE AND ANY OFF SITE BORROW OR DISPOSAL AREAS USED FOR THIS PROJECT. COMPLY WITH SOIL EROSION CONTROL REQUIREMENTS OF IOWA CODE, FEDERAL REGULATIONS, AND LOCAL ORDINANCES.
19. ALL AREAS DISTURBED BY CONSTRUCTION, NOT DESIGNATED AS PLANTED, SHALL BE SEEDED OR SODDED PER LANDSCAPE PLAN. 6" OF TOPSOIL SHALL BE PROVIDED PER SPECIFICATIONS.
20. NOTIFY UTILITY COMPANIES WHO HAVE FACILITIES THAT ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS OF THE SCHEDULE PRIOR TO EACH STAGE OF CONSTRUCTION.
21. CONTROL DUST SPREADING FROM ALL WORK AND STAGING AREAS.
22. COORDINATE ANY GRADE ADJUSTMENTS WITH THE DESIGN ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
23. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
24. SIGNING, STRIPING OR OTHER TRAFFIC CONTROL DEVICES ON THE DRIVEWAY APPROACHES TO PUBLIC STREETS SHOULD CONFORM TO THE (MUTCD) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (FEDERAL HIGHWAY ADMINISTRATION, 2009 EDITION).
25. ALL WATER WORK, PUBLIC OR PRIVATE, SHALL BE DONE IN ACCORDANCE WITH WEST DES MOINES WATER WORKS STANDARD SPECIFICATIONS.
26. CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS AT LEAST ONE WEEK PRIOR TO BUILDING CONSTRUCTION.
27. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
28. CONTACT BUILDING INSPECTION (515-222-3630) A MINIMUM OF 24 HOURS IN ADVANCE FOR PRIVATE UTILITY INSTALLATION INSPECTIONS.
29. DESIGNATED BUFFERS SHALL BE LABELED AS A "NO BUILD AREA".
30. ALL LIGHTS ARE TO BE DOWNCAST CUTOFF VARIETY. WALLPACKS ARE PROHIBITED. THE MAXIMUM ILLUMINATION ALLOWED AT THE PROPERTY LINE IS 1 FOOTCANDLE.
31. AT LEAST ONE WEEK PRIOR TO ANY CONSTRUCTION WITHIN PUBLIC R.O.W. / EASEMENTS AND/OR ANY CONNECTION TO PUBLIC SEWER AND STREETS, THE CONTRACTOR SHALL CONTACT THE CITY OF WEST DES MOINES ENGINEERING SERVICES, 222-3475, TO OBTAIN APPLICABLE CITY PERMITS THAT MAY BE NECESSARY.
32. ALL WORK COMPLETED IN THE PUBLIC ROW SHALL BE DONE IN ACCORDANCE TO THE WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS AND THE DES MOINES METROPOLITAN DESIGN STANDARDS MANUAL WITH WEST DES MOINES ADDENDA.
33. ALL JOINTING SHALL MEET IOWA DOT SPECIFICATIONS AND REQUIREMENTS. ALL LONGITUDINAL PAVEMENT JOINTS SHALL HAVE EITHER TYPE "BT", "KT", OR "L" JOINTS DEPENDING ON THE POURING SEQUENCE. ALL TRAVERSE JOINTS SHALL BE TYPE "C" WITH TYPE "DW" JOINTS USED BETWEEN POURS. MAXIMUM JOINT SPACING SHALL BE 12' ON ALL PAVEMENT AND SQUARE ON ALL SIDEWALKS WITH A MAXIMUM JOINT SPACING OF 10'. SEAL ALL PAVEMENT JOINTS. CONTRACTOR SHALL SUBMIT POURING SEQUENCE AND JOINTING PLANS FOR APPROVAL BY ENGINEER PRIOR TO BEGINNING PAVING OPERATIONS.
34. MATERIALS NOT SUITABLE FOR CONSTRUCTION, INCLUDING TRENCH BACKFILL AND SURFACE RESTORATION, AND EXCESS MATERIALS SHALL BE PROPERLY DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER.
35. ALL PEDESTRIAN SIDEWALK RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH SUDAS REQUIREMENTS AND SHALL MEET "AMERICANS WITH DISABILITIES ACT ACCESSIBILITIES GUIDELINES" (ADAAG) AND "PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN PUBLIC RIGHT-OF-WAY" (PROWAG) GUIDELINES. ANY RAMP NOT IN COMPLIANCE WILL NOT BE ACCEPTED AND WILL REQUIRE RECONSTRUCTION.
36. THE FOLLOWING INFORMATION HAS BEEN FORWARDS TO THE BUILDING ARCHITECT: "THE PROPOSED PROJECT EXCEEDS 3,000 SF AND WILL BE REQUIRED TO PROVIDE VESTIBULES FOR ENTRANCES AS REQUIRED BY THE STATE ADOPTED 2009 INTERNATIONAL ENERGY CONSERVATION CODE (SECTION 502.4.7)".
37. ALL ACCESSIBLE PARKING SPACES ARE LOCATED ON THE SHORTEST POSSIBLE ACCESSIBLE CIRCULATION ROUTE TO THE MAIN ENTRANCE OF THE BUILDING.
38. THERE ARE AT LEAST TWO ACCESSIBLE MEANS OF EGRESS WITH A CONTINUOUS EXIT PATH AWAY FROM THE BUILDING FOR TENANTS THAT WILL REQUIRE TWO EXITS.
39. A REPORT CERTIFIED BY A THIRD-PARTY RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE CITY, SHALL BE SUBMITTED TO DOCUMENT THE THICKNESS AND STRENGTH OF THE PAVEMENT, THE SUB-GRADE COMPACTION COMPLIANCE WITH THE METRO DESIGN STANDARDS FOR STREETS, AND THE STANDARDS LISTED IN THE WEST DES MOINES "OFF STREET PARKING ORDINANCE" FOR PRIVATE STREETS, PARKING LOTS, AND DRIVEWAYS.
40. IF ADDITIONAL PAVEMENT REMOVAL IS REQUIRED OTHER THAN A STANDARD BOX OUT, FULL PANEL REMOVAL WILL BE REQUIRED. NO HALF PANEL REMOVAL WILL BE ALLOWED.
41. 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 WEST DES MOINES ENGINEERING SERVICES DEPARTMENT (222-3475) TO SCHEDULE INSPECTION.
42. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY OR EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS.
43. THE PROJECT CIVIL ENGINEER OR DESIGN PROFESSIONAL SHALL PROVIDE AS-BUILT DOCUMENTATION THAT THE STORM WATER DRAINAGE SYSTEM HAS BEEN CONSTRUCTED AS DESIGNED. THE AS-BUILT SHALL BE FORWARDED TO THE CITY BEFORE ISSUANCE OF THE FINAL OCCUPANCY PERMIT, AND SHALL INCLUDE ELEVATIONS, DETENTION AND RETENTION POND CAPACITY, PIPING RESTRICTIONS, AND ANY PERTINENT ASPECTS OF THE STORM WATER SYSTEM.
44. ALL WATER WORK, PUBLIC OR PRIVATE, SHALL BE DONE IN ACCORDANCE WITH WEST DES MOINES WATER WORKS STANDARD SPECIFICATIONS.
45. CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS (515-222-3465) AT LEAST ONE WEEK PRIOR TO BUILDING CONSTRUCTION.
46. ANY WATER USE FROM A HYDRANT, PUBLIC OR PRIVATE, REQUIRES THE USE OF A WEST DES MOINES WATER WORKS HYDRANT METER. CALL 515-222-3465 TO RESERVE A METER.
47. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE WEST DES MOINES WATER WORKS AND THE CITY'S CROSS CONNECTION CONTROL/CONTAINMENT PROVISIONS.
48. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION OF AN APPROVED BACKFLOW PREVENTION ASSEMBLY(IES) FOR CONTAINMENT IN ALL NEW CONSTRUCTION. BACKFLOW PREVENTION TO BE INSTALLED PER CITY ORDINANCE 1297, 54-1998. CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS, RALPH RENTERIA, ENGINEERING TECHNICIAN (515-222-3465) A MINIMUM OF 24 HOURS AFTER INSTALLATION AND TESTING OF ALL BACKFLOW DEVICES TO SCHEDULE FINAL INSPECTION.

CONSTRUCTION STAGING NOTES

1. CONTRACTOR SHALL COORDINATE ALL STAGING AREAS WITH OWNER.
2. CONTRACTOR SHALL REPLACE ALL PAVEMENT DAMAGED BY CONSTRUCTION ACTIVITIES AT THE END OF CONSTRUCTION. CONTRACTOR TO PROVIDE PHOTO DOCUMENTATION OF EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
3. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS NOT TO BE PAVED TO THEIR ORIGINAL CONDITION AT THE END OF CONSTRUCTION. ALL DISTURBED AREAS SHALL BE SCARIFIED, TILLED AND SEEDED. CONTRACTOR TO PROVIDE PHOTO DOCUMENTATION PRIOR TO BEGINNING WORK.
4. CONTRACTOR SHALL PROVIDE BARRICADES, FENCING OR OTHER DEVICES TO KEEP UNAUTHORIZED PERSONNEL AND STUDENTS OUT OF PROJECT SITE.

TRAFFIC AND PEDESTRIAN CONTROL NOTES

51. CONTRACTOR IS ALLOWED TO CLOSE DOWN LIMITED PARKING AND DRIVES DURING CONSTRUCTION. ACCESS TO ADJACENT BUILDINGS, DRIVES, PARKING, AND SIDEWALKS ARE TO BE MAINTAINED THROUGHOUT CONSTRUCTION. PHASING OF UTILITY CONSTRUCTION AND ROAD PATCHING WILL BE REQUIRED TO MAINTAIN VEHICULAR AND PEDESTRIAN TRAFFIC TO ALL BUILDINGS AND SHALL BE COORDINATED WITH SCHEDULES OF OTHER TRADES, CONTRACTORS, AND UTILITY COMPANIES.
52. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTROL TRAFFIC DURING CONSTRUCTION AND PROVIDE ADEQUATE TRAFFIC AND PEDESTRIAN CONTROL AND SIGNAGE. AT A MINIMUM CONTRACTOR TO PROVIDE TYPE 4 BARRICADES AT EACH END OF CLOSED ROADS AND DRIVES.
53. CONTRACTOR TO INSTALL AND MAINTAIN ORANGE CONSTRUCTION FENCE AROUND ALL AREAS OF ACTIVE CONSTRUCTION. CONTRACTOR SHALL ASSUME PEDESTRIAN TRAFFIC WILL BE IN THE AREA THROUGHOUT THE PROJECT DURATION.
54. OWNER/CONSTRUCTION MANAGER TO INSTALL TEMPORARY GRANULAR SURFACING AND CHAIN LINK FENCE AND GATES AROUND PROPOSED CONSTRUCTION STAGING AREAS. CONTRACTORS TO COORDINATE WITH CONSTRUCTION MANAGER ON PORTIONS OF STAGING AREA THAT ARE REQUIRED FOR THEIR SCOPE OF WORK AND COORDINATE WITH ALL OTHER CONTRACTORS AND TRADES ONSITE.
55. PEDESTRIAN ACCESS MUST BE MAINTAINED TO ALL BUILDINGS THROUGHOUT CONSTRUCTION. PEDESTRIAN ACCESS MUST BE MAINTAINED AT ALL TIMES BETWEEN COTTAGES, GYM/SCHOOL, AND KITCHEN BUILDINGS. COORDINATE WITH FACILITY AND CONSTRUCTION MANAGER ON PHASING AND SHUT DOWN OF ALL DRIVES AND SIDEWALKS. TEMPORARY GRANULAR PATCHES WILL BE REQUIRED FOR ANY DRIVES AND SIDEWALKS WHICH ARE NOT PATCHED WITH CONCRETE IN A TIMELY MANNER TO LIMIT DISRUPTIONS TO CAMPUS TRAFFIC AND PEDESTRIAN FLOW.
56. CONTRACTOR TO COORDINATE CONSTRUCTION ACCESS, STAGING, AND PARKING AREAS WITH OWNER AND MINIMIZE IMPACTS TO OWNER'S OPERATIONS.
57. CONTRACTOR TO PROVIDE AND MAINTAIN PERIMETER SAFETY FENCING AROUND ALL AREAS WHEN UNDER CONSTRUCTION.
58. COORDINATE STAGING AND TRAFFIC CONTROL WITH WEST DES MOINES EMERGENCY SERVICES.
59. LANE CLOSURE NOTICES MUST BE SUBMITTED TO WEST DES MOINES PUBLIC WORKS FOR APPROVAL A MINIMUM OF 48 HOURS IN ADVANCE OF CLOSURE.
60. ALL SIGNING, STRIPING, AND OTHER TRAFFIC CONTROL DEVICES ON THE DRIVEWAY APPROACHES TO THE PUBLIC STREET SHOULD CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), FEDERAL HIGHWAY ADMINISTRATION 2009 EDITION.

GRADING AND EROSION CONTROL NOTES

1. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
2. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
3. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
4. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
5. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
6. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE SEEDED OR SODDED. THESE AREAS SHALL BE SEEDED OR SODDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
7. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
8. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
9. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, WATTLES, INLET PROTECTION, ETC.) TO PREVENT EROSION.
11. ALL STORM SEWER INTAKES THAT RECEIVE STORMWATER RUNOFF FROM DISTURBED AREAS SHALL BE PROVIDED WITH INLET PROTECTION. SEE DETAIL.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, PERIODIC CHECKING AND REINSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES.
13. OWNER SHALL ASSUME RESPONSIBILITY FOR ALL EROSION CONTROL UNTIL DELEGATED TO CONTRACTOR ONCE THE PROJECT CONSTRUCTION STARTS.
14. THE CONSTRUCTION SITE EXCEEDS AN ACRE OF DISTURBED GROUND. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND GENERAL PERMIT #2 WILL BE REQUIRED FOR CONSTRUCTION, AND PROVIDED BY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENT CONTROLS AS REQUIRED TO PREVENT THE RELEASE OF SEDIMENT INTO PUBLIC STORM SEWER.
15. THE OWNER WILL OBTAINED AN NPDES PERMIT FOR THE CAMPUS AND PREPARED AN EPA TEMPLATE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROPOSED CONSTRUCTION. ALL CONTRACTORS WILL BE REQUIRED TO BE CO-PERMITEES WITH THE OWNER.
16. THE OWNER/CONSTRUCTION MANAGER WILL BE RESPONSIBLE FOR EXECUTING THE SWPPP, REQUIRED INSPECTIONS, AND INSTALLING ALL REQUIRED STRUCTURAL CONTROLS. ALL CONTRACTORS ARE REQUIRED TO COORDINATE WITH AND FOLLOW THE PROJECT SWPPP AND NOTIFY THE CONSTRUCTION MANAGER OF ANY POTENTIAL CONCERNS OR RECOMMENDED CONTROLS AS PART OF THEIR SCOPE OF WORK.
17. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE IOWA DNR, US EPA AND LOCAL REGULATIONS DEALING WITH THE NPDES PERMIT, STORMWATER RUNOFF, AND EROSION CONTROL.

UTILITY NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT LOCATIONS AND DEPTHS OF ALL EXISTING PUBLIC AND PRIVATE UTILITIES AND WHETHER ADDITIONAL UTILITIES EXIST.
2. ALL HDPE PIPE SHALL BE DUAL-WALLED UNLESS OTHERWISE SPECIFIED AS PERFORATED.
3. CONSTRUCTION NOT SPECIFICALLY DETAILED OR SPECIFIED WITHIN THE PLANS OR PROJECT SPECIFICATIONS SHALL CONFORM TO THE MOST RECENT EDITION OF THE DES MOINES METROPOLITAN STANDARDS WITH WEST DES MOINES ADDENDUM AND THE WEST DES MOINES CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS.
4. ALL CLEANOUTS AND WATER VALVES IN LAWN OR LANDSCAPE BEDS SHALL HAVE CONCRETE COLLARS.
5. ALL EXISTING PUBLIC AND PRIVATE UTILITY STRUCTURES SHALL BE ADJUSTED TO FINAL FINISH GRADES.
6. ALL HDPE BENDS AND CONNECTIONS SHALL BE MANUFACTURED CONNECTIONS.
7. CONTRACTOR TO MODIFY EXISTING INVERTS TO ACCOMMODATE NEW PIPE CONNECTIONS.
8. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS, SPECIFICATIONS, PERMITS, AND FEES. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS AND LABOR ASSOCIATED WITH PUBLIC AND PRIVATE UTILITY REMOVAL, RELOCATION, AND INSTALLATION.
9. ALL EXISTING AND PROPOSED UTILITY CROSSINGS/CONFLICTS SHALL MEET OR EXCEED HORIZONTAL AND VERTICAL SEPARATION REQUIREMENTS OF THE IOWA DEPARTMENT OF PUBLIC HEATH AND OTHER REGULATING AGENCIES.
10. ALL UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED, AND APPROVED BEFORE BACKFILLING.
11. WATER TO BE INSTALLED WITH A MINIMUM COVER OF 5.5 FEET DEEP OR LOWER TO ACCOMMODATE UTILITY CROSSINGS.
12. SANITARY PIPE LENGTHS SHOWN ARE CENTERLINE TO CENTERLINE OF STRUCTURES.
13. STORM PIPE LENGTHS SHOWN ARE INSIDE EDGE TO INSIDE EDGE OF STRUCTURES.
14. AS-BUILT DOCUMENTATION OF THE STORM WATER DETENTION SYSTEM AND AN EXECUTED STORM WATER MANAGEMENT FACILITY MAINTENANCE AGREEMENT WILL BE REQUIRED AND FORWARDED TO THE CITY BEFORE ISSUANCE OF THE FINAL OCCUPANCY PERMIT AND SHALL INCLUDE ELEVATIONS, DETENTION BASIN CAPACITY, PIPING RESTRICTIONS, AND OTHER PERTINENT INFORMATION.
15. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE WEST DES MOINES WATER WORKS AND THE CITY'S CROSS CONNECTION CONTROL/CONTAINMENT PROVISION.
16. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION OF AN APPROVED BACKFLOW PREVENTION ASSEMBLY(IES) FOR CONTAINMENT IN ALL NEW CONSTRUCTION. BACKFLOW PREVENTION TO BE INSTALLED PER CITY ORDINANCE 1297, 54-1998. CONTRACTOR SHALL NOTIFY WEST DES MOINES WATER WORKS, RALPH RENTERIA, ENGINEERING TECHNICIAN (515-222-3465) A MINIMUM OF 24 HOURS AFTER INSTALLATION AND TESTING OF ALL BACKFLOW DEVICES TO SCHEDULE FINAL INSPECTION.
17. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH IOWA SUDAS STANDARD SPECIFICATIONS AND IOWA DOT SPECIFICATIONS AND STANDARD ROAD PLANS, AND ROAD DESIGN DETAILS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
18. ALL OPEN EXCAVATIONS SHALL BE PROTECTED WITH SAFETY FENCE, BARRIERS OR BARRICADES IN ACCORDANCE WITH OSHA.
19. CONTRACTOR TO IMPLEMENT TEMPORARY SHORING OR SUPPORT AT ALL UTILITY CROSSINGS AS REQUIRED BY CONTRACTORS MEANS AND METHODS. ALL DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
20. ALL CONNECTIONS TO PUBLIC SEWERS SHALL BE CORE DRILLED.

DEMOLITION NOTES

1. REMOVAL REQUIREMENTS SHOWN ON THE PLANS SHOULD BE CONSIDERED MINIMUM REMOVAL AND REPLACEMENT REQUIREMENTS. CONTRACTORS SHALL ADJUST REMOVAL LIMITS AND DIMENSIONS AS REQUIRED BY CONSTRUCTION MEANS AND METHODS AND ACTUAL SITE CONDITIONS. CONTRACTORS SHOULD FACTOR ADDITIONAL ANTICIPATED REMOVAL AND REPLACEMENT REQUIREMENTS INTO THEIR BIDS AS ADDITIONAL COMPENSATION REQUESTS FOR ADJUSTED OR EXPANDED REMOVAL LIMITS WILL NOT BE APPROVED.
2. CONTRACTOR SHALL REPLACE AT NO COST TO THE OWNER ALL DAMAGED STREETS, DRIVES, SIDEWALKS, CURB AND GUTTER, SIGNS, PAVEMENT MARKINGS, LIGHTS, FENCES AND ALL OTHER SURFACE STRUCTURES NOT SCHEDULED TO BE REMOVED DURING THE COURSE OF THE WORK.
3. ALL LANDSCAPING INCLUDING TREES, SHRUBS, PERENNIALS NOT CALLED OUT TO BE REMOVED OR APPROVED FOR REMOVAL BY CONSTRUCTION MANAGER SHALL BE PROTECTED AND REPLACED AT NO COST TO THE OWNER IF DAMAGED DURING CONSTRUCTION. REPLACE TREES WITH (1) EQUIVALENT TREE UP TO 6" CALIPER AND (1) ADDITIONAL TREE FOR EVERY 6" CALIPER BEYOND THAT. ALL PLANTS THAT ARE DESTROYED OR DAMAGED SHALL BE REPLACED WITH NEW PLANTS OF THE EQUIVALENT TYPE.
4. WHERE A SECTION OF PAVEMENT, CURB AND GUTTER, OR SIDEWALK IS CUT OR OTHERWISE DAMAGED BY THE CONTRACTOR, THE ENTIRE SECTION SHALL BE REMOVED AND REPLACED. PAVEMENT, CURBS, GUTTERS, AND SIDEWALKS SHALL BE REMOVED TO THE NEAREST JOINT A MINIMUM OF TWO FEET BEYOND THE EDGE OF ALL EXCAVATIONS. CONTRACTOR SHALL DOCUMENT (OR PHOTO) ALL CRACKED PCC PAVEMENT OR DAMAGED HMA PAVEMENT PRIOR TO CONSTRUCTION. IF NEW CRACKS IN PCC PAVEMENT DEVELOP OR HMA PAVEMENT IS DAMAGED DUE TO THE CONSTRUCTION TRAFFIC (EXTENDS BEYOND CONSTRUCTION LIMITS), CONTRACTOR SHALL REPLACE DAMAGED AREA AT NO ADDITIONAL COST TO OWNER.
5. FIRE PROTECTION ACCESS AND FIRE HYDRANTS SHALL BE MAINTAINED THROUGHOUT THE PROJECT. ALL EXISTING FIRE HYDRANTS WHICH ARE NOT CALLED OUT TO BE REMOVED SHALL BE PROTECTED AND MAINTAINED. AT THE REQUEST OF THE CONTRACTOR SELECT EXISTING FIRE HYDRANTS MAY BE ALLOWED TO BE REMOVED TO BETTER ACCOMMODATE THE PROPOSED SITE IMPROVEMENTS. REQUESTS TO REMOVE EXISTING FIRE HYDRANT ASSEMBLIES SHOULD BE SUBMITTED AND APPROVED BY THE ENGINEER AND LOCAL JURISDICTION.
6. TREE AND VEGETATION INDICATED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ALL STUMPS AND ROOT STRUCTURES THAT ARE 2" DIAMETER AND LARGER. BACKFILL ALL EXCAVATIONS AND DEPRESSIONS WITH COMPACTED SUITABLE TOPSOIL MATERIAL.
7. PAVEMENT REMOVAL FOR THE PRIVATE DRIVEWAY CONNECTION TO THE PUBLIC STREET SHALL BE 18" FROM THE BACK OF CURB. IF A JOINT EXISTS 3 FEET FROM THE BACK OF CURB, THE REMOVAL LIMITS SHALL BE 3 FEET FROM THE BACK OF CURB. REMOVAL LIMITS SHALL ALSO BE TO THE NEAREST TRANSVERSE JOINT AT THE END OF RETURNS. VERIFY REMOVAL LIMITS WITH WDM CONSTRUCTION INSPECTOR PRIOR TO ANY REMOVAL.

EXCAVATION NOTES

1. EXCAVATE TRENCH AND PROVIDE PIPE BEDDING AND BACKFILL MATERIAL PER IOWA SUDAS SPECIFICATIONS OR AS SHOWN ON THE DRAWINGS.
2. STRIP, STOCKPILE, AND RESPREAD A MINIMUM OF 6" OF TOPSOIL IN ALL SOD AREAS DISTURBED BY CONSTRUCTION. DISTURBED AREAS SHALL BE LEFT IN SMOOTH CONDITIONS READY FOR FINAL SEEDBED PREPARATION BY SITE RESTORATION CONTRACTOR. GRADE ALL DISTURBED ARES TO DRAIN AS PONDING OF WATER WILL NOT BE ACCEPTABLE.
3. CONTRACTOR IS RESPONSIBLE FOR ALL TRENCH AND FILL SETTLEMENT FOR THE PROJECT'S ONE YEAR WARRANTY PERIOD. CONTRACTOR SHALL PROVIDE ADDITIONAL FILL MATERIAL AND IS RESPONSIBLE FOR RESEEDING OF ALL SETTLEMENT AREAS AFTER SITE RESTORATION HAS BEEN COMPLETED.
4. CONTRACTOR MAY TEMPORARILY STORE EXCESS SOILS ON SITE. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL EXCESS SOIL FROM SITE PRIOR TO PROJECT COMPLETION. CONTRACTORS WILL BE RESPONSIBLE FOR STRIPPING AND RESPREADING TOPSOIL AND LEAVING THE WASTE SITE IN A SMOOTHLY GRADED CONDITION AT THE END OF CONSTRUCTION. ONLY CLEAN SOIL MATERIAL AND GRANULAR MATERIAL LESS THAN 1.5" DIAMETER WILL BE ALLLOWED TO BE PLACED ONSITE. ALL DEBRIS AND LARGER ROCK OR CONCRETE WASTE SHALL BE DISPOSED OF OFFSITE. POTHOLE MUD DISPOSAL WILL NOT BE PERMITTED ONSITE AND SHOULD BE DISPOSED OF OFFSITE.

PAVEMENT GENERAL NOTES

1. ALL PROPOSED PAVEMENT PATCHES ARE APPROXIMATE AND SHOULD BE CONSIDERED MINIMUM REMOVAL EXTENTS. EXTEND AND ADJUST PAVEMENT PATCHES AS REQUIRED BY CONSTRUCTION WITH PRIOR APPROVAL BY CONSTRUCTION MANAGER.
2. ASPHALT PAVEMENT SHALL BE REMOVED AS REQUIRED FOR UTILITY INSTALLATION AND REPLACED WITH PCC PAVEMENT UNLESS PRIOR APPROVAL IS PROVIDED BY ENGINEER TO REPLACE WITH ASPHALT PATCHES.
3. ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING. ANY PONDING ON PAVEMENT PATCHES OR ADJACENT TO PATCHES WILL BE CONSIDERED UNACCEPTABLE AND SHALL BE REPLACED.
4. SALVAGE ALL SIGNS WITHIN THE CONSTRUCTION LIMITS AND REINSTALL IN THE SAME LOCATION AND CONDITION AFTER CONSTRUCTION. ANY STREET SIGNS OR POLES DAMAGED DURING THE COURSE OF WORK TO BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.
5. USE TYPE "A" COMPACTION ON SUBGRADE AND SUBBASE, TYPE "A" COMPACTION PER IOWA DOT STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGE CONSTRUCTION.
6. IN THE EVENT THAT PAVEMENT PATCHES ON ROADS AND SIDEWALKS CANNOT BE COMPLETED BEFORE THE COLD WEATHER SEASON BEGINS, CONTRACTOR MAY INSTALL TEMPORARY ROCK PATCHES IN AREAS WHERE PAVEMENT HAS BEEN REMOVED RATHER THAN COMPLETE PAVEMENT PATCHES IN LESS THAN IDEAL WEATHER CONDITIONS. TEMPORARY ROCK PATCHES SHALL BE A MINIMUM OF 8" DEEP AND COMPACTED. CONTRACTOR TO MAINTAIN TEMPORARY ROCK PATCHES THROUGHOUT THE WINTER SEASON INCLUDING SUPPLEMENTING WITH ADDITIONAL ROCK AS REQUIRED AND INSTALL PERMANENT PAVEMENT PATCHES AS SHOWN IN PLANS IN ACCEPTABLE WEATHER CONDITIONS.

Legend

EXISTING	DESCRIPTION	PROPOSED
CP	CONTROL POINT/BENCHMARK	
	HANDICAPPED PARKING	
	SHRUB	
	DECIDUOUS TREE	
	CONIFEROUS TREE	
	EXISTING TREE LINE	
	TREE REMOVAL	
	PAVEMENT MARKING	
	LIGHT POST	
	UTILITY POLE	
	SINGLE POLE SIGN	
	BOLLARD	
	FLAGPOLE	
	FIRE HYDRANT	
	UTILITY END CAP	
	VALVE	
	CLEANOUT	
	CURB INTAKE	
	STORM INTAKE	
	FLARED END SECTION	
	MANHOLE	
	DRAINAGE MANHOLE	
	SANITARY MANHOLE	
	TRANSFORMER	
	VAULT BOX	V
	CURB AND GUTTER (PCC)	
910	MAJOR CONTOUR	910
909	MINOR CONTOUR	909
	GAS MAIN	G
	SANITARY SEWER	
	STORM SEWER	
	SUBDRAIN	
	FIBER OPTIC	FO
W	WATER MAIN	W
	UTILITY DEMO	
	SILT FENCE OR FILTER SOCK	
	CONSTRUCTION LIMITS	
	BUILDING	
	PCC PAVING	
	SIDEWALK PAVING	
	PCC PAVING DEMO	
	SIDEWALK PAVING DEMO	

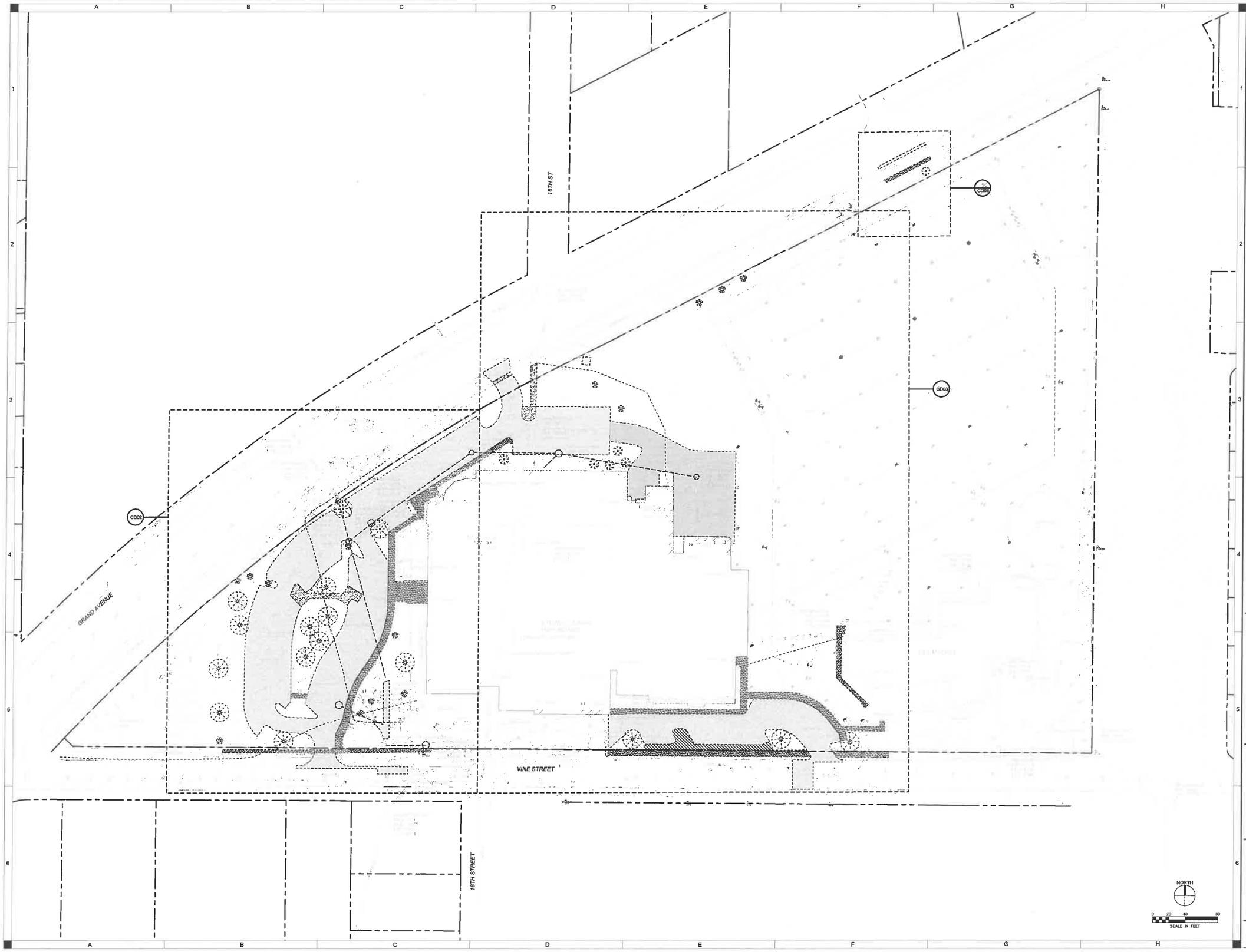
SHIVE-HATTERY
ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.8104 | www.shive-hattery.com
Iowa | Illinois | Indiana

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

DRAWN: EDR
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4203000
FIELD BOOK: --
CLIENT NO: MAM-004975-2020

CONSTRUCTION NOTES

C001



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ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.1536 | www.shivehattery.com
Iowa | Illinois | Nebraska

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

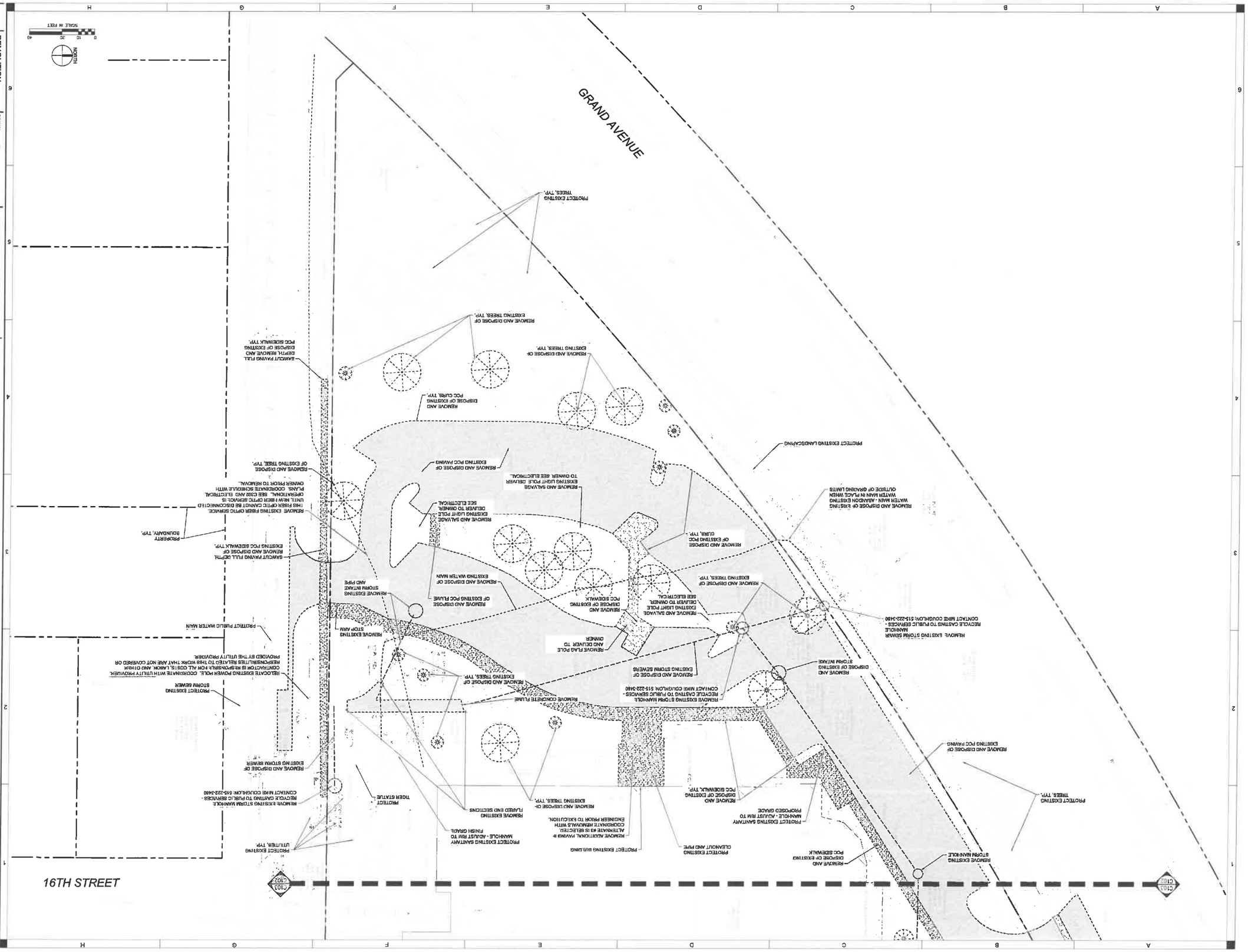
WEST DES MOINES COMMUNITY SCHOOLS
1901 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-20	ADDENDUM #1
ADD	2	2022-01-06	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: AM
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4203000
FIELD BOOK: –
CLIENT NO: MAA-04615-2030

DEMOLITION PLAN

CD01



STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 WINE ST, WEST DES MOINES, IA 50265

NO.	DATE	DESCRIPTION
1	2021-12-22	ADDENDUM #1
2	2022-2-08	ADDENDUM #2
3	2022-3-11	PROPOSAL REQUEST #3

DRAWN: AJH
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 620060
FIELD BOOK: –
CLIENT NO: KAM-000075-209

DEMOLITION ENLARGEMENT PLAN

CD02

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.8700 | www.shive-hattery.com
Iowa | Illinois | Indiana

1 C003

PROTECT EXISTING LANDSCAPING AND IRRIGATION CONTROL SYSTEM

PROTECT EXISTING TREES, TYP.

EXISTING IRRIGATION SYSTEM - LOCATION IS APPROXIMATE AND IS BASED ON RECORD DOCUMENTS.
REMOVE OR ABANDON SYSTEM AS IMPACTED BY CONSTRUCTION. REPAIR AND RESTORE IRRIGATION SYSTEM IN IRRIGATED AREAS THAT ARE PROPOSED TO REMAIN GREEN SPACE.
PROTECT SYSTEM BEYOND PROPOSED CONSTRUCTION LIMITS.

CONTRACTOR SHALL COORDINATE WITH AND SUBMIT DESIGN PLANS FROM A PROFESSIONAL IRRIGATION DESIGN CONSULTANT PRIOR TO BEGINNING WORK ON IRRIGATION SYSTEM.

REMOVE AND DISPOSE EXISTING TREES, TYP.

PROTECT EXISTING ELECTRICAL CIRCUITS FOR SPRINKLER SYSTEM. RELOCATE AS NECESSARY AS PART OF SPRINKLER SYSTEM REPAIR.

REMOVE AND DISPOSE OF EXISTING ACC PAVING, TYP.

PROTECT EXISTING STORM SEWER

REMOVE AND DISPOSE OF EXISTING STORM SEWER. ABANDON IN PLACE AS NECESSARY TO PROTECT EXISTING TRANSFORMER AND OTHER ITEMS TO REMAIN.

PROTECT EXISTING PAVING AND BUILDING

RELOCATE EXISTING ELECTRICAL SERVICE - SEE C303 AND ELECTRICAL SITE PLAN. COORDINATE WITH UTILITY PROVIDER.

SAWCUT FULL DEPTH, REMOVE, AND DISPOSE OF REMAINING ACC PAVING

PROTECT EXISTING TRANSFORMER, FOUNDATIONS, AND SCREEN WALL. TEMPORARY REMOVAL OF SCREEN WALL MAY BE REQUIRED FOR PROPOSED PAVEMENT REMOVAL AND INSTALLATION.

SALVAGE EXISTING LANDSCAPING MATERIALS AND RETURN TO OWNER

REMOVE AND DISPOSE OF EXISTING TREES, TYP.

PROTECT EXISTING PCC STOOPS

REMOVE EXISTING PCC PAVING AND PVC TUBES WITH CONCRETE COLLARS

REMOVE AND DISPOSE OF EXISTING TREES, TYP.

REMOVE AND SALVAGE EXISTING LIGHT POLE DELIVER TO OWNER, SEE ELECTRICAL

PROTECT EXISTING TREE, TYP.

REMOVE EXISTING STORM SEWER STRUCTURE

REMOVE AND DISPOSE OF EXISTING PCC PAVING

REMOVE AND DISPOSE OF EXISTING PCC CURB, TYP.

PROTECT WATER VALVE

SAWCUT FULL DEPTH, REMOVE, AND DISPOSE OF EXISTING PCC PAVING, TYP.

PROTECT EXISTING MANHOLES

PROTECT EXISTING PCC SIDEWALK, TYP.

REMOVE AND DISPOSE OF EXISTING TREE, TYP.

SAWCUT FULL DEPTH, REMOVE, AND DISPOSE OF EXISTING PCC SIDEWALK, TYP.

REMOVE AND DISPOSE OF EXISTING TREE, TYP.

PROTECT EXISTING UTILITIES, TYP.

SAWCUT FULL DEPTH. REMOVE AND DISPOSE OF EXISTING SIDEWALK TO NEAREST JOINT, TYP.

SAWCUT FULL DEPTH, REMOVE, AND DISPOSE OF EXISTING PCC CURB AND GUTTER, TYP.

PROTECT EXISTING TREES, TYP.

1 GRAND AVENUE ENTRANCE
NTS

C103
C102

NORTH
0 10 20 40
SCALE IN FEET

SAWCUT PAVING FULL DEPTH, REMOVE AND DISPOSE OF EXISTING PCC SIDEWALK, TYP.

PROTECT PUBLIC WATER MAIN

SAWCUT PAVING FULL DEPTH, REMOVE AND DISPOSE OF EXISTING PCC SIDEWALK, TYP.

PROTECT EXISTING FLARED END SECTION AND STORM SEWER PIPE

ABANDON EXISTING FIBER OPTIC MANHOLE

REMOVE EXISTING TREE (TYP)

PROTECT EXISTING STORM SEWER MANHOLE

REMOVE EXISTING FIBER OPTIC SERVICE. THIS FIBER OPTIC CANNOT BE DISCONNECTED UNTIL NEW FIBER OPTIC SERVICE IS OPERATIONAL. SEE C303 AND ELECTRICAL PLANS. COORDINATE SCHEDULE WITH OWNER PRIOR TO REMOVAL.

SAWCUT FULL DEPTH, REMOVE TO NEAREST HALF PANEL, AND DISPOSE OF EXISTING PAVING, TYP.

REMOVE EXISTING TREE (TYP)

REMOVE AND DISPOSE OF EXISTING PCC SIDEWALK

REMOVE AND DISPOSE OF EXISTING LIGHT POLE BASE

REMOVE EXISTING PCC PAVING, TYP.

REMOVE LANDSCAPING (TYP)

REMOVE EXISTING PCC STOOP AND SIDEWALK. PROTECT BUILDING.

REMOVE EXISTING FIBER OPTIC MANHOLE. THIS FIBER OPTIC CANNOT BE DISCONNECTED UNTIL NEW FIBER OPTIC SERVICE IS OPERATIONAL. SEE ELECTRICAL PLANS.

REMOVE AND DISPOSE OF EXISTING PCC CURB, TYP.

PROTECT EXISTING PCC STOOPS

REMOVE AND DISPOSE OF EXISTING PCC SIDEWALK

REMOVE AND DISPOSE OF EXISTING SIDEWALK, TYP.

SAW CUT FULL DEPTH, REMOVE, AND DISPOSE OF EXISTING PCC PAVING

REMOVE AND DISPOSE OF EXISTING TREE (TYP)

PROTECT EXISTING SANITARY MANHOLE - MODIFY AS NECESSARY FOR NEW CONNECTION. SEE C303.

PROTECT EXISTING BUILDING AND PAVING

PROTECT EXISTING GREASE INTERCEPTOR

SAWCUT FULL DEPTH, REMOVE, AND DISPOSE OF EXISTING PCC PAVING, TYP.

VINE STREET

C101
C102

NORTH
0 10 20 40
SCALE IN FEET

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 1003 | West Des Moines, Iowa 50266
515.223.1102 | www.shivehattery.com
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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

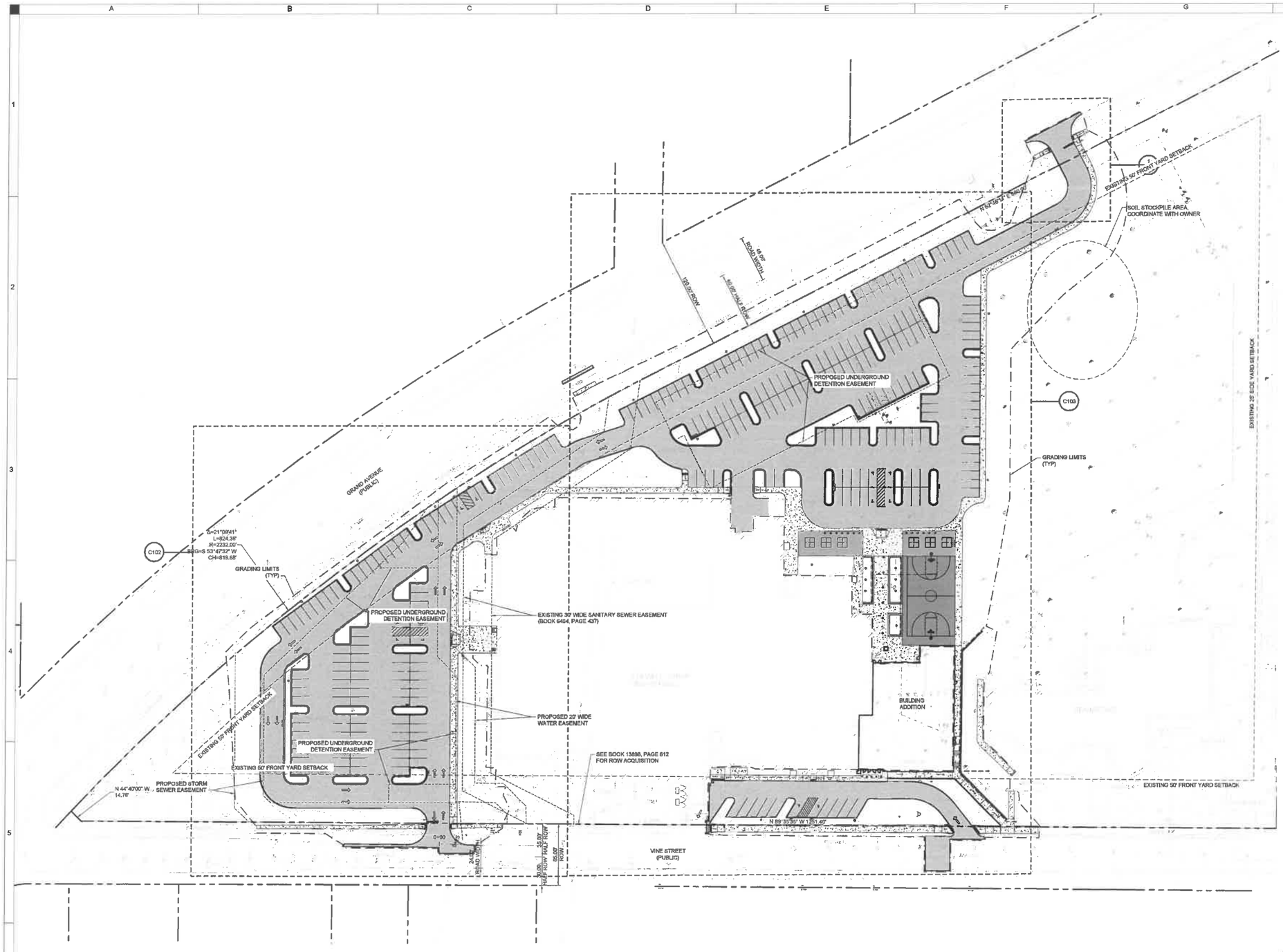
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-10-22	ADDENDUM #1
ADD	2	2022-01-06	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: AR
APPROVED: AJR
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 420060
FIELD BOOK: --
CLIENT NO: MAA-04875-2020

DEMOLITION ENLARGEMENT PLAN

CD03



PARKING SUMMARY

REQUIRED PARKING:
1 SPACE PER EMPLOYEE (91)
25 SPACE PICK UP/DROP OFF QUEUING LANE (25)
1 SPACE PER 5 SEATS IN GYMNASIUM AND AUDITORIUMS (181)
297 TOTAL, INCLUDING 7 ADA

EXISTING PARKING:
134 STALLS (5 ACCESSIBLE)
25 SPACE PICK UP/DROP OFF QUEUING LANE
159 TOTAL, INCLUDING 6 ADA

PROPOSED PARKING:
NORTH LOT: 150 (4 ADA)
WEST LOTS: 111 STALLS (6 ADA)
SOUTH LOT: 11 STALLS (2 ADA)
272 TOTAL STALLS (12 ADA)
25 SPACE PICK UP/DROP OFF QUEUING LANE
297 TOTAL, INCLUDING 12 ADA

PROPOSED QUEUING DISTANCE FOR NORTH ENTRANCE TO WEST DROP-OFF: 1,250 LF

NOTES:

SEE SHEET _____ FOR CONSTRUCTION PHASING AND STAGING INFORMATION

LEGEND:

- 6" P.C.C. PAVING
- 5" P.C.C. SIDEWALK
- 6" COLORED P.C.C., CHARCOAL

ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 103.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.

NORTH

0 20 40 80
SCALE IN FEET

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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-22	ADDENDUM #1
ADD	2	2022-01-05	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: EER
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4520009
FIELD BOOK: —
CLIENT NO: MAA-0904975-2020

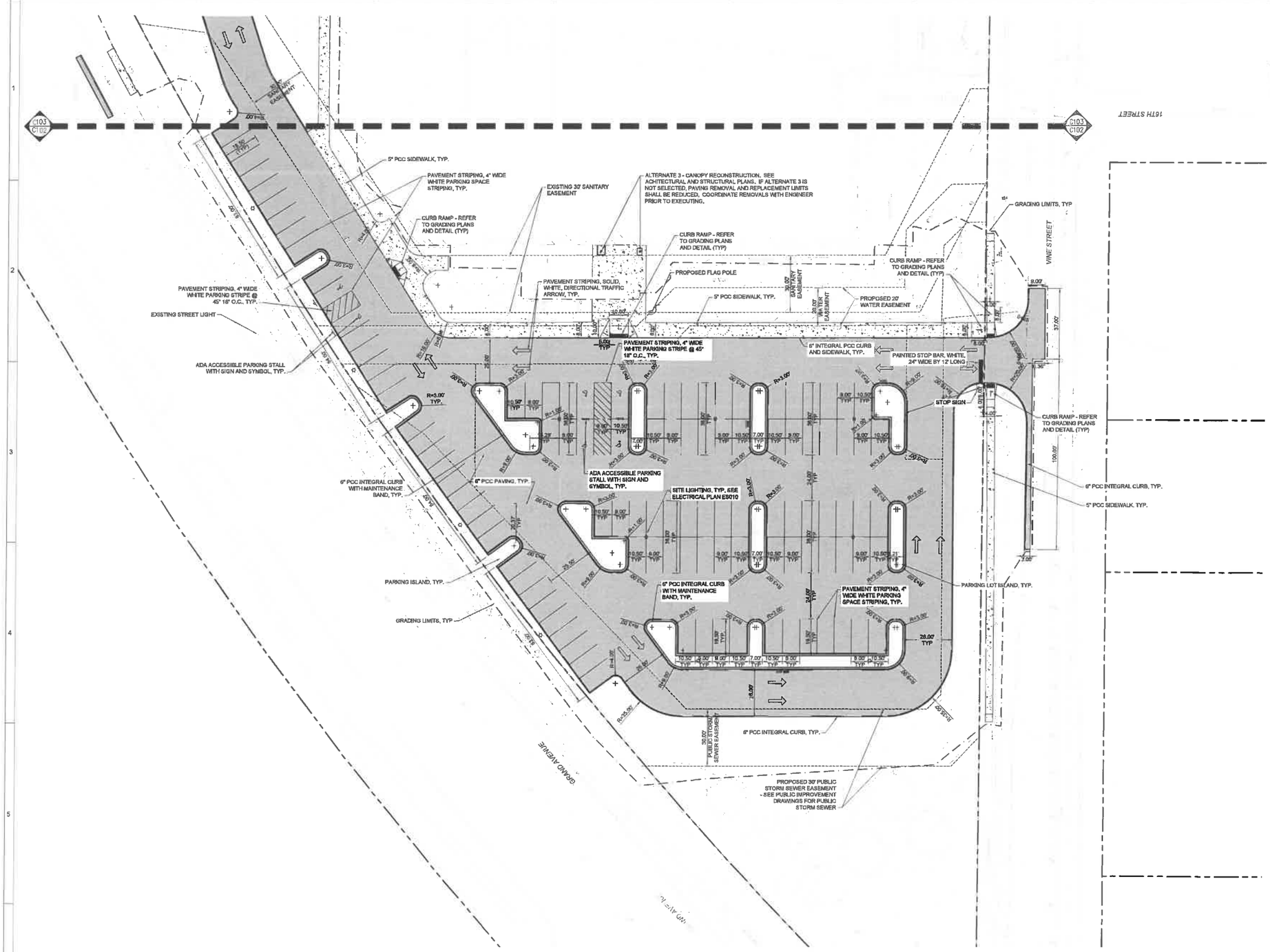
SITE PLAN

C101

NOTES:
1. ALL RADII ARE SHOWN TO BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURBS WITH MAINTENANCE BANDS ARE LABELED TO BACK OF BAND.

LEGEND:

- 6" P.C.C. PAVING
- 5" P.C.C. SIDEWALK



ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 100.03. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.

NORTH

0 10 20 40
SCALE IN FEET

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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1501 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-22	ADDENDUM #1
ADD	2	2022-01-06	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: EER
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4203069
FIELD BOOK: --
CLIENT NO: MAM-00975-2039

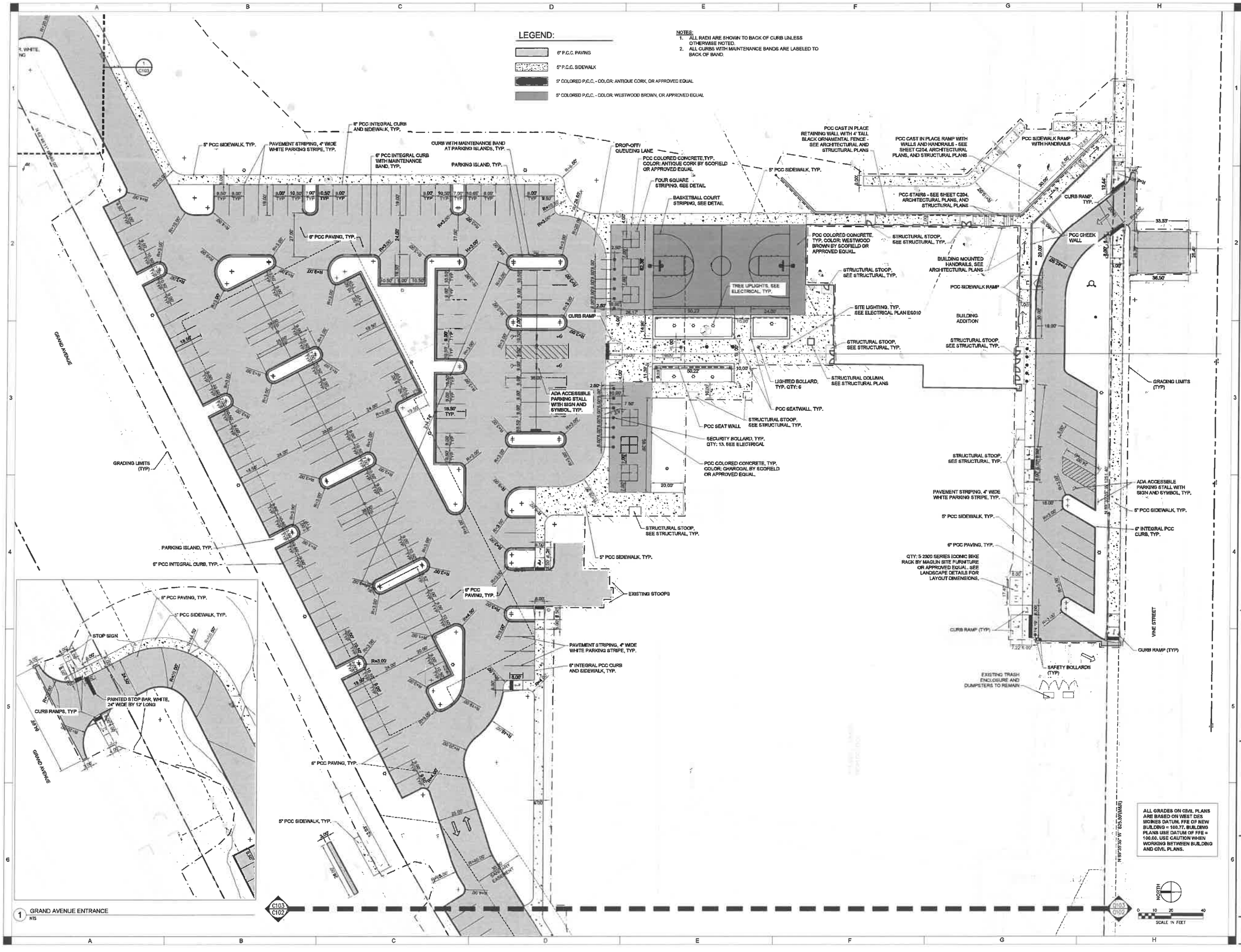
SITE ENLARGEMENT PLAN

C102

LEGEND:

- 6" P.C.C. PAVING
- 5" P.C.C. SIDEWALK
- 5" COLORED P.C.C. - COLOR: ANTIQUE CORK, OR APPROVED EQUAL
- 5" COLORED P.C.C. - COLOR: WESTWOOD BROWN, OR APPROVED EQUAL

NOTES:
1. ALL RADII ARE SHOWN TO BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURBS WITH MAINTENANCE BANDS ARE LABELED TO BACK OF BAND.



1 GRAND AVENUE ENTRANCE
NTS

ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 100.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.

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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

NO	DATE	DESCRIPTION
1	2021-12-06	ADDENDUM #1
2	2022-2-04	ADDENDUM #2
3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: EDR
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 1253006
FIELD BOOK: --
CLIENT NO: MAHA-00475-2020

SITE ENLARGEMENT PLAN

C103

ISOMETRIC VIEW
DO NOT USE ON ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS

ELEVATION VIEW
PROFILE VIEW OF INSTALLED FILTER SACK

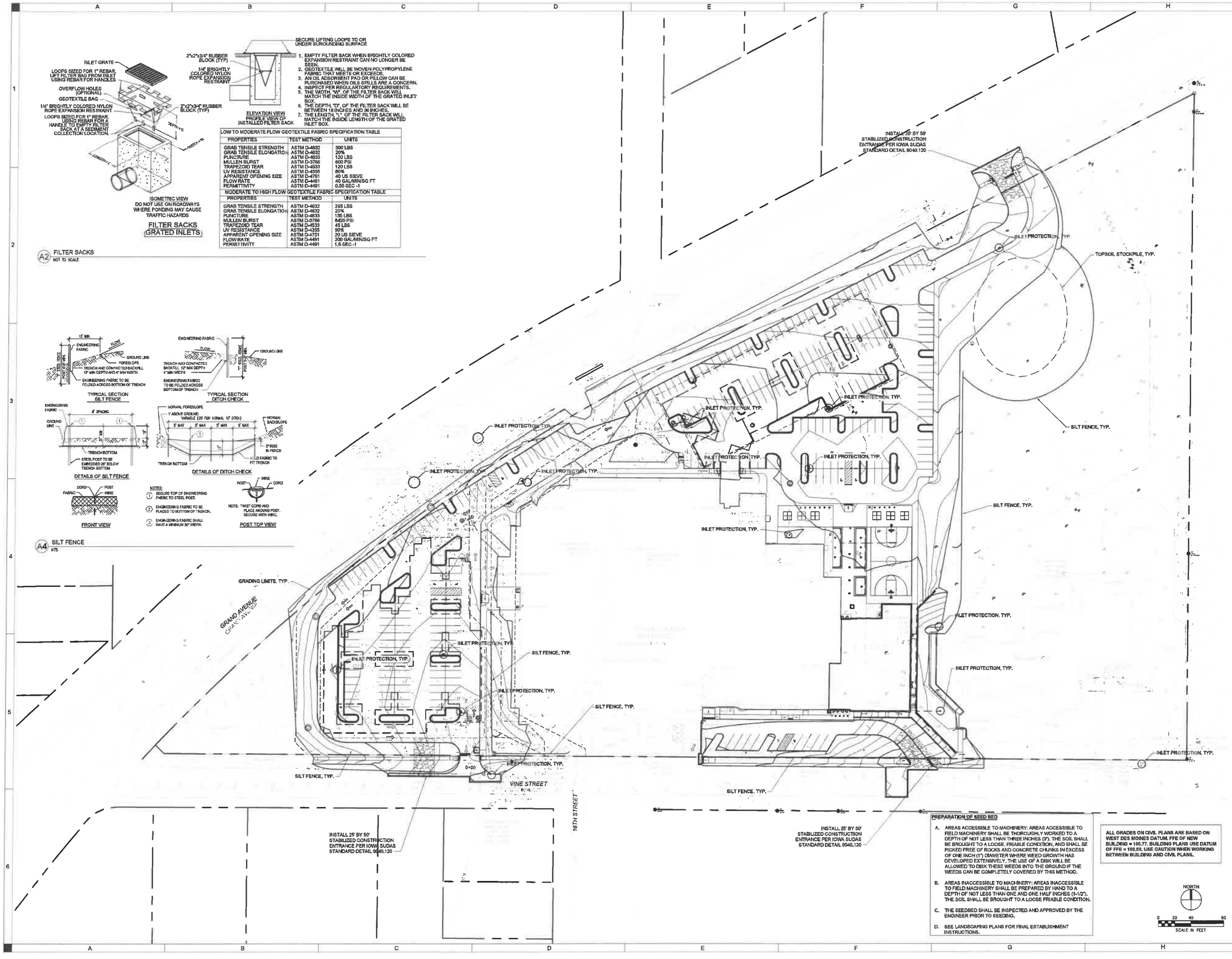
1. EMPTY FILTER SACK WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE WILL BE WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS.
3. AN OIL ADSORBENT PAD OR PILLOW CAN BE PURCHASED WHEN OILS SPILLS ARE A CONCERN.
4. INSPECT PER REGULARTORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK WILL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK WILL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK WILL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	600 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	8420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

A2 FILTER SACKS
NOT TO SCALE

A4 SILT FENCE
NTS



PREPARATION OF SEED BED

A. AREAS ACCESSIBLE TO MACHINERY: AREAS ACCESSIBLE TO FIELD MACHINERY SHALL BE THOROUGHLY WORKED TO A DEPTH OF NOT LESS THAN THREE INCHES (3"). THE SOIL SHALL BE BROUGHT TO A LOOSE, FRIABLE CONDITION, AND SHALL BE PICKED FREE OF ROCKS AND CONCRETE CHUNKS IN EXCESS OF ONE INCH (1") DIAMETER WHERE WEED GROWTH HAS DEVELOPED EXTENSIVELY. THE USE OF A DISK WILL BE ALLOWED TO DISK THESE WEEDS INTO THE GROUND IF THE WEEDS CAN BE COMPLETELY COVERED BY THIS METHOD.

B. AREAS INACCESSIBLE TO MACHINERY: AREAS INACCESSIBLE TO FIELD MACHINERY SHALL BE PREPARED BY HAND TO A DEPTH OF NOT LESS THAN ONE AND ONE HALF INCHES (1-1/2"). THE SOIL SHALL BE BROUGHT TO A LOOSE FRIABLE CONDITION.

C. THE SEEDBED SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO SEEDING.

D. SEE LANDSCAPING PLANS FOR FINAL ESTABLISHMENT INSTRUCTIONS.

ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 100.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.

NORTH

0 20 40 80
SCALE IN FEET

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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

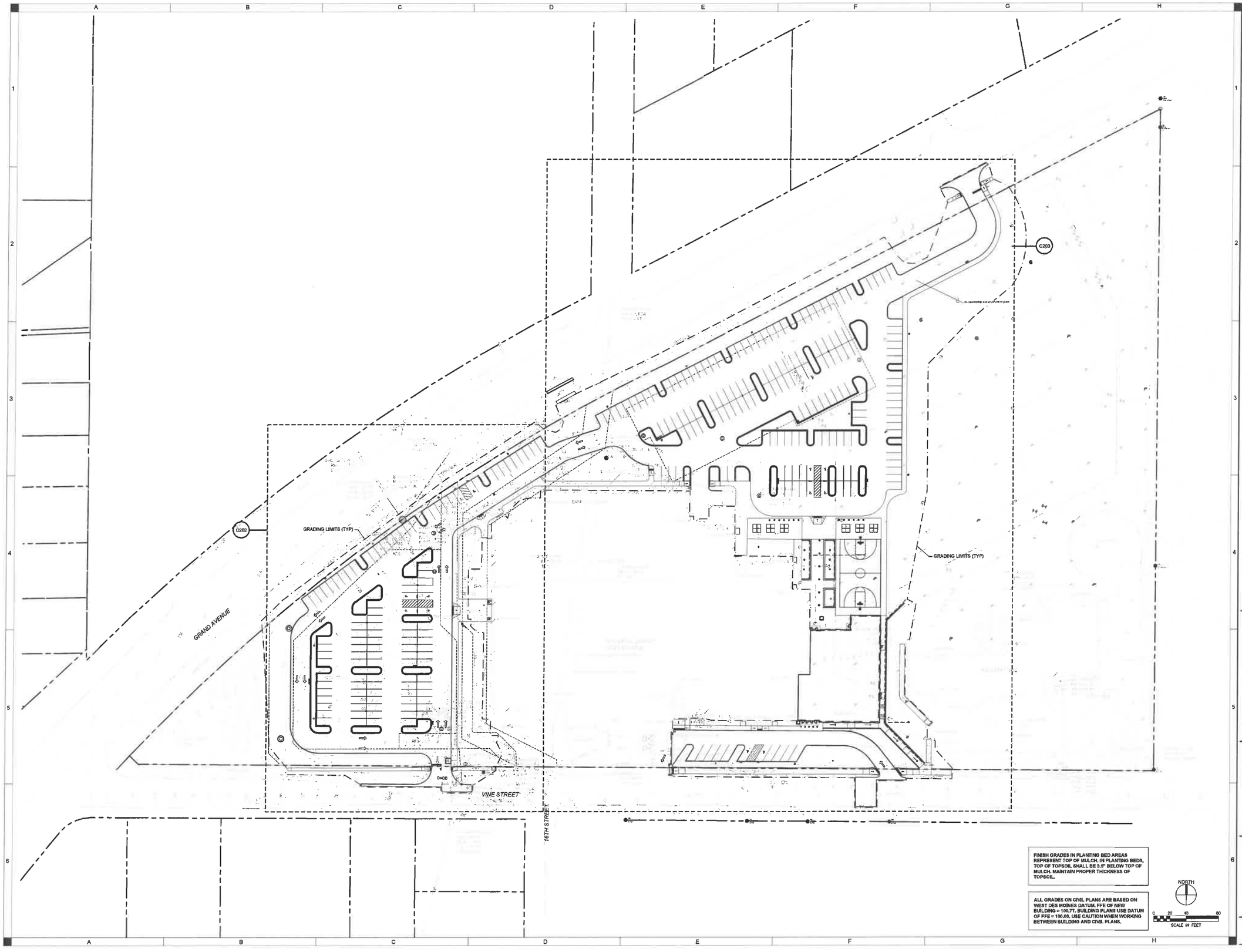
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

ADD 1	2021-12-22	ADDENDUM #1	
ADD 2	2022-01-06	ADDENDUM #2	
PR 3	2022-03-11	PROPOSAL REQUEST #3	

DRAWN: AM
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4202000
FIELD BOOK: --
CLIENT NO: MA4-004075-2000

EROSION CONTROL SITE PLAN

C200



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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-22	ADDENDUM #1
ADD	2	2022-01-05	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: AM
APPROVED: AJI
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 420000
FIELD BOOK: –
CLIENT NO: IIAA46.0075-2020

GRADING PLAN

C201

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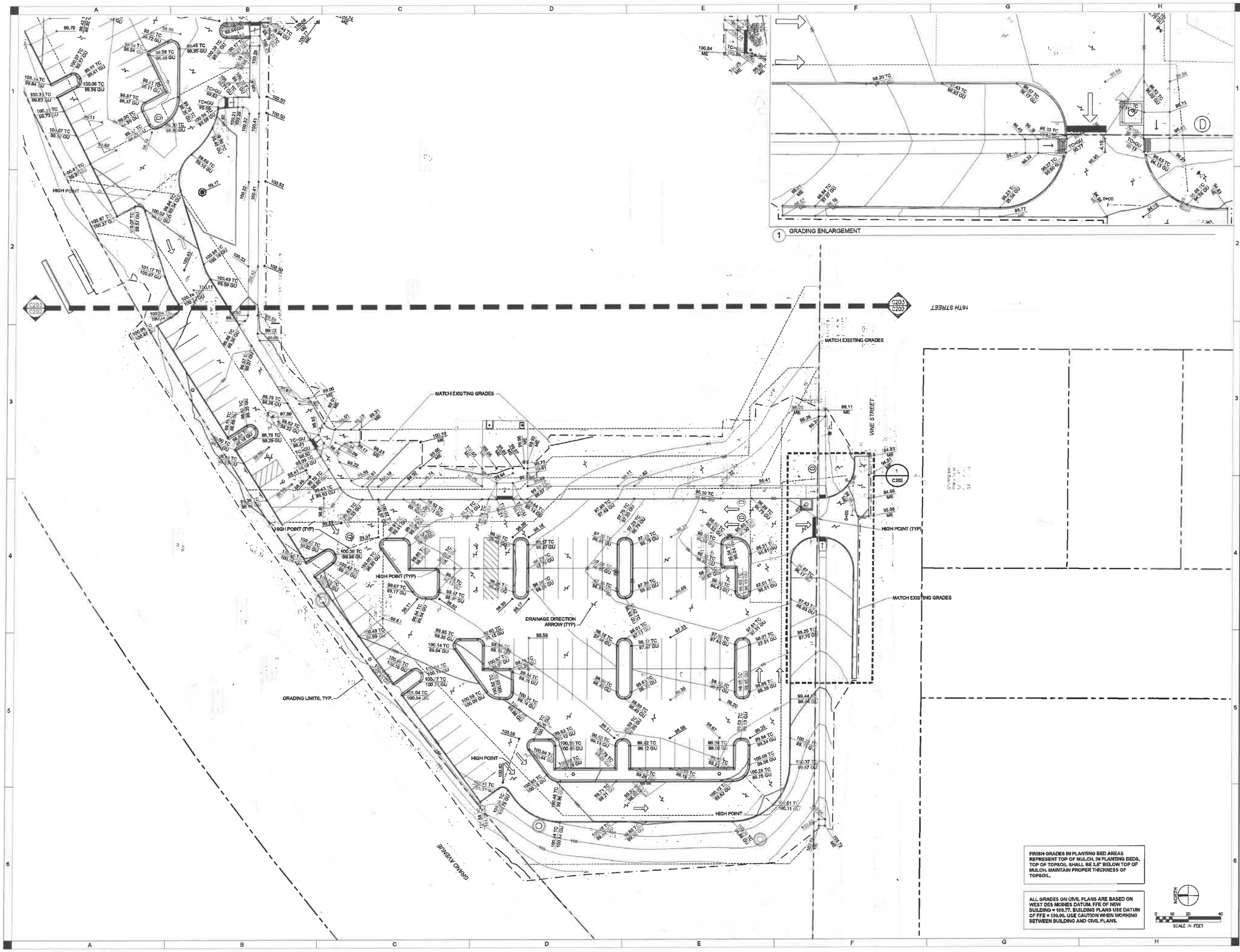
GRADING ENLARGEMENT
16TH STREET
VINE STREET
GRAND AVENUE
MATCH EXISTING GRADES
HIGH POINT (TYP)
HIGH POINT
DRAINAGE DIRECTION ARROW (TYP)
GRADING LIMITS, TYP.
C203
C202
FINISH GRADES IN PLANTING BED AREAS REPRESENT TOP OF MULCH. IN PLANTING BEDS, TOP OF TOPSOIL SHALL BE 3.5" BELOW TOP OF MULCH. MAINTAIN PROPER THICKNESS OF TOPSOIL.
ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 100.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.
NORTH
SCALE IN FEET
SHIVEHATTERY
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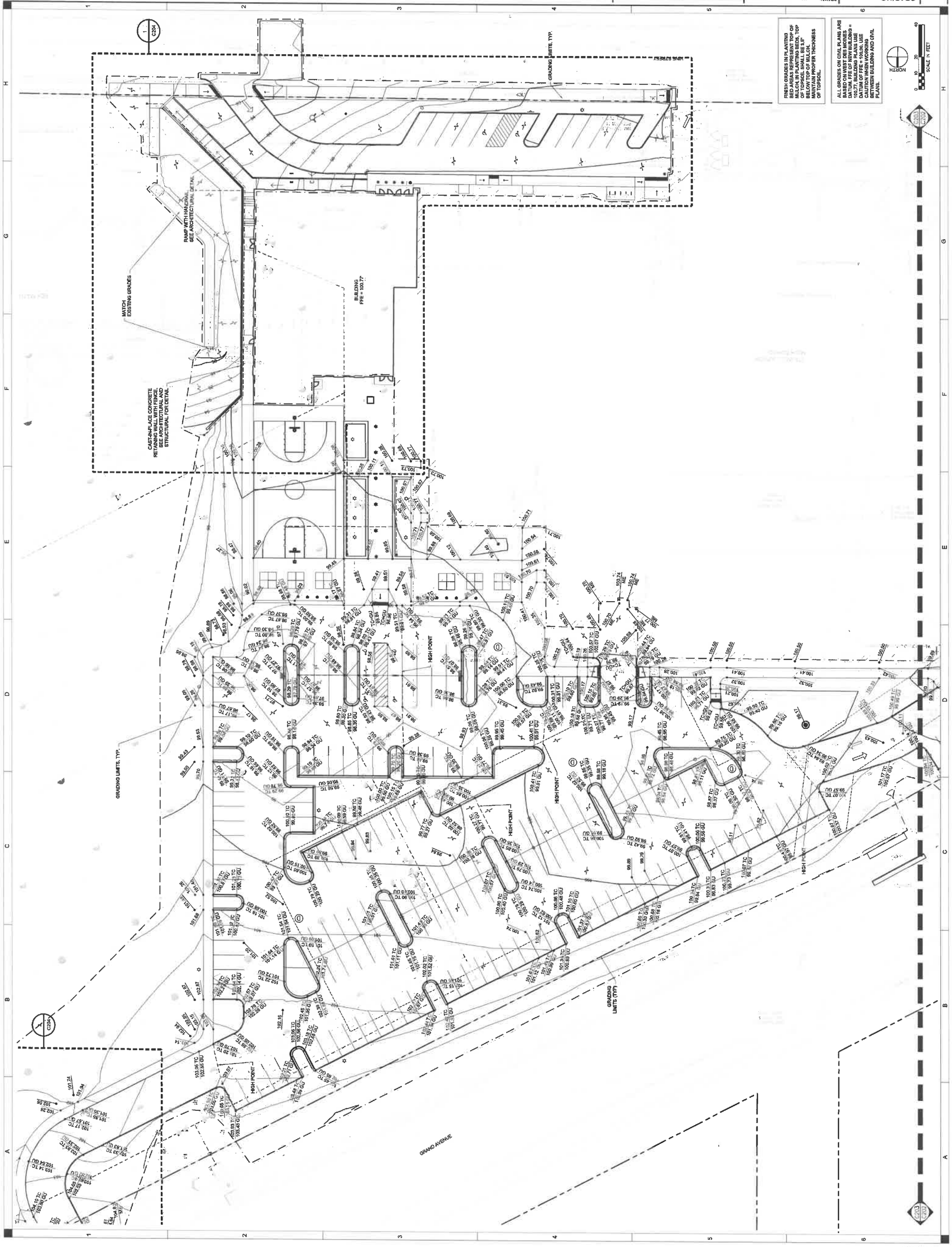
Iowa | Illinois | Indiana
STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265
ADD 1 2021-12-22 ADDENDUM #1
ADD 2 2022-01-05 ADDENDUM #2
PR 3 2022-03-11 PROPOSAL REQUEST #3
DRAWN: AN
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 420000
FIELD BOOK: --
CLIENT NO: MAA-00UPS-2020
GRADING ENLARGEMENT PLAN
C202


GRADING PLAN
ENLARGEMENT PLAN
C203
DRAWN: AM
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4202003
FIELD BOOK: —
CLIENT NO: MAAA0409/5-2020
STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265
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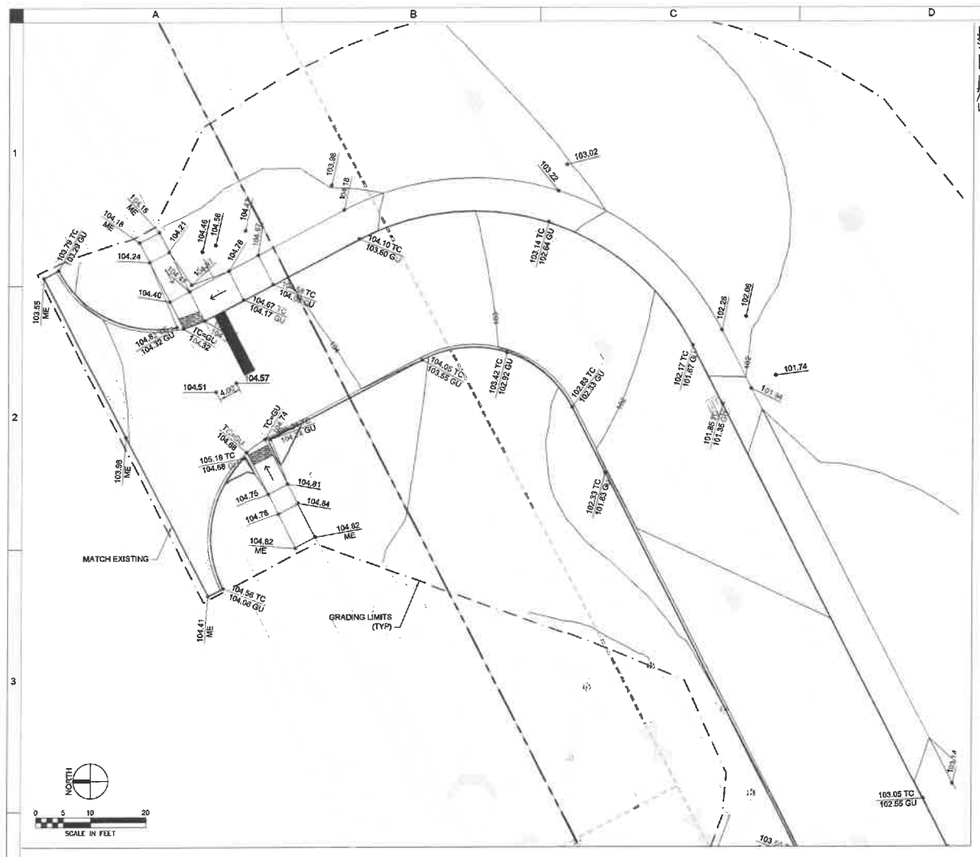
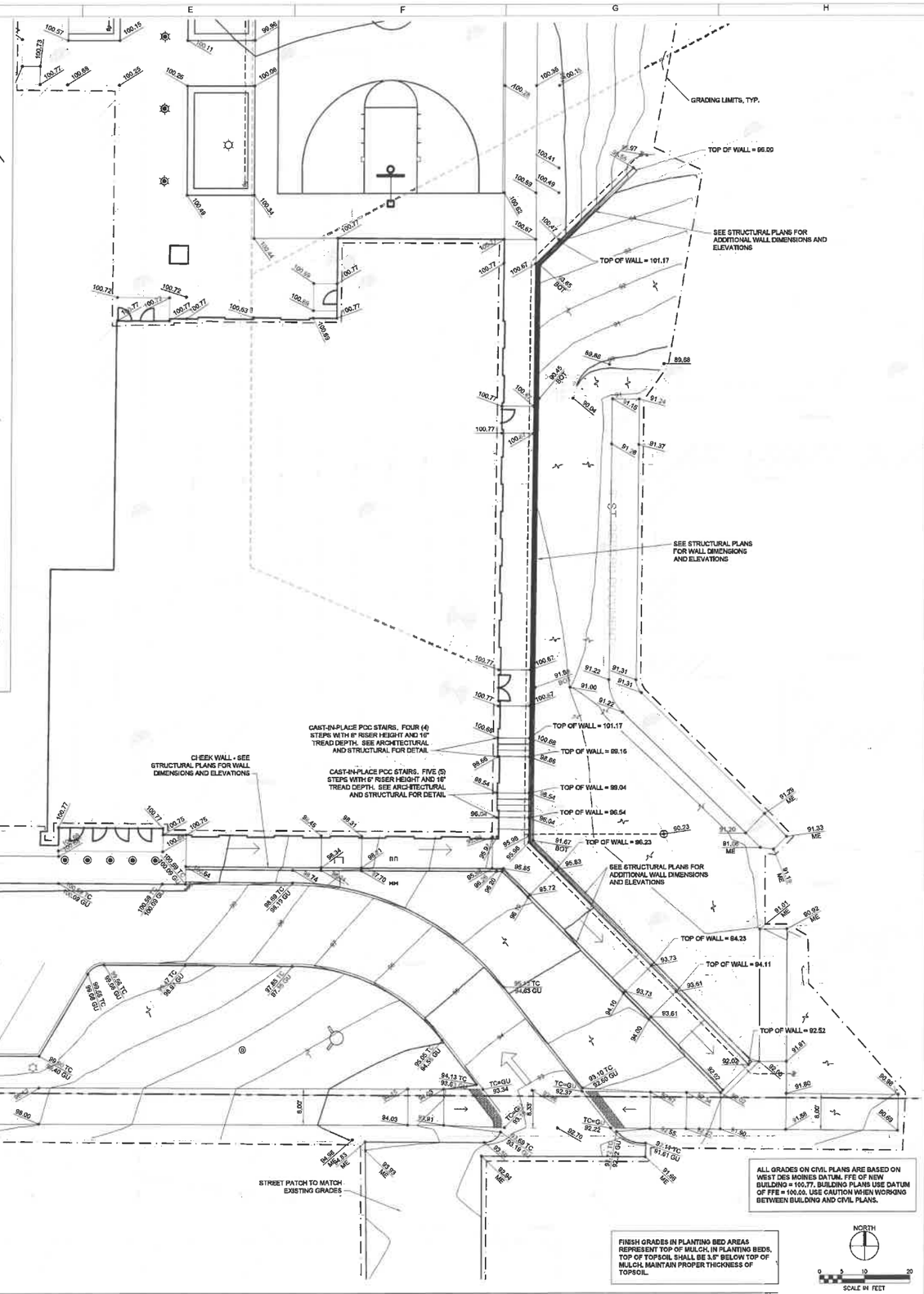
515.223.1014 | www.shive-hattery.com
Iowa | Illinois | Indiana
FINISH GRADES IN IN AREAS BED AREAS REPRESENT TOP OF MULCH, IN PLANTING BEDS, TOP OF PLANTS WILL BE 3" BELOW TOP OF MULCH. MAINTAIN PROPER THICKNESS OF TOPSOIL.
ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM OF FFE = 100.00 EQUAL 103.77, BUILDING PLANS USE DATUM OF FFE = 100.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.
NORTH
SCALE IN FEET
0 10 20 40
GRADING LIMITS, TYP.
RAMP WITH HANDRAIL SEE ARCHITECTURAL DETAIL
MATCH EXISTING GRADES
CAST-IN-PLACE CONCRETE RETAINING WALL WITH FENCE. SEE ARCHITECTURAL AND STRUCTURAL / CIVIL DETAIL
BUILDING FFE = 103.77
HIGH POINT
GRAND AVENUE
C203A
C203B



2 GRADING ENLARGEMENT



1 GRADING ENLARGEMENT

ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 100.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.

FINISH GRADES IN PLANTING BED AREAS REPRESENT TOP OF MULCH. IN PLANTING BEDS, TOP OF TOPSOIL SHALL BE 3.5" BELOW TOP OF MULCH. MAINTAIN PROPER THICKNESS OF TOPSOIL.

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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1801 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-22	ADDENDUM #1
ADD	2	2022-03-04	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: AM
APPROVED: AM
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4220300
FIELD BOOK: –
CLIENT NO: MAA-004875-2020

GRADING ENLARGEMENT PLAN

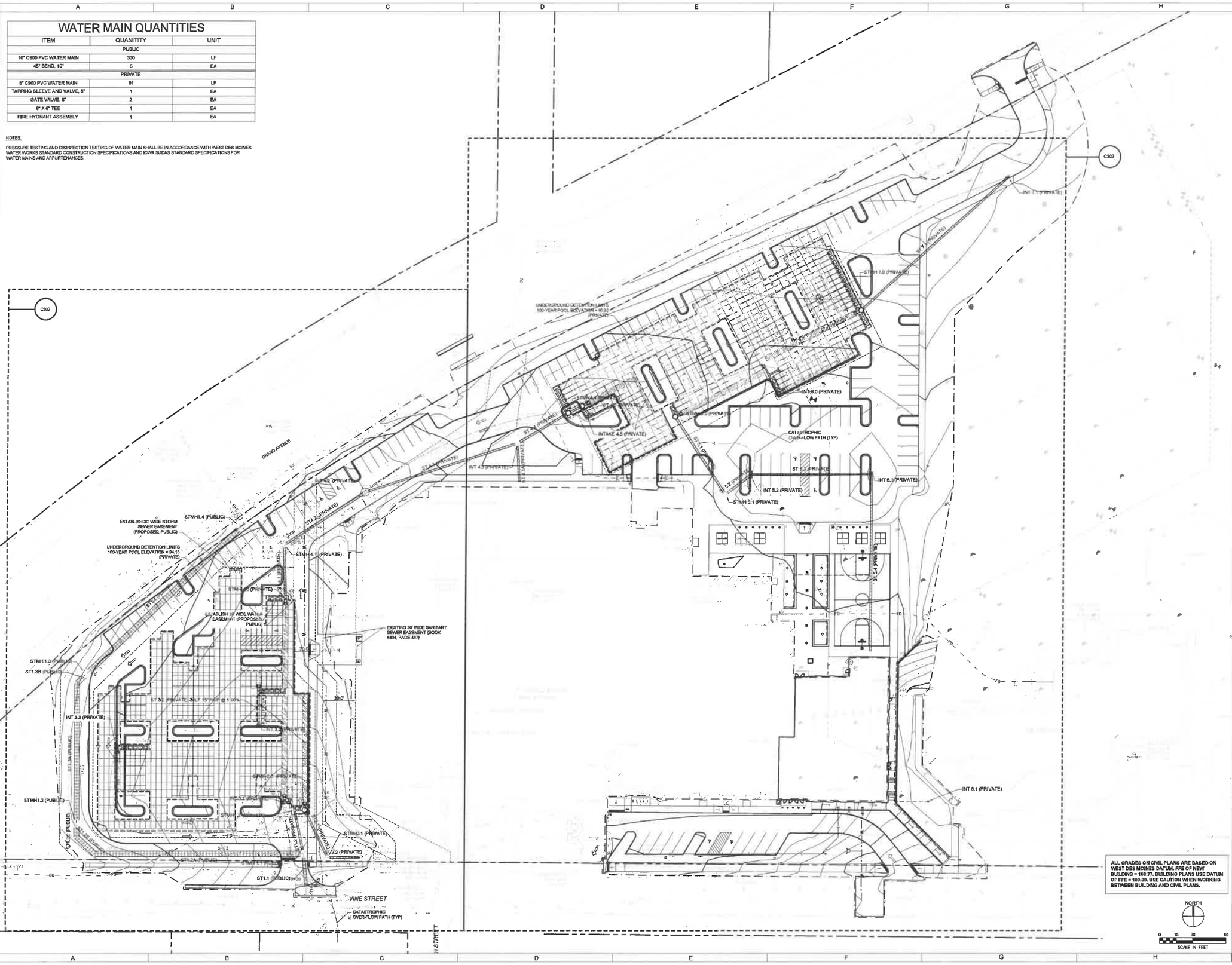
C204

WATER MAIN QUANTITIES

ITEM	QUANITITY	UNIT
PUBLIC		
10" C900 PVC WATER MAIN	330	LF
45° BEND, 10"	5	EA
PRIVATE		
8" C900 PVC WATER MAIN	91	LF
TAPPING SLEEVE AND VALVE, 8"	1	EA
GATE VALVE, 8"	2	EA
8" X 6" TEE	1	EA
FIRE HYDRANT ASSEMBLY	1	EA

NOTES:

PRESSURE TESTING AND DISINFECTION TESTING OF WATER MAIN SHALL BE IN ACCORDANCE WITH WEST DES MOINES WATER WORKS STANDARD CONSTRUCTION SPECIFICATIONS AND IOWA SUDAS STANDARD SPECIFICATIONS FOR WATER MAINS AND APPURTENANCES.



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NORTH

0 15 30 60
SCALE IN FEET

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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

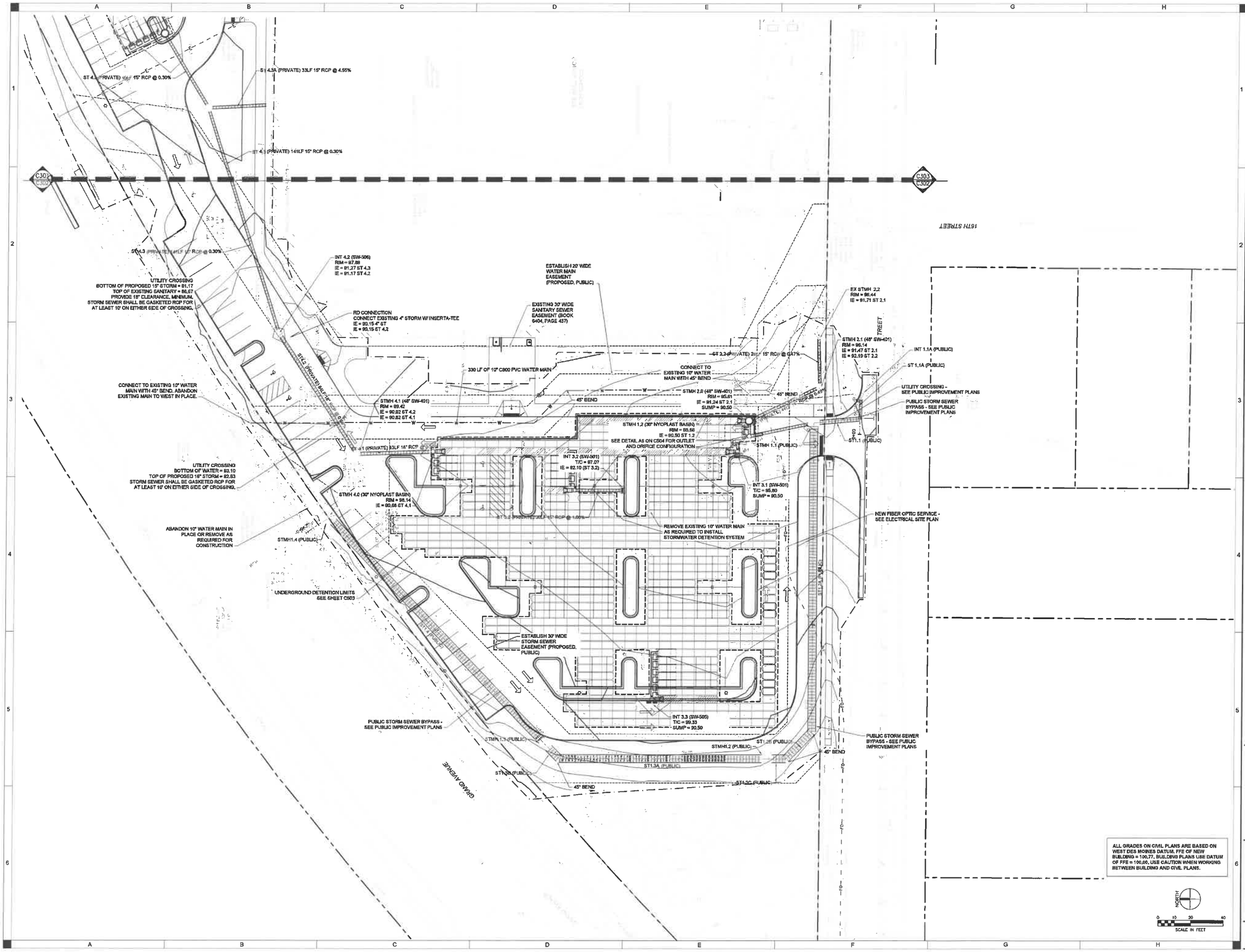
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

PDD	1	2021-12-21	ADDENDUM #1
PDD	2	2022-2-09	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: ARI
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2020-04-27
PROJECT NO: 4203003
FIELD BOOK: –
CLIENT NO: MAAHO/0P3-2019

UTILITY PLAN

C301



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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST. WEST DES MOINES, IA 50265

NO	DATE	DESCRIPTION
1	2021-12-22	ADDENDUM #1
2	2022-1-26	ADDENDUM #2
3	2022-4-11	PROPOSAL REQUEST #3

DRAWN: AM
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-07
PROJECT NO: 420360
FIELD BOOK: –
CLIENT NO: MAA-0405(75-320)

UTILITY ENLARGEMENT PLAN

C302

INT 7.1 (SW-501)
RIM = 101.85
IE = 96.75 ST6.1

ST 7.1 (PRIVATE) 171LF 15" RCP @ 0.5%

GRAND AVENUE

STMH 7.0 (30" NYOPLAST BASIN)
RIM = 100.77
IE = 94.06 ST 7.1
SUMP = 92.97

INT 6.0 (SW-501)
T/C = 99.50
SUMP = 92.97

INT 5.3 (SW-501)
CONNECT PROPOSED ROOF DRAIN
CONNECTION TO CURB INTAKE
T/C = 97.77
IE = 94.94 ST 5.4
IE = 94.84 ST 5.3

ST 5.4 (PRIVATE) 145LF 15" RCP @ 0.5%

ST 5.3 (PRIVATE) 161LF 15" RCP @ 0.50%

INT 5.2 (SW-505)
T/C = 98.59
IE = 94.30 ST 5.3
IE = 94.20 ST 5.2

ST 5.2 (PRIVATE) 71LF 18" RCP @ 0.50%

UTILITY CROSSING
BOTTOM OF ELECTRIC = 97.28
TOP OF STORM = 95.51

UNDERGROUND DETENTION UNITS
SEE SHEET C503

STMH 5.0 (30" NYOPLAST BASIN)
RIM = 99.56
IE = 93.53 ST 5.1
SUMP = 92.87

INT 4.5 (SW-505)
T/C = 96.63
IE = 93.98 ST 4.5

ST 4.5 (PRIVATE) 55LF 15" RCP @ 1.0%

STMH 4.4 (30" NYOPLAST BASIN)
RIM = 99.25
IE = 91.96 ST 4.3
SEE DETAIL D6 ON C504 FOR OUTLET
AND ORIFICE CONFIGURATION

ST 4.4 (PRIVATE) 49LF 15" RCP @ 0.30%

UTILITY CROSSING -
TOP OF PROPOSED 18" STORM = 92.84
BOTTOM OF EXISTING WATER = 84.64
PROVIDE 18" CLEARANCE, MINIMUM.
STORM SEWER SHALL BE GASKETED RCP FOR
AT LEAST 10' ON EITHER SIDE OF CROSSING.

ADJUST EXISTING SANITARY SEWER
MANHOLE TO FINISHED GRADE USING
THREE PIECE MANHOLE CASTING
ELEVATION = 99.86
RECYCLE EXISTING CASTING TO PUBLIC
SERVICES - CONTACT MIKE COUGHLON:
515-232-3480

NEW FIBER OPTIC SERVICE -
SEE SHEET CD03 AND
ELECTRICAL SITE PLAN

CONNECT TO ST 5.4 WITH
INSERTA-TEE OR APPROVED EQUAL
IE (ST) = 95.85
IE (ST 5.4) = 95.32

39 LF 6" DUAL WALL
PERFORATED HDPE AT 3.92%

17 LF 6" DUAL WALL
PERFORATED HDPE
AT 0.5%

62 LF 6" DUAL WALL
PERFORATED HDPE

CLEANOUT
RIM = 99.50
IE = 97.50

6" CROSS ADAPTER
IE = 97.41

17 LF 6" DUAL WALL
PERFORATED HDPE
AT 0.5%

31 LF 6" DUAL WALL
PERFORATED HDPE AT 0.5%

27 LF 6" DUAL WALL
PERFORATED HDPE AT 0.5%

6" AREA INTAKE
WITH FLAT GRATE
RIM = 99.72
IE = 97.85

6" x 6" x 6" TEE
IE = 97.56

CLEANOUT
RIM = 100.33
IE = 97.73

CLEANOUT
RIM = 100.23
IE = 97.708

STMH 5.1 (60" SW-401)
RIM = 99.22
IE = 94.05 ST 5.2
IE = 93.95 ST 5.1
IE (EXISTING - S) = 95.88
IE (EXISTING - SW) = 95.96

CONNECT EXISTING 10"
ROOF DRAIN TO 30"
NYOPLAST BASIN WITH 18"
FLAT GRATE AND REDUCER
RIM = 99.67
IE = 96.30

RECONNECT EXISTING SW
AND S PIPES TO PROPOSED
STRUCTURE

CONNECT TO EXISTING - SEE ELECTRICAL

NEW ELECTRICAL SERVICE -
SEE ELECTRICAL SITE PLAN

UTILITY CROSSING
BOTTOM ELECTRIC = 96.61
TOP OF STORM = 93.37

INT 4.3 (48" SW-401 WITH FLAT
SLOTTED GRATE - SUDAS TYPE 4B)
RIM = 99.19
IE = 91.80 ST 4.4
IE = 91.70 ST 4.3
IE = 93.44 ST 4.3A

ST 4.3A (PRIVATE) 33LF 15" RCP @ 4.55%

STMH 4.3A
RECONNECT EXISTING ROOF
DRAIN WITH CONCRETE COLLAR -
VERIFY INVERT ELEVATION PRIOR
TO BEGINNING CONSTRUCTION
IE = 94.13 ST 4.3A

ST 4.3 (PRIVATE) 141LF 15" RCP @ 0.30%

C303
C302

INT 8.1 (12" NYLOPLAST BASIN
WITH DOME GRATE)
FIELD LOCATE EXISTING TILE
AND CONNECT DRAIN BASIN.
RIM = 90.24
INVERT = 88.58 (VERIFY)

CLEANOUT
RIM = 91.80
IE = 88.31

9 LF 6" DUAL WALL
PERFORATED HDPE

31 LF 6" DUAL WALL
PERFORATED HDPE
AT 0.5%

45° BEND
IE = 88.27

CLEANOUT
RIM = 98.08
IE = 88.70

33 LF 6" DUAL WALL
PERFORATED HDPE
AT 0.5%

129 LF 6" DUAL
WALL PERFORATED
HDPE @ 0.5%

72 LF 6" DUAL WALL
PERFORATED HDPE

6" 45° BEND
IE = 88.53

6" x 6" x 6" TEE
IE = 87.90

6" 45° BEND
IE = 87.91

PROTECT PUBLIC
WATER MAIN

RCBO
ROOF DRAIN CONNECTION
IE = 88.77
REFER TO PLUMBING FOR
CONTINUATION

4" DOMESTIC SERVICE
CONNECTION - SEE
PLUMBING PLANS

CONNECT TO EXISTING
WATER MAIN WITH
TAPPING SLEEVE AND
VALVE, CONTRACTOR TO
VERIFY LOCATION OF
EXISTING WATER MAIN

6" FIRE PROTECTION
SERVICE CONNECTION
- SEE PLUMBING PLANS

GATE VALVES
(TYP)

8 X 6 TEE

91 LF 6" C900 PVC
WATER
SERVICE LINE
(PRIVATE)

REMOTE FIRE DEPARTMENT
CONNECTION

SANITARY SEWER
CONNECTION IE = 86.77
REFER TO PLUMBING
FOR CONTINUATION

FIRE HYDRANT ASSEMBLY

45° BEND
IE = 86.27

45° BEND
IE = 95.88

SANITARY CLEANOUT

SAN 1.1
221 LF 8" SAN @ 1.9%

EX SAN MH 1.0 (48" SW-301)
RIM = 100.60
IE = 92.85 (PROPOSED)
IE = 92.51 (EXISTING)

CONTRACTOR TO VERIFY EXISTING
INVERT PRIOR TO ALL SANITARY
INSTALLATION

ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 100.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.

NORTH

0 10 20 40
SCALE IN FEET

C303
C302

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.1904 | www.shivehattery.com
Iowa | Illinois | Indiana

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

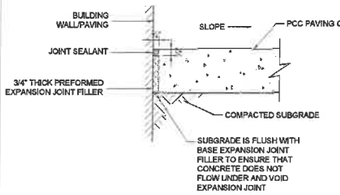
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

NO	DATE	DESCRIPTION
1	2021-12-06	ADDENDUM #1
2	2022-01-21	ADDENDUM #2
3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: ANI
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 6203900
FIELD BOOK: –
CLIENT NO: MAMA04075-2020

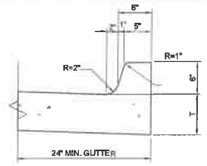
UTILITY ENLARGEMENT PLAN

C303



NOTE:
ALL PREFORMED JOINT MATERIAL SHALL BE INSTALLED PERPENDICULAR TO THE PAVEMENT SURFACE AND CARE SHALL BE EXERCISED THROUGHOUT THE CONSTRUCTION OF THE PAVEMENT TO ENSURE THAT SUCH JOINT MATERIAL REMAINS IN PROPER POSITION UPON COMPLETION OF PAVING OPERATION.

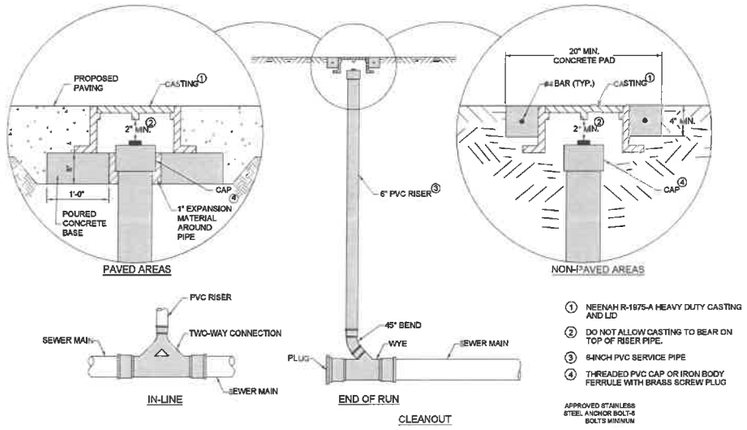
A1 ISOLATION JOINT
NOT TO SCALE



T = THICKNESS OF PAVEMENT

NOTE: CURB MAY BE POURED INTEGRALLY WITH PAVEMENT IN PLACE OF CURB AND GUTTER SECTION.

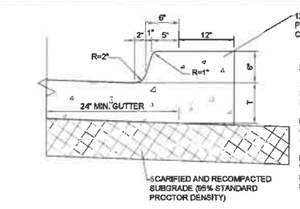
C1 PCC INTEGRAL CURB
NOT TO SCALE



1. NEENAH R-1975-A HEAVY DUTY CASTING AND LID
2. DO NOT ALLOW CASTING TO BEAR ON TOP OF RISER PIPE.
3. 6-INCH PVC SERVICE PIPE
4. THREADED PVC CAP OR IRON BODY FERRULE WITH BRASS SCREW PLUG

APPROVED STAINLESS STEEL ANCHOR BOLT-6 BOLTS MINIMUM

F4 SANITARY SEWER CLEANOUT
NOT TO SCALE



12" WIDE PCC MAINTENANCE BAND - PROVIDE 1" OF FALL TOWARDS CURB

NOTES:

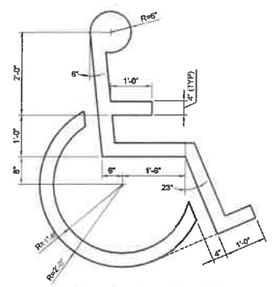
ALIGN WITH CURB SAWCUTS, AND SUBDIVIDE INTERMEDIATE CUTS TO CREATE EQUAL PANELS BETWEEN, NO FURTHER THAN 5' APART.

PLACE AND SEAL 1/2" EXPANSION JOINT AT 60-FOOT INTERVALS ALONG PCC BAND. SEAL JOINT BETWEEN PCC BAND AND BACK OF CURB.

MAINTENANCE BAND MAY BE POURED INTEGRALLY WITH THE CURB IN PLACE OF CURB AND GUTTER SECTION - REFER TO INTEGRAL PCC CURB AND SIDEWALK DETAIL.

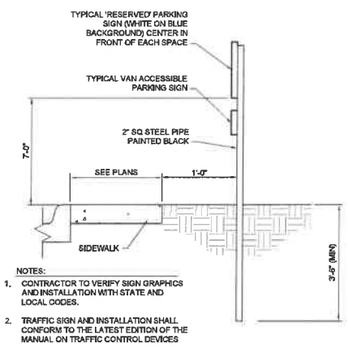
T = THICKNESS OF PAVEMENT

A3 PCC INTEGRAL CURB WITH MAINTENANCE BAND
NOT TO SCALE



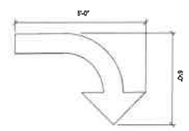
NOTE: SYMBOL TO BE CENTERED IN PARKING SPACE AND ORIENTED AS ILLUSTRATED ON PLANS.

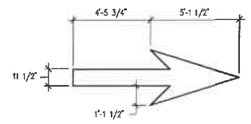
C4 HANDICAPPED PARKING SYMBOL
NOT TO SCALE



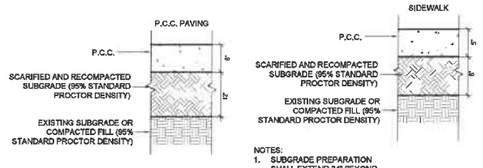
NOTES:
1. CONTRACTOR TO VERIFY SIGN GRAPHICS AND INSTALLATION WITH STATE AND LOCAL CODES.
2. TRAFFIC SIGN AND INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON TRAFFIC CONTROL DEVICES

E4 R7-8 AND R7-8 MOD 'RESERVED' PARKING SIGN
NOT TO SCALE





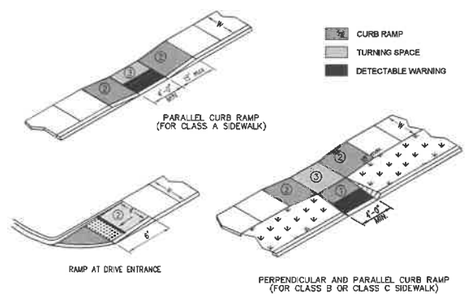
G4 ARROW PAVEMENT MARKINGS
NTS



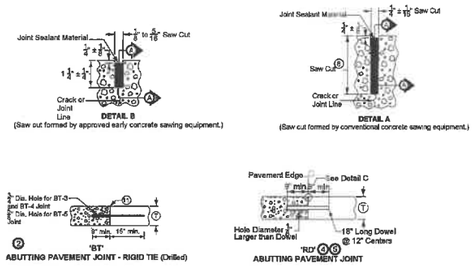
NOTES:
1. SUBGRADE PREPARATION SHALL EXTEND 24" BEYOND EDGE OF PAVING.

A4 PAVEMENT CROSS SECTIONS
NOT TO SCALE

1. PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%. MATCH PEDESTRIAN STREET CROSSING CROSS SLOPE AT BACK OF CURB. AT MID-BLOCK CROSSINGS, CROSS SLOPE MAY EXCEED 2.0% TO MATCH ROADWAY GRADE.
2. PARALLEL CURB RAMP: TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%. THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMPS SHORTER THAN 15 FEET.
3. TURNING SPACE: TARGET SLOPE OF 1.5%, WITH A MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTIONS OF 2.0%. AT MID-BLOCK CROSSINGS, CROSS SLOPE OF LANDING MAY EXCEED 2.0% TO MATCH ROADWAY GRADE. MINIMUM 4 FEET BY 4 FEET.
4. FLARE (10:1 MAX) REQUIRED IF RAMP IS CONTIGUOUS WITH SIDEWALK.



A6 SIDEWALK RAMPS
NOT TO SCALE

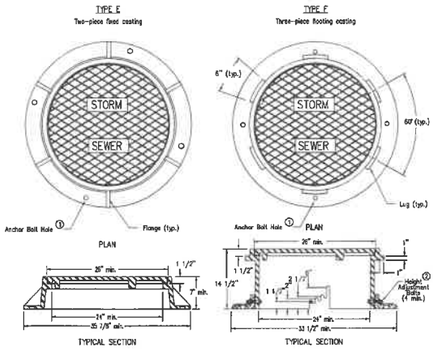


NOTES:
1. CONTRACTOR TO SUBMIT JOINTING PLAN TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
2. TIE BARS, (JOINTS L, BT, RD) TO BE INSTALLED ON JOINTS PARALLEL TO TRAFFIC FLOW.
3. ALL JOINTS TO BE SEALED

	Joint	Bars	Bar Length and Spacing
< 8"	'BT-5'	#4	24" Long at 30" Centers
> 8"	'BT-3'	#5	24" Long at 30" Centers
	'BT-4'		24" Long at 15" Centers

	Joint	Bars	Bar Length and Spacing
< 8"	'L-1'	#4	36" Long at 30" Centers
> 8"	'L-2'	#5	36" Long at 30" Centers
	'L-3'		36" Long at 15" Centers

C6 JOINT DETAILS
NOT TO SCALE



FRAME NOTES:
SIZE AND SPACING OF LUGS AND FLANGES MAY VARY.

COVER NOTES:
ROUGHNESS PATTERN AND TEXT STYLES MAY VARY.
MINIMUM ONE CONCEALED PICKHOLE.

1. IF FRAME IS REQUIRED TO BE ATTACHED TO STRUCTURE, DRILL FOUR 1/8" DIAMETER HOLES OR SLOTS, EQUALLY SPACED AROUND FRAME.
2. REMOVE BOLTS UPON COMPLETION OF PAVING

E6 CASTINGS FOR STORM SEWER MANHOLES (SW-602)
NTS

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
8170 Mitchum Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.224.1911 | www.shivehattery.com
Iowa | Illinois | Indiana

ADD 1	2021-12-22	ADDENDUM #1	
ADD 2	2022-01-06	ADDENDUM #2	
PR 3	2022-03-11	PROPOSAL REQUEST #3	

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

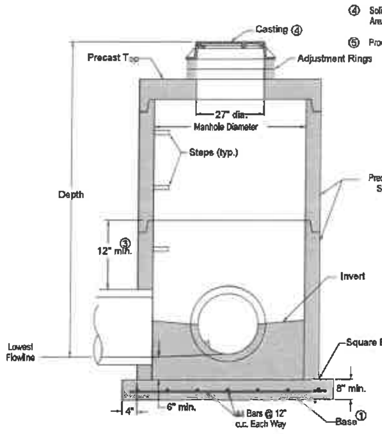
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

DRAWN: AM
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-02-27
PROJECT NO: 6203060
FIELD BOOK: –
CLIENT NO: MAM-204975-2020

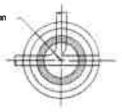
CONSTRUCTION DETAILS

C501

A2 CIRCULAR STORM SEWER MANHOLE, (SW-401)
NTS



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.

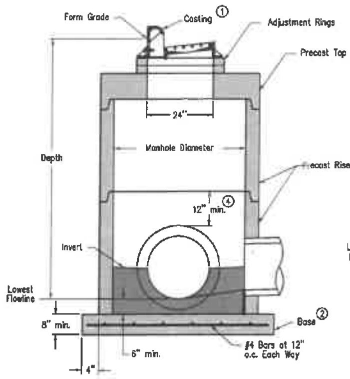
③ 12 inch minimum riser height above all pipe openings, or less as required and approved by engineer.

④ Solid Lid - SW-602 Casting
Area Intake - SW-604 Casting

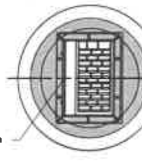
⑤ Provide sump below lowest pipe invert where specified on plans.

Manhole Diameter (inches)	Maximum Pipe Diameter (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

C2 CIRCULAR SINGLE GRATE INTAKE, (SW-502)



TYPICAL SECTION



PLAN

Refer to SW-514 for boxout details.

① SW-603 Type R unless Type Q is specified in the contract documents.

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

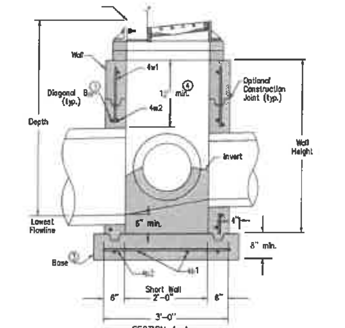
③ For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.

④ 12 inch minimum riser height above all pipes.

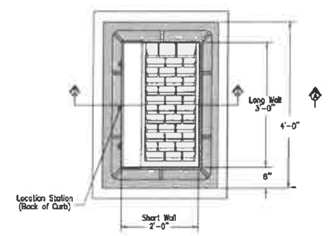
Manhole Diameter (inches)	Maximum Pipe Diameter (inches) for 2 Pipes ⑤	
	at 180° Separation	at 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

SUDAS | Iowa Department of Transportation | SW-502
FIGURE 6010.502 STANDARD ROAD PLAN
REVISIONS: Added reference to SW-514.
CIRCULAR SINGLE GRATE INTAKE

F2 SINGLE CURB INTAKE, (SW-501)
NOT TO SCALE



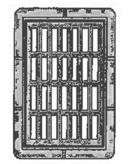
SECTION A–A



PLAN

②
③
④

TYPE Q ①
Driveway Grate
(Minimum open area 370 in)

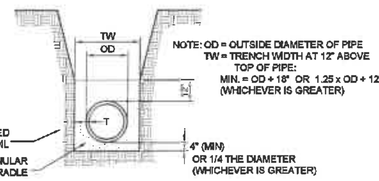


PLAN

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"

C3 FLEXIBLE PIPE BEDDING
NTS



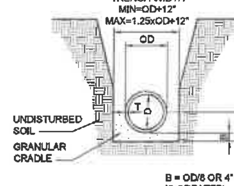
NOTE: OD = OUTSIDE DIAMETER OF PIPE
TW = TRENCH WIDTH AT 12" ABOVE TOP OF PIPE:
MIN. = OD + 18" OR 1.25 x OD + 12" (WHICHEVER IS GREATER)

4" (MIN) OR 1/4 THE DIAMETER (WHICHEVER IS GREATER)

SUBGRADE SHOULD BE EXCAVATED OR OVER EXCAVATED, IF NECESSARY, SO A UNIFORM FOUNDATION FREE OF PROTRUDING ROCKS MAY BE PROVIDED.

D3 RIGID PIPE EXCAVATION & BEDDING
NTS

TRENCH WIDTH
MIN=OD+12"
MAX=1.25xOD+12"



B = OD/8 OR 4" (WHICHEVER IS GREATER)

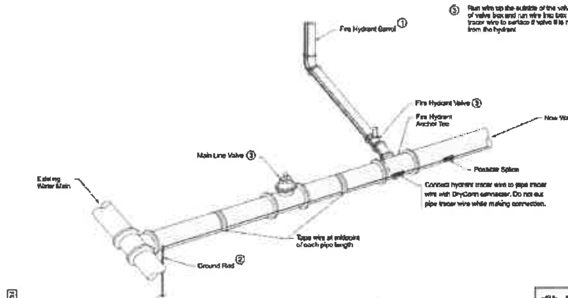
NOTE: SUBGRADE SHOULD BE EXCAVATED OR OVER EXCAVATED, IF NECESSARY, SO A UNIFORM FOUNDATION FREE OF PROTRUDING ROCKS MAY BE PROVIDED.

F3 TRACER SYSTEM
NOT TO SCALE

① Extend tracer wire up fire hydrant barrel to internal terminals of tracer wire station and back down. Refer to WM-201 for details of fire hydrant assembly.

② Clamp tracer wire to ground rod at system termination points.

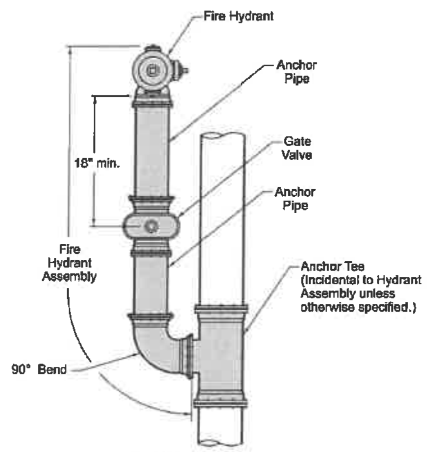
③ Run wire up the outside of the valve box. Notch the top of valve box and run wire into box below lid. Bring tracer wire to surface if valve is more than 25 feet from the hydrant.



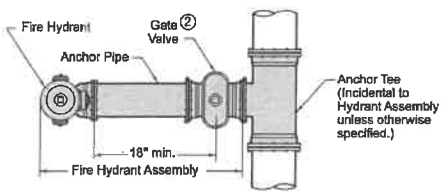
TYPICAL INSTALLATION

WM-102
TRACER SYSTEM

A6 FIRE HYDRANT ASSEMBLY
NTS

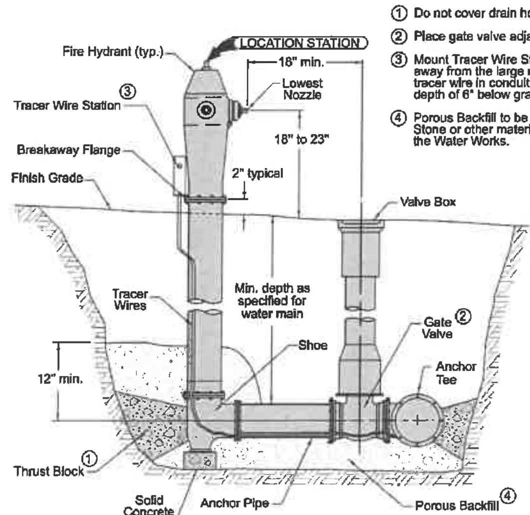


ALTERNATE PLAN
(USE ONLY WHERE SPECIFIED)



TYPICAL PLAN

FIGURE 5020.201 SHEET 1 OF 1



TYPICAL SECTION

① Do not cover drain holes or tracer wire.

② Place gate valve adjacent to tee.

③ Mount Tracer Wire Station to the side away from the large nozzle. Protect tracer wire in conduit to a minimum depth of 6" below grade.

④ Porous Backfill to be 1" Clean Crushed Stone or other material as approved by the Water Works.

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

Long Hydrant Assemblies
- Hydrant assemblies longer than twenty feet require a second valve located within two feet of the hydrant.
- When a second valve is used, ductile iron or PVC pipe may be used between the two valves.

WEST DES MOINES WATER WORKS
1505 Railroad Avenue
West Des Moines, Iowa 50265
515-222-3510 Office
515-222-3465 Plant

REVISION 3 | 01-01-20
WM-201
SHEET 1 of 1
REVISIONS: Modifications for West Des Moines Water Works System.
FIRE HYDRANT ASSEMBLY

E6 THRUST BLOCKS
NTS

Extend thrust blocks to undisturbed soil. Excavation into trench wall may be necessary.

Form vertical surfaces of poured concrete thrust blocks except on bearing surface.

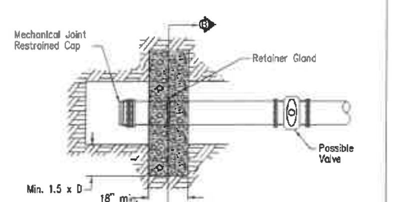
Encase all fittings in polyethylene wrap. Do not allow concrete to directly contact joints or fitting bolts.

Diameter of Pipe, D (inches)	MINIMUM BEARING SURFACE (sf)				
	Bends				Tees and Dead Ends
	11¼°	22½°	45°	90°	
4	1	1	2	4	3
6	1	2	4	8	6
8	2	4	7	14	10
10	3	6	11	21	15
12	4	8	16	29	21
14	5	11	21	39	28
16	7	14	27	50	36
18	9	17	34	63	45
20	11	21	42	78	55
24	15	31	60	111	78
30	24	47	92	171	120
36	34	67	132	244	173

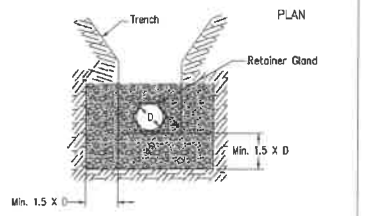
Minimum surface area based on water pressure of 150 psi and allowable soil pressure of 1,000 psf.

DEAD ENDS (ALTERNATE METHOD)

Use only when allowed by the Engineer, or when specified in the contract documents.

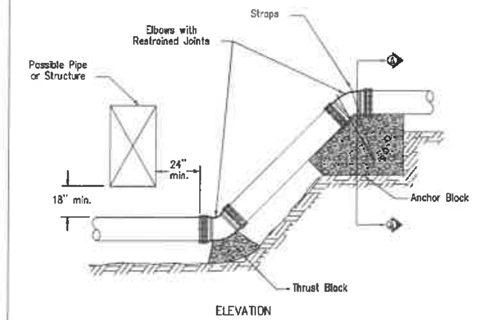


PLAN

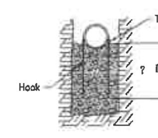


SECTION B–B

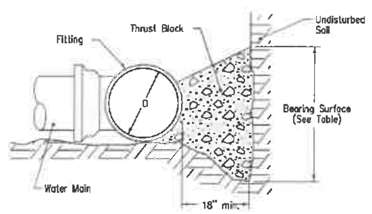
CHANGES IN PIPE DEPTH



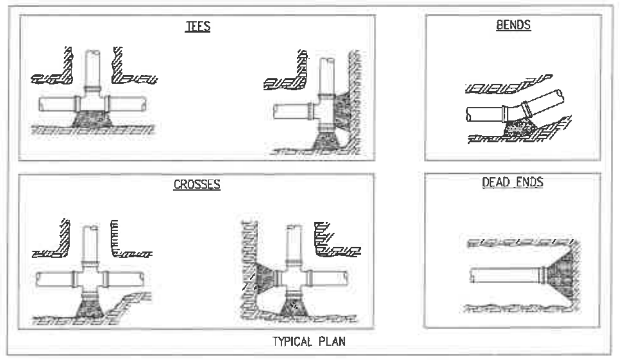
ELEVATION



SECTION A–A



TYPICAL SECTION



TYPICAL PLAN

SHIVEHATTERY
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.8104 | www.shive-hattery.com
Iowa | Illinois | Indiana

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-22	ADDENDUM #1
ADD	2	2022-01-06	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: ANI
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4203000
FIELD BOOK: —
CLIENT NO: MAM-004976-2020

CONSTRUCTION DETAILS

C502

ADVANCED DRAINAGE SYSTEMS, INC.

FOR STORMTECH INSTRUCTIONS, DOWNLOAD THE INSTALLATION APP

SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

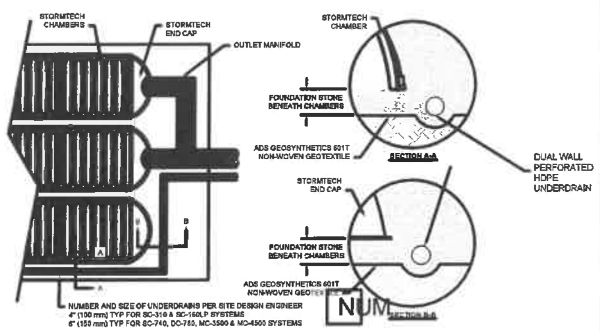
1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.
   STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

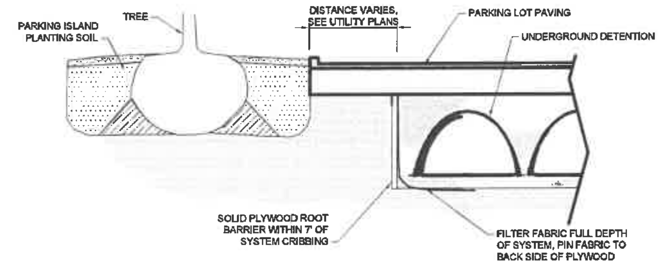
1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

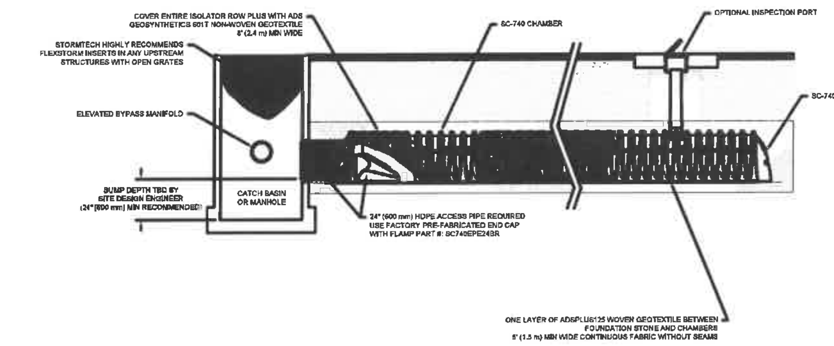
CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



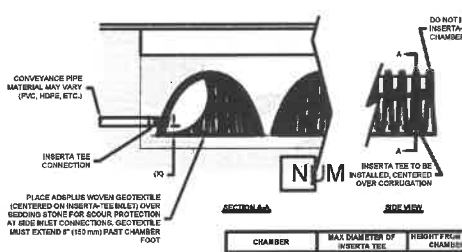
D2 UNDERDRAIN DETAIL
NTS



F1 UNDERGROUND DETENTION ADJACENT TO PARKING LOT ISLAND TREE
NTS



A4 SC-740 ISOLATOR ROW
NTS

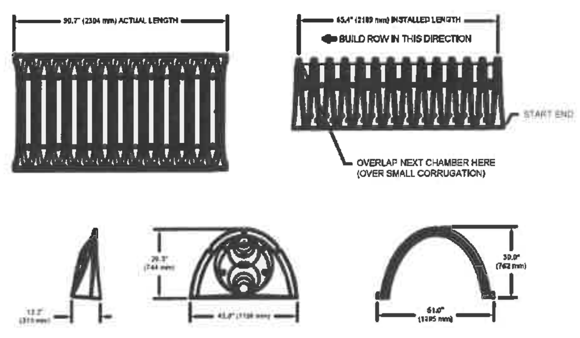


CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

NOTE:
PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.

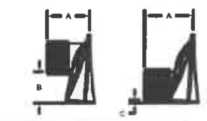
D4 INSERTA-TEE SIDE INLET DETAIL
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs.	(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "PC"

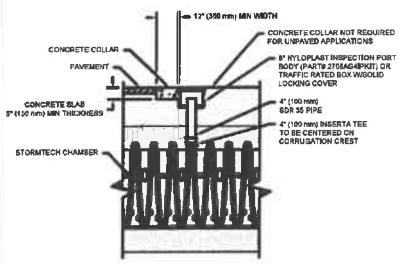
PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	—
SC740EPE06B / SC740EPE06BPC			—	0.5" (13 mm)
SC740EPE08T / SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	—
SC740EPE08B / SC740EPE08BPC			—	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	—
SC740EPE10B / SC740EPE10BPC			—	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	—
SC740EPE12B / SC740EPE12BPC			—	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	—
SC740EPE15B / SC740EPE15BPC			—	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	—
SC740EPE18B / SC740EPE18BPC			—	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	—	0.1" (3 mm)
SC740EPE24BR*	24" (600 mm)	18.5" (470 mm)	—	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B/SC740EPE24BR ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B/SC740EPE24BR THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

F4 TECHNICAL SPECIFICATIONS
NTS



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

A6 PVC INSPECTION PORT DETAIL
NTS

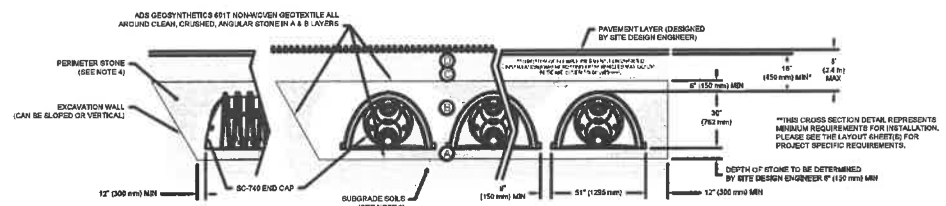
NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145¹ A-1, A-2-4, A-3 OR AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.²,³

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



D6 SC-740 CROSS SECTION DETAIL
NTS

SHIVEHATTERY
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.8104 | www.shive-hattery.com
Iowa | Illinois | Indiana
Illinois Firm Number: 184-000214

SEAL

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

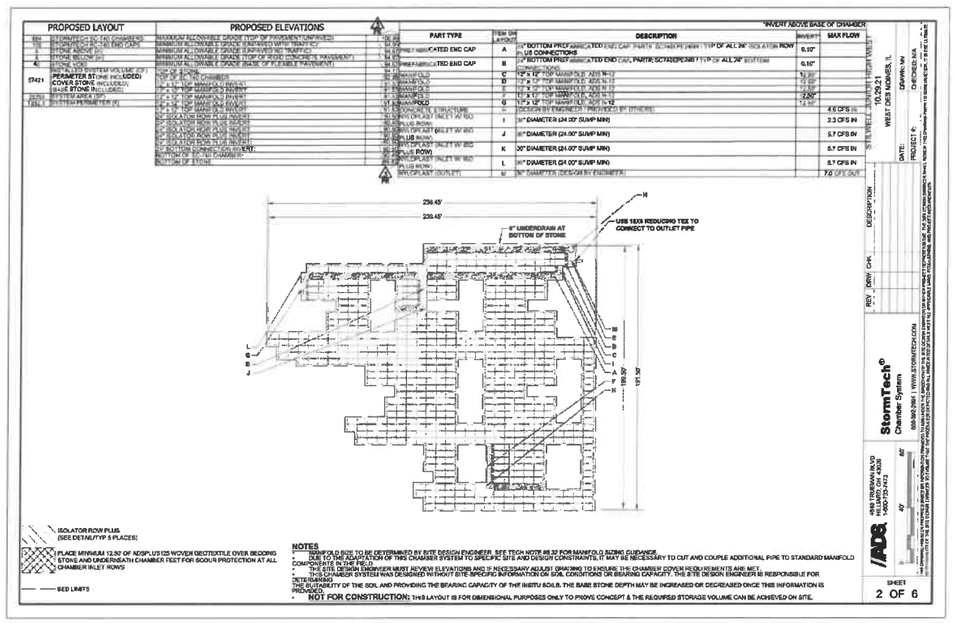
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-22	ADDENDUM #1
ADD	2	2022-01-06	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

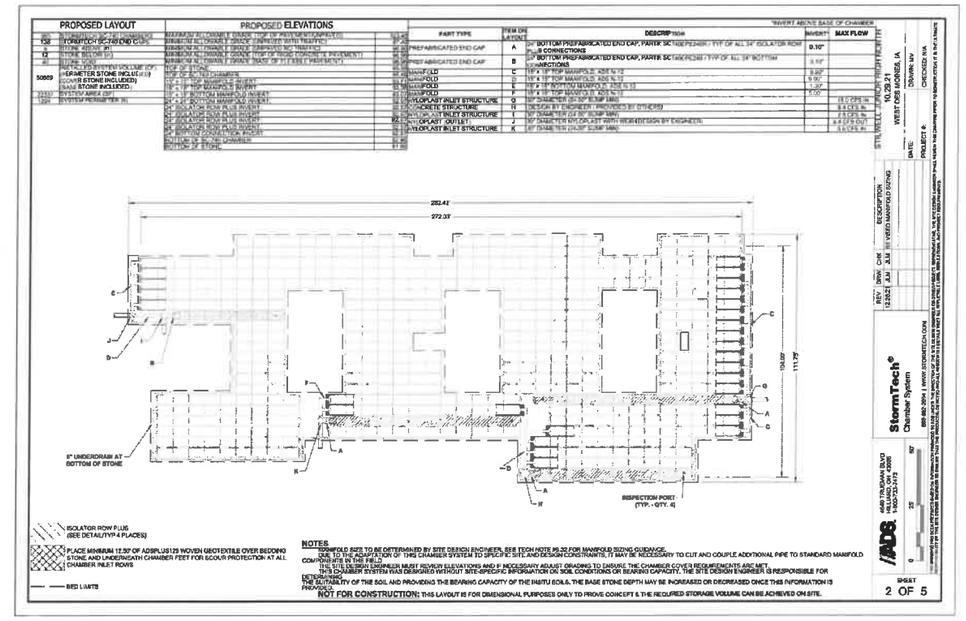
DRAWN: ANI
APPROVED: AJH
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4203000
FIELD BOOK: —
CLIENT NO: MAM-004975-2020

UNDERGROUND DETENTION DETAILS

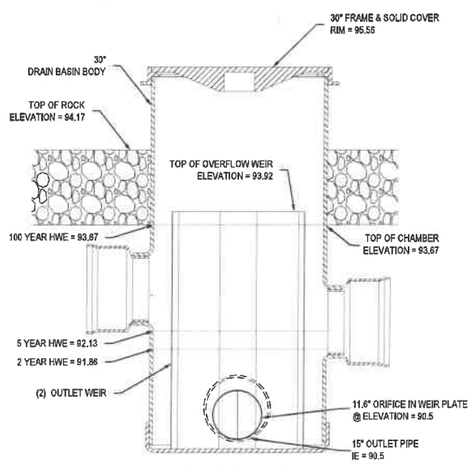
C503



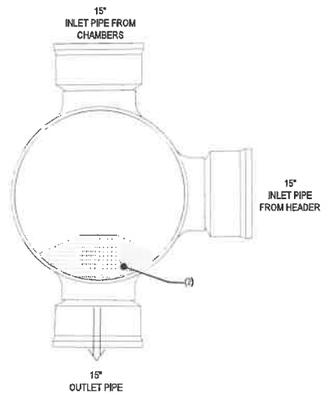
A6 WEST SC-740 CHAMBER LAYOUT DETAIL
NTS



D6 NORTH SC-740 CHAMBER LAYOUT DETAIL
NTS



SIDE SECTION VIEW



TOP VIEW W/ FRAME & COVER REMOVED

1 - INVERT ELEVATIONS & LOCATIONS OF INCOMING PIPES TO BE DETERMINED BY MANUFACTURER AND CONFIRMED BY ENGINEER.
2 - WEIR MANUFACTURED TO MINIMIZE LOSS OF OUTLET PIPE OPEN AREA SEE DRAWING NO. 7004-110-058 FOR DETAILS.

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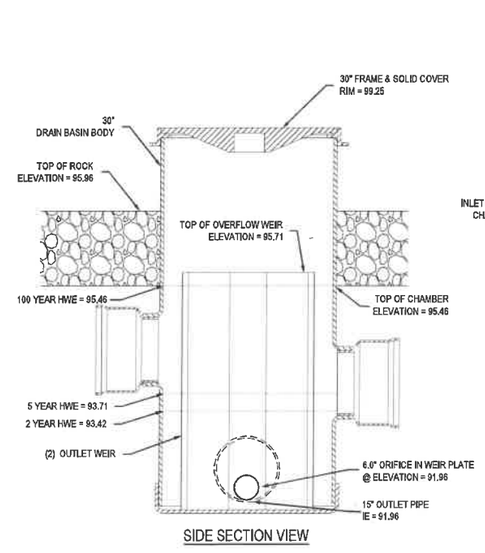
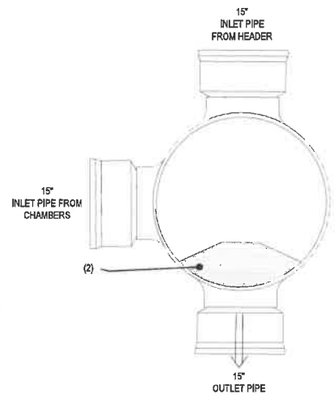
	REVISED BY / DATE	PROJECT NO./NAME	TITLE TYPICAL DRAIN BASIN WITH OUTLET WEIR FOR STORMTECH
	DWG SIZE A	SCALE / SHEET	DWG NO. 7004-110-067 REV

A6 WEST SC-740 CHAMBER OUTLET DETAIL
NTS



SIDE SECTION VIEW



TOP VIEW W/ FRAME & COVER REMOVED

1 - INVERT ELEVATIONS & LOCATIONS OF INCOMING PIPES TO BE DETERMINED BY MANUFACTURER AND CONFIRMED BY ENGINEER.
2 - WEIR MANUFACTURED TO MINIMIZE LOSS OF OUTLET PIPE OPEN AREA SEE DRAWING NO. 7004-110-058 FOR DETAILS.

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	REVISED BY / DATE	PROJECT NO./NAME	TITLE TYPICAL DRAIN BASIN WITH OUTLET WEIR FOR STORMTECH
	DWG SIZE A	SCALE / SHEET	DWG NO. 7004-110-037 REV

D6 NORTH SC-740 CHAMBER OUTLET DETAIL
NTS

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ARCHITECTURE + ENGINEERING
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515.223.1904 | www.shivehattery.com
Iowa | Illinois | Indiana
Illinois Firm Number: 184-000214

SEAL

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

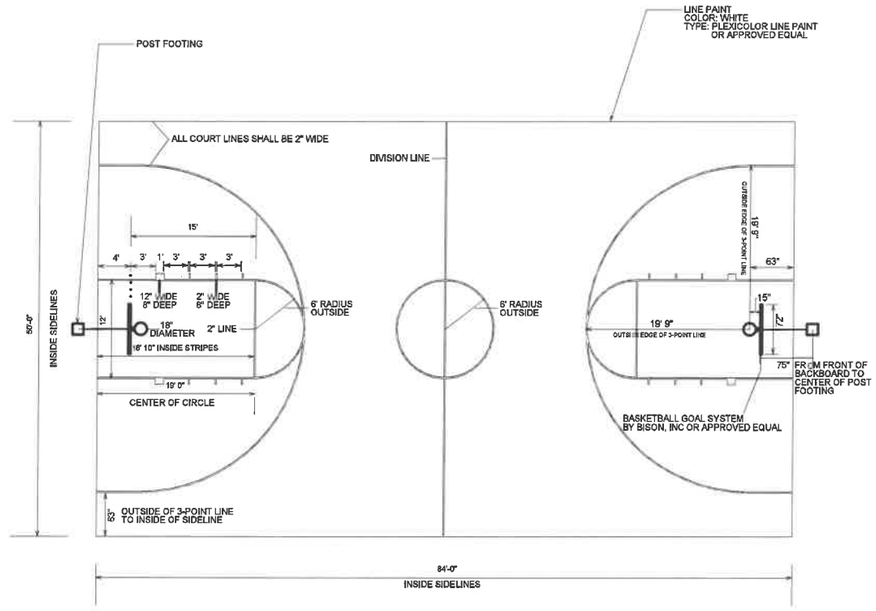
WEST DES MOINES COMMUNITY SCHOOLS
1651 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-02	ADDENDUM #1
ADD	2	2022-03-04	ADDENDUM #2
PR	3	2022-04-11	PROPOSAL REQUEST #3

DRAWN: AN
APPROVED: AJI
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 403060
FIELD BOOK: --
CLIENT NO: MAM-00975-3030

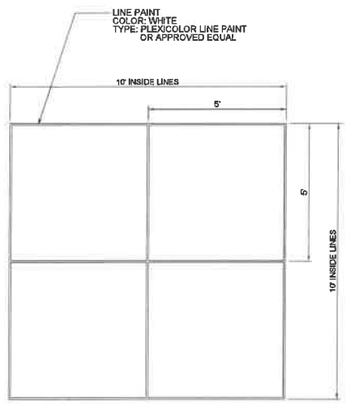
UNDERGROUND DETENTION DETAILS

C504



REFER TO SPECIFIC SITE PLANS FOR
OVERALL DIMENSIONS AND HOOP LOCATIONS

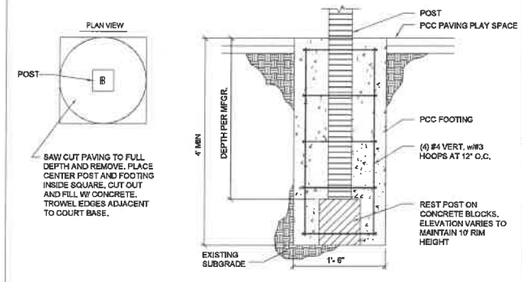
D4 BASKETBALL COURT LAYOUT
NOT TO SCALE



A6 FOUR SQUARE LAYOUT
NOT TO SCALE

MANUFACTURER: Bison Inc. or Approved Equal
SERIES: Model # BA-873U-BK (No Arm Extension)
RIM: BA32-HD FLEX RIM (Single Ring)
HEIGHT ADJUSTMENT: Non-Adjustable
BACKBOARD: 42" x 72" Polycarbonate
PRODUCT REP: RAINBOW PLAYSYSTEMS
3946 NW Urbandale Dr.
Urbandale, IA 50322
515-327-8989

D6 BASKETBALL HOOP SYSTEM
NOT TO SCALE



G6 BASKETBALL POST FOOTING
NOT TO SCALE

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515.223.1504 | www.shive-hattery.com
Iowa | Illinois | Indiana

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1501 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-22	ADDENDUM #1
ADD	2	2022-01-05	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #2

DRAWN: EER
APPROVED: AJI
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 4230009
FIELD BOOK: --
CLIENT NO: WAM-00479-2030

BASKETBALL AND FOUR SQUARE DETAILS

C505

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE
	9	Acer miyabei 'Morton' TM	State Street Miyabe Maple	B & B	2"Cal
	3	Betula platyphylla 'Fargo' TM	Dakota Pinnacle Asian White Birch	B & B	2"Cal
	9	Ginkgo biloba 'Magyar'	'Magyar' Maidenhair Tree	B & B	2"Cal
	10	Gleditsia triacanthos Harve	Northern Acclaim Honey Locust	B & B	2"Cal
	17	Liquidambar styraciflua 'Hapdell'	Happidaze Sweet Gum	B & B	2"Cal
	10	Quercus rubra	Northern Red Oak	B & B	2"Cal
	8	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	B & B	1.5"Cal
CONIFEROUS TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**
	6	Abies concolor	White Fir	B & B	6' HT.
	11	Picea glauca 'Densata'	Black Hills Spruce	B & B	6' HT.
	10	Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	B & B	6' HT.
SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**
	66	Aronia melanocarpa 'Morton' TM	Iroquois Beauty Black Chokeberry	CONT.	3 gal
	49	Ilex glabra 'Shamrock'	Shamrock Inkberry Holly	CONT.	3 gal
	37	Spiraea japonica 'Neon Flash'	Neon Flash Japanese Spiree	CONT.	3 gal
	39	Taxus cuspidata 'Nana Aurescens'	Dwarf Golden Japanese Yew	CONT.	3 gal
ORNAMENTAL GRASSES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**
	94	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	CONT.	1 gal
	236	Sporobolus heterolepis	Prairie Dropseed	CONT.	1 gal
PERENNIALS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**
	234	Hemerocallis x 'Happy Returns'	Happy Returns Daylily	CONT.	1 gal
	362	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	CONT.	1 gal
	20	Iris sibirica 'Over in Gloryland'	'Over in Gloryland' Siberian Iris	CONT.	1 gal
	30	Rudbeckia fulgida var. sullivantii 'Goldstrum'	Black-eyed Susan	CONT.	1 gal
GROUND COVERS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	
	301	Carex pensylvanica	Pennsylvania Sedge	6" pot	12" o.c.
	322	Pachysandra terminalis	Japanese pachysandra	6" pot	12" o.c.
	31	Rhus aromatica 'Gro-low	Gro-low Sumac	3 GAL	48" o.c.
	64,791 sf	Sod Grass	Sod	SF	
	333	Vinca minor 'Variegata'	Variegated Periwinkle	6" pot	12" o.c.

LANDSCAPE SUMMARY

-OFF STREET PARKING AREAS TO BE SCREENED FROM PUBLIC ROW TO A HEIGHT OF 3'
-ALL PARKING LOT ISLANDS NEED TREES PLANTED IN THEM
-2 TREES AND 3 SHRUBS REQUIRED PER 3,000 SF OF REQUIRED OPEN SPACE
-50% OF OPEN SPACE TREES SHALL BE EVERGREEN
-35% OF TOTAL SITE TREES SHALL BE EVERGREEN

REQUIRED OPEN SPACE: 147,625 SF (25%)
100 TREES REQUIRED
150 SHRUBS REQUIRED

EXISTING:
58 DECIDUOUS TREES
33 EVERGREEN TREES
30 SHRUBS

TREES TO BE REMOVED:
26 DECIDUOUS TREES
9 EVERGREEN TREES

PROPOSED:
66 DECIDUOUS TREES (50 ARE PARKING LOT TREES)
27 EVERGREEN TREES
223 SHRUBS

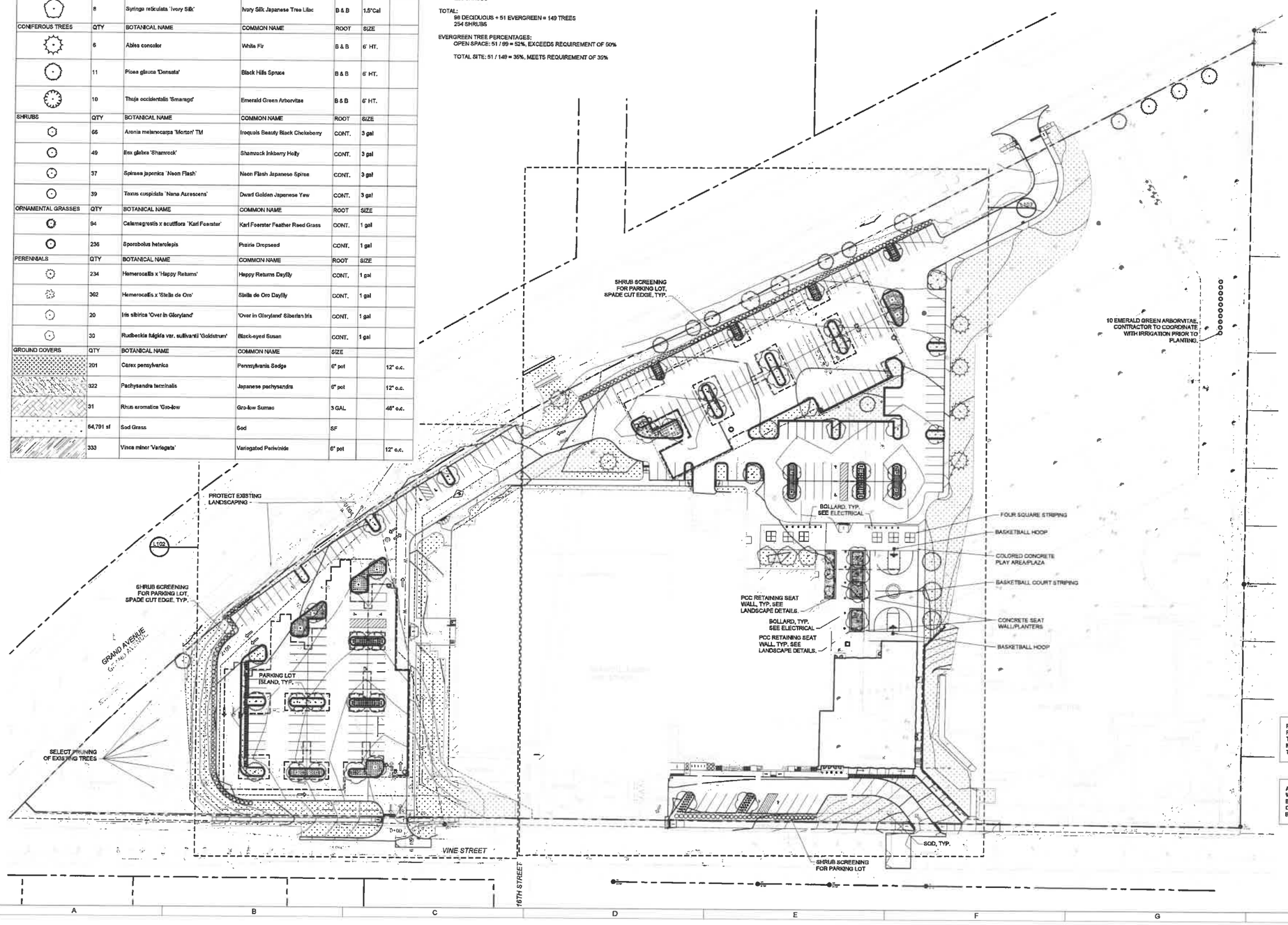
TOTAL:
98 DECIDUOUS + 51 EVERGREEN = 149 TREES
254 SHRUBS

EVERGREEN TREE PERCENTAGES:
OPEN SPACE: 51 / 99 = 52%, EXCEEDS REQUIREMENT OF 50%

TOTAL SITE: 51 / 149 = 35%, MEETS REQUIREMENT OF 35%

LANDSCAPE NOTES:

1. ALL TREES SHALL BE PER THE RECOMMENDATIONS AND REQUIREMENTS OF THE CURRENT ANSI 'AMERICAN STANDARDS FOR NURSERY STOCK'.
2. PROTECT ALL EXISTING AND NEW STRUCTURES AND UTILITY SERVICES DURING INSTALLATION OF ALL PLANT MATERIAL. NOTIFY ENGINEER IMMEDIATELY UPON CONFLICT OF PLANTS, STRUCTURES, AND UTILITIES.
3. ALL PLANTING BEDS SHALL RECEIVE 3" DOUBLE SHREDDED HARDWOOD MULCH, UNLESS OTHERWISE NOTED.
4. REPAIR ALL AREAS OF DISTURBANCE WITH TURF SEED ACCORDING TO SPEC, UNLESS NOTED OTHERWISE.
5. PLANTING BEDS SHALL BE TILLED TO A DEPTH OF 12" TO DECOMPACT SOILS.
6. TREES MUST BE PLANTED 8' OFF VEHICULAR ROADS PER WEST DES MOINES CODE.
7. ISLANDS SHALL BE CORED OUT TO REMOVE ALL GRANULAR AND COMPACTED SUBBASE TO A DEPTH OF 36" BELOW FINISH PAVING SURFACE AND FILLED WITH APPROVED TOPSOIL.
8. SPADE CUT EDGE OF PLANTING BEDS ADJACENT TO TURF.



FINISH GRADES IN PLANTING BED AREAS REPRESENT TOP OF MULCH. IN PLANTING BEDS, TOP OF TOPSOIL SHALL BE 3.5" BELOW TOP OF MULCH. MAINTAIN PROPER THICKNESS OF TOPSOIL.

ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 100.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.

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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

ADD 2	2022-05-02	ADDENDUM #2
ADD 1	2022-04-06	ADDENDUM #1
PR 3	2022-03-11	PROPOSAL REQUEST #3

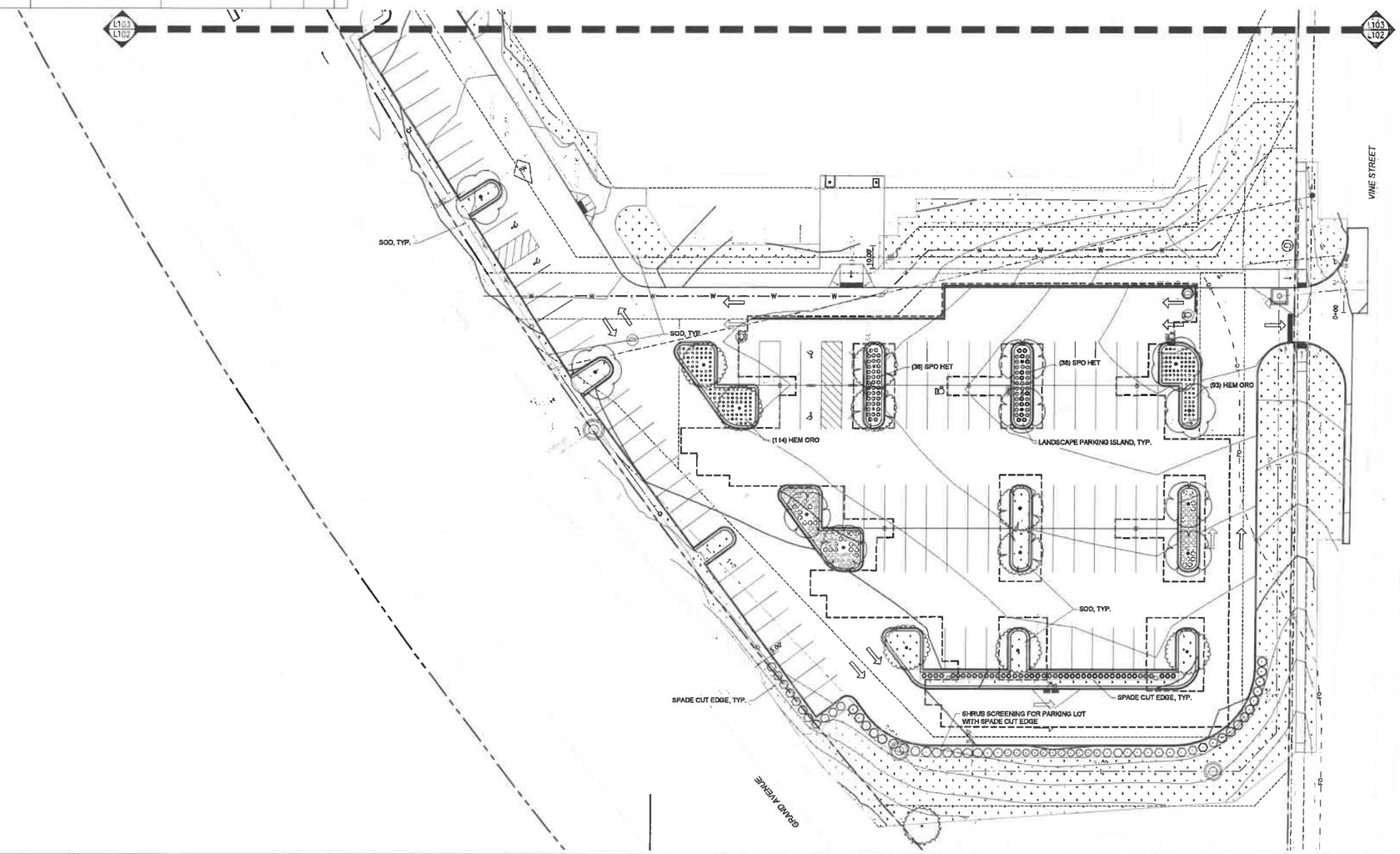
DRAWN: EDR
APPROVED: HCR
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 420000
FIELD BOOK: —
CLIENT NO: WAA-0649F2-2030

LANDSCAPE PLAN

L101

PLANT SCHEDULE WEST LOT

TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE
	6	Ginkgo biloba 'Magyar'	'Magyar' Maidenhair Tree	B & B	2"Cal
	4	Gleditsia triacanthos Harve	Northern Acclaim Honey Locust	B & B	2"Cal
	4	Liquidambar styraciflua 'Happdell'	Happidaze Sweet Gum	B & B	2"Cal
	5	Quercus rubra	Northern Red Oak	B & B	2"Cal
CONIFEROUS TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**
	1	Picea glauca 'Densata'	Black Hills Spruce	B & B	6' HT.
SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**
	22	Aronia melanocarpa 'Morton' TM	Iroquois Beauty Black Chokeberry	CONT.	3 gal
	15	Ilex glabra 'Shamrock'	Shamrock Inkberry Holly	CONT.	3 gal
	11	Spiraea japonica 'Neon Flash'	Neon Flash Japanese Spirea	CONT.	3 gal
	11	Taxus cuspidata 'Nana Aurescens'	Dwarf Golden Japanese Yew	CONT.	3 gal
ORNAMENTAL GRASSES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**
	43	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	CONT.	1 gal
	76	Sporobolus heterolepis	Prairie Dropseed	CONT.	1 gal
PERENNIALS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**
	119	Hemerocallis x 'Happy Returns'	Happy Returns Daylily	CONT.	1 gal
	208	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	CONT.	1 gal
GROUND COVERS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	
	21,993 sf	Sod Grass	Sod	SF	



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ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 100.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.

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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

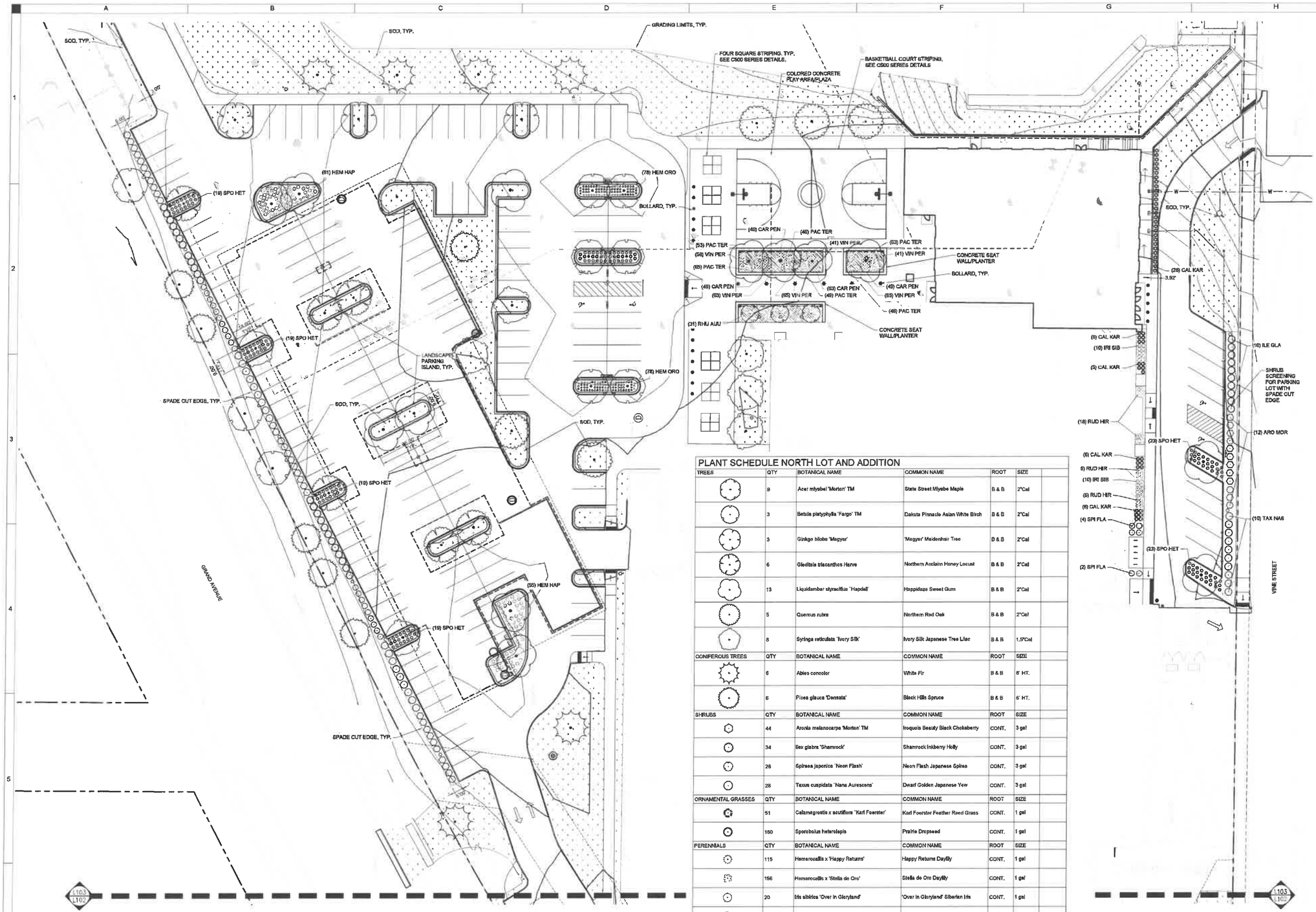
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

ADD	1	2021-12-22	ADDENDUM #1
ADD	2	2022-01-06	ADDENDUM #2
PR	3	2022-03-11	PROPOSAL REQUEST #3

DRAWN: EDR
APPROVED: HCR
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: K200300
FIELD BOOK: –
CLIENT NO: MAA40445/5-2030

LANDSCAPE ENLARGEMENT PLAN

L102



PLANT SCHEDULE NORTH LOT AND ADDITION

TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	
	9	Acer miyabei 'Morton' TM	State Street Miyabe Maple	B & B	2"Cal	
	3	Betula platyphylla 'Fargo' TM	Dakota Pinnacle Asian White Birch	B & B	2"Cal	
	3	Ginkgo biloba 'Magyar'	'Magyar' Maidenhair Tree	B & B	2"Cal	
	6	Gleditsia triacanthos Harve	Northern Acclaim Honey Locust	B & B	2"Cal	
	13	Liquidambar styraciflua 'Hapdell'	Happidaze Sweet Gum	B & B	2"Cal	
	5	Quercus rubra	Northern Red Oak	B & B	2"Cal	
	8	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	B & B	1.5"Cal	
CONIFEROUS TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	
	6	Abies concolor	White Fir	B & B	6' HT.	
	6	Picea glauca 'Densata'	Black Hills Spruce	B & B	6' HT.	
SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	
	44	Aronia melanocarpa 'Morton' TM	Iroquois Beauty Black Chokeberry	CONT.	3 gal	
	34	Ilex glabra 'Shamrock'	Shamrock Inkberry Holly	CONT.	3 gal	
	28	Spiraea japonica 'Neon Flash'	Neon Flash Japanese Spirea	CONT.	3 gal	
	28	Taxus cuspidata 'Nana Aurescens'	Dwarf Golden Japanese Yew	CONT.	3 gal	
ORNAMENTAL GRASSES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	
	51	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	CONT.	1 gal	
	160	Sporobolus heterolepis	Prairie Dropseed	CONT.	1 gal	
PERENNIALS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**	**SIZE**	
	115	Hemerocallis x 'Happy Returns'	Happy Returns Daylily	CONT.	1 gal	
	156	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	CONT.	1 gal	
	20	Iris sibirica 'Over In Gloryland'	'Over In Gloryland' Siberian Iris	CONT.	1 gal	
	30	Rudbeckia fulgida var. sullivantii 'Goldstrum'	Black-eyed Susan	CONT.	1 gal	
GROUND COVERS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**		
	201	Carex pensylvanica	Pennsylvania Sedge	6" pot		12" o.c.
	322	Pachysandra terminalis	Japanese pachysandra	6" pot		12" o.c.
	31	Rhus aromatica 'Gro-low	Gro-low Sumac	3 GAL		48" o.c.
	42,434 sf	Sod Grass	Sod	SF		
	333	Vinca minor 'Variegata'	Variegated Periwinkle	6" pot		12" o.c.

FINISH GRADES IN PLANTING BED AREAS REPRESENT TOP OF MULCH. IN PLANTING BEDS, TOP OF TOPSOIL SHALL BE 3.5" BELOW TOP OF MULCH. MAINTAIN PROPER THICKNESS OF TOPSOIL.

ALL GRADES ON CIVIL PLANS ARE BASED ON WEST DES MOINES DATUM. FFE OF NEW BUILDING = 100.77. BUILDING PLANS USE DATUM OF FFE = 100.00. USE CAUTION WHEN WORKING BETWEEN BUILDING AND CIVIL PLANS.

NORTH

0 10 20 40
SCALE IN FEET

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STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

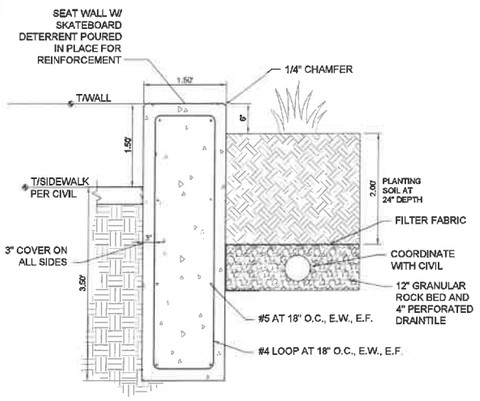
WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

JOB 1	2021-12-22	ADDENDUM #1
JOB 2	2022-01-06	ADDENDUM #2
PR 3	2022-03-11	PROPOSAL REQUEST #3

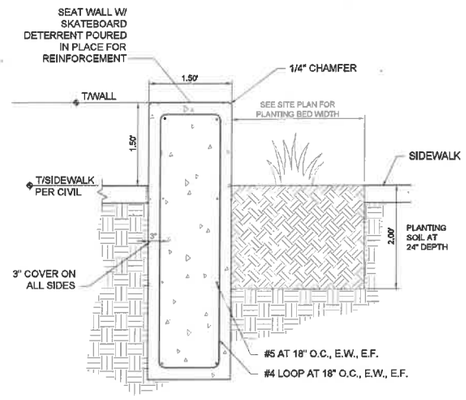
DRAWN: EBR
APPROVED: HCR
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 420000
FIELD BOOK: --
CLIENT NO: MAM-004075-2200

LANDSCAPE ENLARGEMENT PLAN

L103

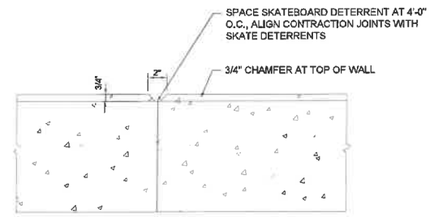


SEAT WALL SURROUNDING ALL FOUR SIDES OF ELEVATED PLANTING BED.

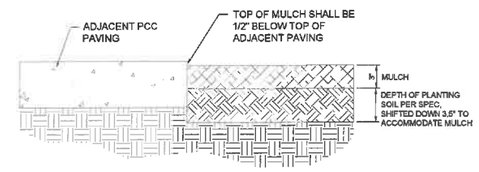


SEAT WALL WITH PLANTING BED FLUSH WITH SIDEWALK FINISH GRADE.

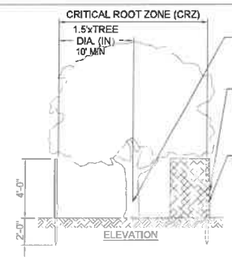
C3 TYPICAL SEAT WALL SECTION
NTS

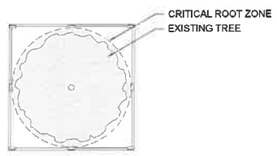


E3 SKATEBOARD DETERRENT
NTS



G3 HARDWOOD MULCH INSTALLATION FOR PLANTING BEDS
NTS

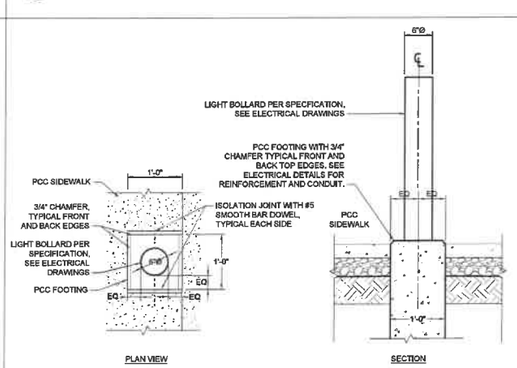




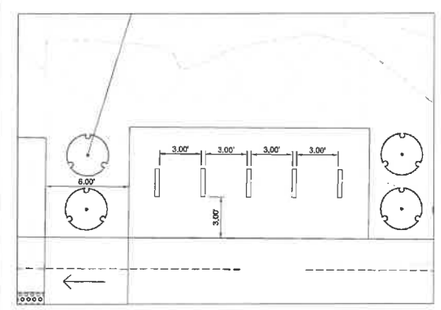
PLAN

NOTES:
1. TYPICAL ALL TREES INSIDE WORK AREA
2. FENCE LOCATION TO BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION ACTIVITIES.
3. THE SOIL WITHIN THE CRZ SHALL NOT BE DISTURBED IN ANY MANNER DURING CONSTRUCTION. NO EQUIPMENT, MATERIALS, SUPPLIES, AND/ORSALVAGE SHALL BE STORED OR PLACED WITHIN THE ZONE. NO VEHICULAR OR EQUIPMENT TRAFFIC SHALL BE PERMITTED WITHIN THE CRZ. NO FILLING OR CURING OF EXISTING SOILS SHALL BE PERMITTED WITHIN THE CRZ. THE OWNER'S REPRESENTATIVE AND/OR LANDSCAPE SERVICES MUST APPROVE ANY DEVIATION FROM THE STANDARD.

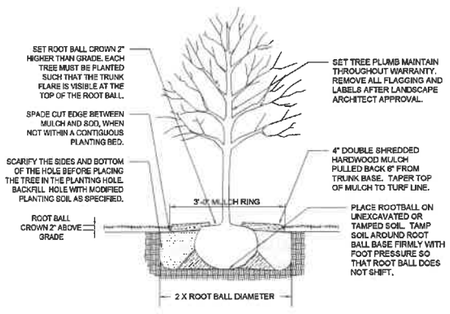
A5 TREE PROTECTION DETAIL
NTS



E5 LIGHTED BOLLARD
NTS

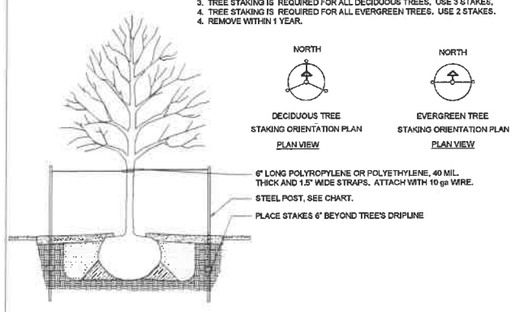


G5 BIKE RACK LAYOUT
1" = 1'-0"

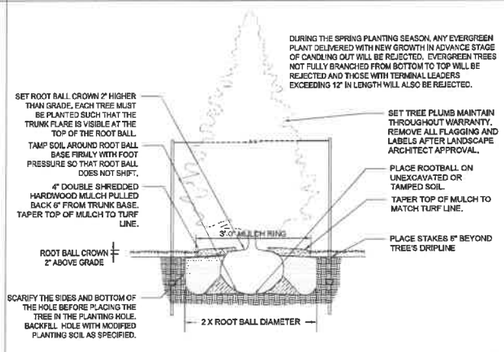


A6 DECIDUOUS TREE PLANTING
NTS

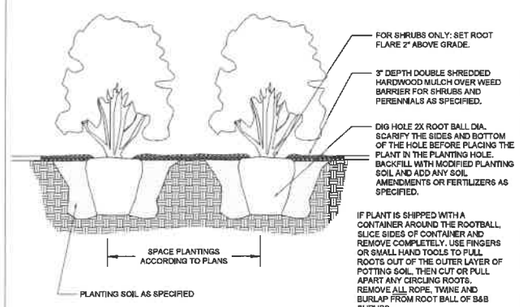
NOTES:
1. STEEL POSTS TO BE NOTCHED OR DRILLED TO RETAIN GUY WIRES. PLACE OUTSIDE OF PLANTING HOLE. DRIVE PLUMB REGARDLESS OF GROUND SLOPE.
3. TREE STAKING IS REQUIRED FOR ALL DECIDUOUS TREES. USE 3 STAKES.
4. TREE STAKING IS REQUIRED FOR ALL EVERGREEN TREES. USE 2 STAKES.
4. REMOVE WITHIN 1 YEAR.



C6 TREE STAKING DETAIL
NTS



E6 CONIFEROUS TREE PLANTING
NTS



G6 PERENNIAL AND SHRUB PLANTING BED
NTS

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
8100 Ninebroom Pkwy, Suite 1001 West Des Moines, Iowa 50266
515.223.1131 | www.shivehattery.com
Iowa | Illinois | Indiana

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST, WEST DES MOINES, IA 50265

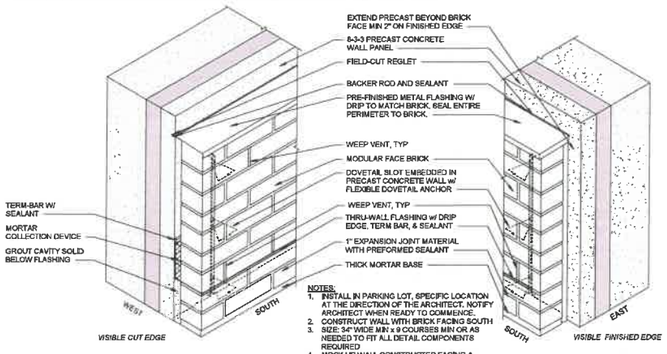
ASBO	2	2022-05-20
ADD	2	2022-04-08
PR	3	2022-03-11

ADDENDUM #2
PROPOSAL REQUEST #3

DRAWN: EDR
APPROVED: NCR
ISSUED FOR: CITY SUBMITTAL
DATE: 2022-04-27
PROJECT NO: 420366
FIELD BOOK: –
CLIENT NO: MAA-00676-2020

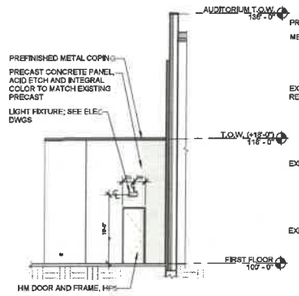
LANDSCAPE DETAILS

L104

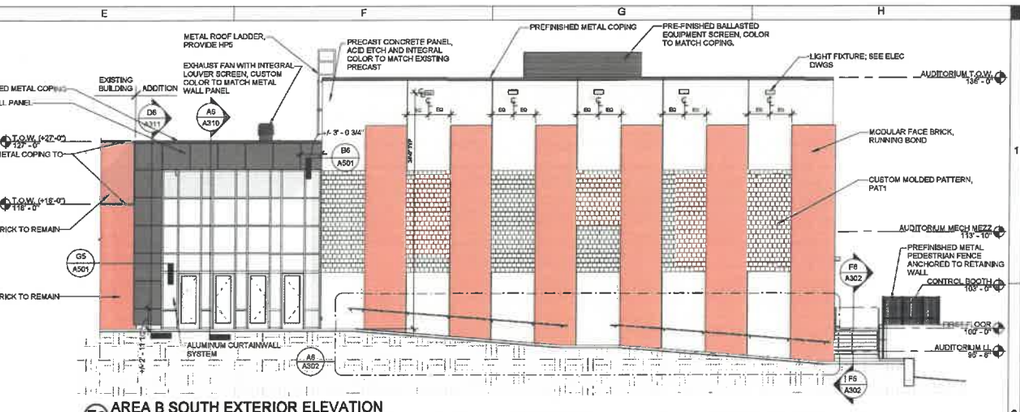


NOTES:
1. INSTALL IN PARKING LOT, SPECIFIC LOCATION AT THE DIRECTION OF THE ARCHITECT. NOTIFY ARCHITECT WHEN READY TO COMMENCE.
2. CONSTRUCT WALL WITH BRICK FACING SOUTH
3. SIZE: 34" WIDE MIN x 9 COURSES MIN OR AS NEEDED TO FIT ALL DETAIL COMPONENTS REQUIRED
4. MOCK UP WALL CONSTRUCTED FACING A DIRECTION OTHER THAN DIRECTED IN DETAIL WILL NOT BE ACCEPTED
5. SEE CORRESPONDING DETAILS ON A500

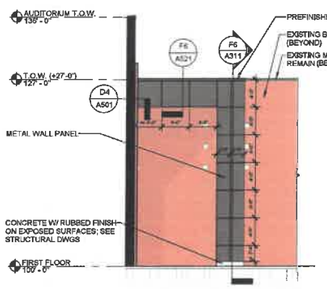
A2 PRECAST CONCRETE W/ BRICK MOCK-UP WALL DETAIL
1 1/2" = 1'-0"



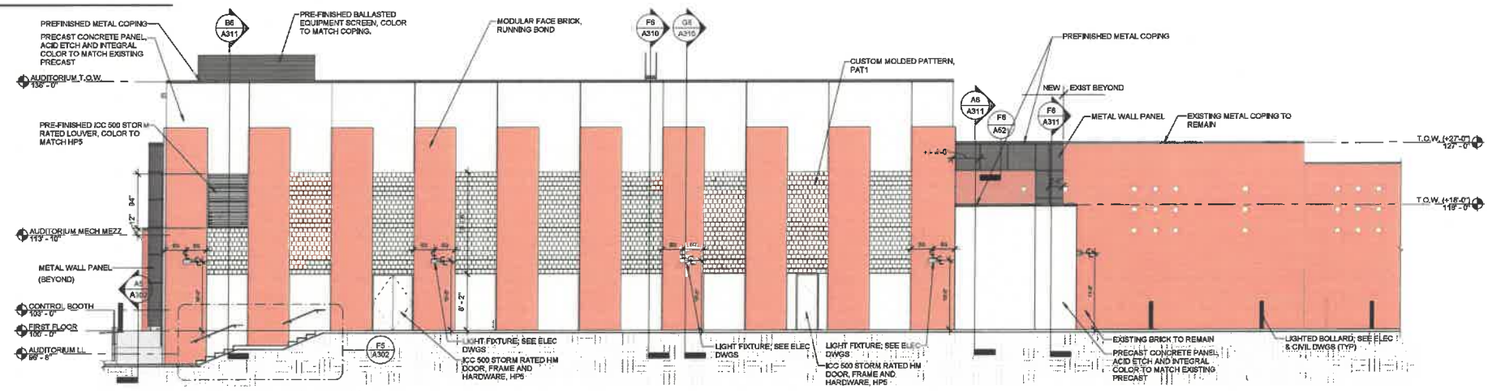
C2 AREA B WEST EXT ELEVATION
1/8" = 1'-0"



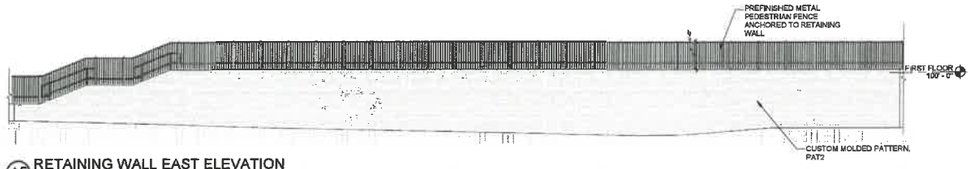
E2 AREA B SOUTH EXTERIOR ELEVATION
1/8" = 1'-0"



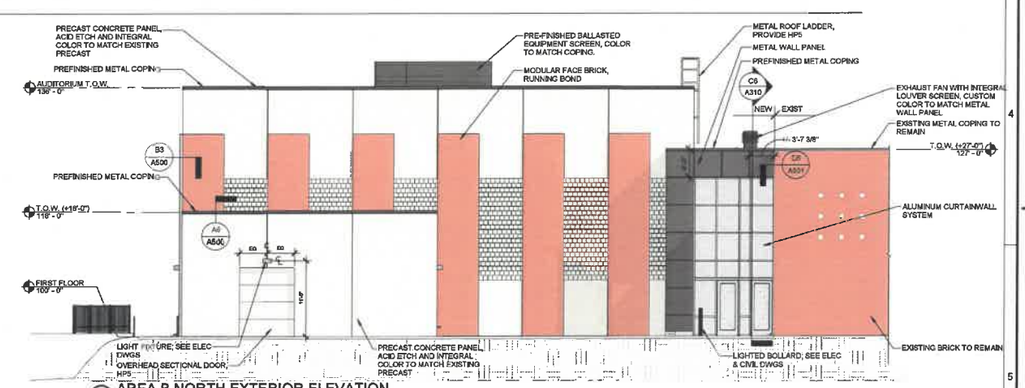
A4 AREA B NORTH ENTRY - EAST EXT ELEVATION
1/8" = 1'-0"



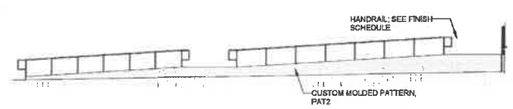
C4 AREA B EAST EXTERIOR ELEVATION
1/8" = 1'-0"



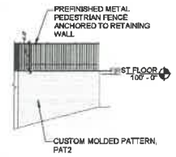
A5 RETAINING WALL EAST ELEVATION
1/8" = 1'-0"



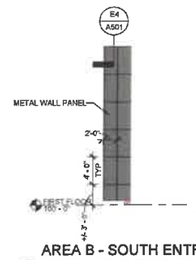
E5 AREA B NORTH EXTERIOR ELEVATION
1/8" = 1'-0"



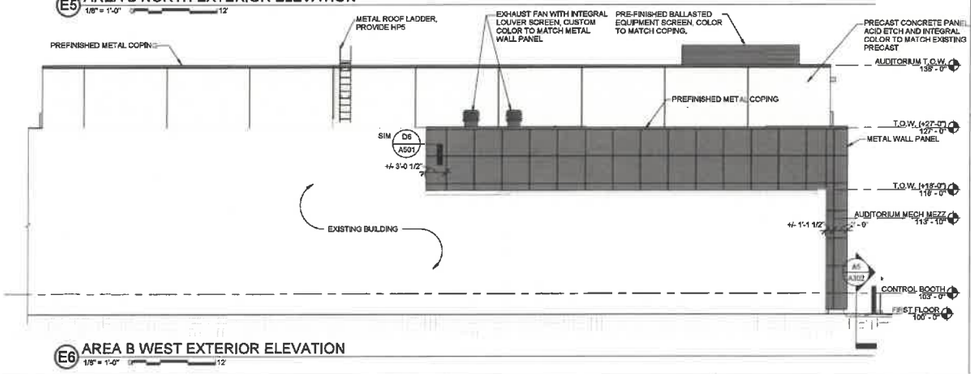
A6 RETAINING WALL SOUTHEAST ELEVATION
1/8" = 1'-0"



C6 RETAINING WALL NORTHEAST ELEVATION
1/8" = 1'-0"



D6 AREA B - SOUTH ENTRY EAST EXT ELEVATION
1/8" = 1'-0"



E6 AREA B WEST EXTERIOR ELEVATION
1/8" = 1'-0"

BASIS OF DESIGN MATERIAL LEGEND

MATERIAL	COLOR	MANUFACTURER
PRECAST CONCRETE	AZURE (MATCHES EXISTING TAN)	WELLS CONCRETE
CLAY MASONRY BRICK	RED CLASSIC MODULAR	OLDCASTLE
METAL WALL PANELS & TRIM*	DARK BRONZE METAL PLATE PANELS	DRI-DESIGN
METAL LOUVER	CUSTOM COLOR TO MATCH PRECAST CONCRETE	GREENHECK
ROOF TOP SCREENING	DARK BRONZE	LINEA
HOLLOW METAL DOORS & FRAMES	CUSTOM COLOR TO MATCH PRECAST CONCRETE	STEELCRAFT
ALUMINUM STOREFRONT & CURTAINWALL	CLEAR ANODIZED ALUMINUM	KAWNEER

*PER THE CITY OF WEST DES MOINES, THE METAL PANELS SHALL HAVE CONCEALED FASTENERS.

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, IA 50266
515.223.8104 | www.shive-hattery.com
Iowa | Illinois | Indiana

PERFORMANCE ARTS, TECHNOLOGY & DESIGN CONSULTANT INC.
221 1/2 EAST WASHINGTON STREET SUITE 301
IOWA CITY, IA 52240USA
PATDESIGNCONSULTANT@GMAIL.COM

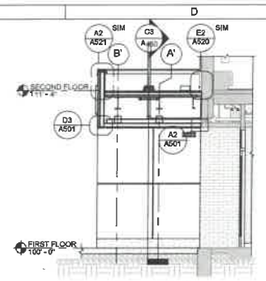
STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST. WEST DES MOINES, IA 50265

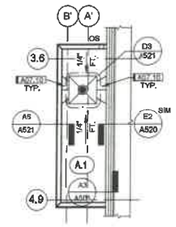
DRAWN: J.G
APPROVED: M.K
ISSUED FOR: BID DOCUMENTS
DATE: 2021-11-15
PROJECT NO: 4203000
FIELD BOOK:

ENLARGED EXTERIOR ELEVATIONS - AREA B

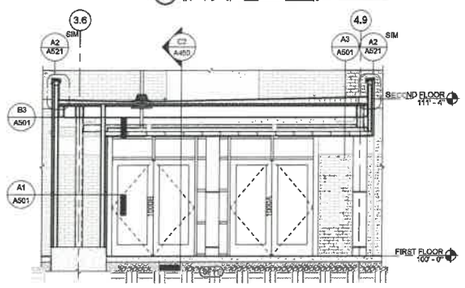
A200B



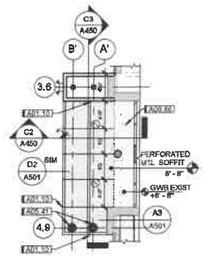
MAIN ENTRY CANOPY NORTH SECTION - BID ALTERNATE #3
C2 1/4" = 1'-0"



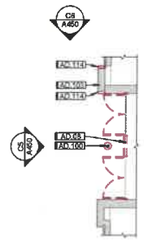
MAIN ENTRY CANOPY ROOF PLAN - BID ALTERNATE #3
E2 1/8" = 1'-0"



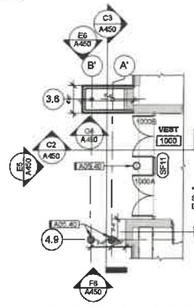
MAIN ENTRY CANOPY EAST SECTION - BID ALTERNATE #3
C3 1/4" = 1'-0"



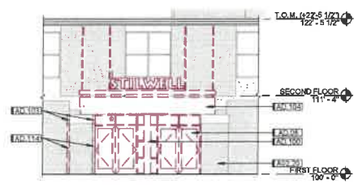
MAIN ENTRY CANOPY RCP - BID ALTERNATE #3
E3 1/8" = 1'-0"



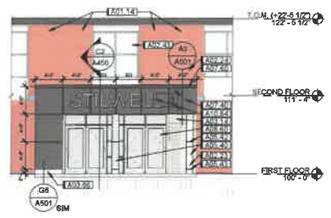
MAIN ENTRY CANOPY DEMO PLAN - BID ALTERNATE #3
C4 1/8" = 1'-0"



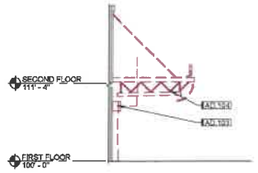
MAIN ENTRY CANOPY PLAN - BID ALTERNATE #3
E4 1/8" = 1'-0"



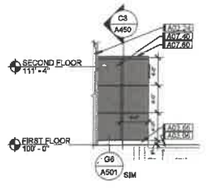
MAIN ENTRY CANOPY WEST DEMO ELEV - BID ALTERNATE #3
C5 1/8" = 1'-0"



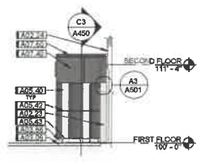
MAIN ENTRY CANOPY WEST ELEV - BID ALTERNATE #3
E5 1/8" = 1'-0"



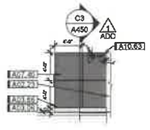
MAIN ENTRY CANOPY NORTH DEMO ELEV - BID ALTERNATE #3
C6 1/8" = 1'-0"



MAIN ENTRY CANOPY NORTH ELEV - BID ALTERNATE #3
E6 1/8" = 1'-0"



MAIN ENTRY CANOPY SOUTH ELEV 1 - BID ALTERNATE #3
F6 1/8" = 1'-0"



MAIN ENTRY CANOPY SOUTH ELEV 2 - BID ALTERNATE #3
G6 1/8" = 1'-0"

DEMO KEYNOTE LEGEND	
KEY	NOTE
AD.06	REMOVE STOREFRONT SYSTEM IN IT'S ENTIRETY, INCLUDING DOOR(S) AND ASSOCIATED HARDWARE
AD.07	REMOVE FLOORING, FLOORING ADHESIVE RESIDUE, & WALL BASE IN HATCHED REGION, TYP. REMOVE ANY ASSOCIATED TRANSITION STRIPS. PREP FOR INFILL. LEVEL CHANGE IS APPROXIMATELY 6" PER RISER.
AD.100	EXISTING STEEL COLUMN TO REMAIN. REMOVE COLUMN ENCLOSURE. PREP FOR NEW WORK.
AD.103	REMOVE PORTION FROM EACH END OF CONCRETE BEAM BACK TO CMU FACE, SEE STRUCTURAL DWGS
AD.104	REMOVE METAL CANOPY IN IT'S ENTIRETY, SEE STRUCTURAL DWGS
AD.114	REMOVE PORTION OF BRICK WALL BACK TO CMU FACE

KEYNOTE LEGEND	
KEY	NOTE
A01.10	ALIGN SOFFIT AND WALL JOINTS, TYP
A01.14	PATCH HOLES FROM REMOVAL OF CANOPY SUPPORTS, PATCH COLOR TO MATCH EXISTING EMBEDDED BRICK COLOR IN PRECAST WALL
A02.06	EXISTING METAL HANDRAIL TO REMAIN. PREP RAILING TO BE FREE OF CHIPS AND SCRATCHES, PROVIDE HIGH PERFORMANCE COATING HP3.
A02.07	EXISTING METAL RAILING TO REMAIN. PREP RAILING TO BE FREE OF CHIPS AND SCRATCHES, PROVIDE HIGH PERFORMANCE COATING HP3.
A02.09	EXISTING STEEL PAN STAIR. PREP ALL RISERS, STRINGERS, AND ANY ASSOCIATED METAL COMPONENTS TO BE FREE OF CHIPS AND SCRATCHES, PROVIDE HIGH PERFORMANCE COATING HP3.
A02.11	BID ALTERNATE #2: PREP SURFACES FOR NEW FINISH, INCLUDING BUT NOT LIMITED TO REMOVING ANY LIGHT TO EXTREME RUST AND REPAIR W/ BODY FILLER. PROVIDE HIGH PERFORMANCE COATING ON EXISTING DOOR LEAF(S) IF HM AND FRAME IF HM, BOTH SIDES. PROVIDE HIGH PERFORMANCE COATING ON ANY ASSOCIATED STEEL LINTELS AND TRANSOM MTL PANELS PART OF FRAME. SEE DOOR RE-FINISHING SCHEDULE.
A02.12	BID ALTERNATE #2: PREP SURFACES FOR NEW FINISH, PROVIDE HIGH PERFORMANCE COATING ON EXISTING CH DOOR PANELS AND RAILS EXTERIOR SIDE, SEE EXISTING DOOR AND FRAME RE-FINISHING / REPLACEMENT SCHEDULE.
A02.13	BID ALTERNATE #2: PREP SURFACES FOR NEW FINISH, PROVIDE HIGH PERFORMANCE COATING ON EXISTING CORNER GUARD
A02.16	REFINISH ALL TEAL PAINTED STEEL ELEMENTS AND COMPONENTS, INCLUDING BUT NOT LIMITED TO STEEL BEAMS, STEEL PLATES, AND FASTENERS. PREP ALL VISIBLE SURFACES TO BE FREE OF CHIPS AND SCRATCHES, PROVIDE HIGH PERFORMANCE COATING HP3.
A02.20	EXISTING BRICK TO REMAIN
A02.23	EXISTING BRICK
A02.24	EXISTING PRECAST CONCRETE WALL
A02.43	EXISTING ALUMINUM WINDOW, TYP
A03.05	CONCRETE PAVING, SEE CIVIL DWGS
A03.07	INFILL FLOOR WITH CONCRETE SLAB OVER GEOFOAM. PREP FLOOR FOR NEW FINISHES.
A03.14	PATCH HOLE IN CONCRETE BEAM WHERE LIGHT FIXTURE WAS REMOVED. MATCH PATCH TO EXISTING TEXTURE AND COLOR OF EXISTING CONCRETE BEAM
A03.56	CONCRETE W/ RUSSED FINISH ON EXPOSED SURFACES; SEE STRUCTURAL DWGS
A05.40	PRE-FINISHED METAL COLUMN ENCLOSURE
A05.41	PRE-FINISHED METAL COLUMN ENCLOSURE TRIM PIECE AT SOFFIT
A05.42	COLUMN ENCLOSURE REVEAL, ALIGN WITH REVEAL IN ADJ METAL WALL PANEL, TYP.
A05.43	COLUMN ENCLOSURE REVEAL, ALIGN WITH BOTTOM OF ADJ METAL WALL PANEL, TYP.
A07.10	ALL TAPERED INSULATION USED TO CREATE ADEQUATE DRAINAGE BEHIND MECHANICAL UNITS AND FOR CRICKETS/SADDLES SHALL BE SLOPED AT 1/2"FT.
A07.40	METAL WALL PANEL
A07.60	PREFINISHED METAL COPING
A08.60	ALUMINUM STOREFRONT SYSTEM
1 ADD A09.66	PATCH SOFFIT FROM LIGHT FIXTURES DEMO, MATCH EXISTING TEXTURE WITH NO LINES OF VISIBLE DELINEATION. PAINT ENTIRE EXISTING SOFFIT HP4.
A10.63	ALUMINUM SIGNAGE; INDIVIDUAL LETTERS, ARIAL FONT, CONCEALED FASTENERS
1 ADD A10.64	ALUMINUM SIGNAGE; INDIVIDUAL HALO-ILLUMINATED LETTERS W/ FROSTED BACK, ARIAL FONT, 1" STANDOFF, CONCEALED FASTENERS AND WIRING

BASIS OF DESIGN MATERIAL LEGEND		
MATERIAL	COLOR	MANUFACTURER
PRECAST CONCRETE	ASDIS (MATCHES EXISTING TAN)	WELLS CONCRETE
CLAY MASONRY BRICK	RED CLASSIC MODULAR	OLDS-GREY
METAL WALL PANELS & TRIM*	DARK BRONZE METAL PLATE PANELS	DRI-DESIGN
METAL LOUVER	CUSTOM COLOR TO MATCH PRECAST CONCRETE	GREENHECK
ROOF TOP SCREENING	DARK BRONZE	LB/SA
HOLLOW METAL DOORS & FRAMES	CUSTOM COLOR TO MATCH PRECAST CONCRETE	STEELCRAFT
ALUMINUM STOREFRONT & CURTAINWALL	CLEAR ANODIZED ALUMINUM	KAWNEER

*FOR THE CITY OF WEST DES MOINES, THE METAL PANELS SHALL HAVE CONCEALED FASTENERS.

DEMOLITION PLAN SYMBOLS LEGEND

- EXISTING WALL PARTITIONS
- TEMPORARY WALL PARTITIONS
- DEMOLISHED WALL PARTITIONS
- EXISTING DOOR
- DEMOLISHED DOOR

* SEE NOTES ON AD10A

FLOOR PLAN SYMBOLS LEGEND

- 101 — DOOR MARK
- WALL CORE MATERIAL
- WALL CORE WIDTH
- 1 1/2" 3 1/4" — WALL HEIGHT CODE
- WALL GYP LAYERS
- WALL MODIFIER CODE
- CW — GLAZED OPENING MARK

* SEE NOTES ON A101A

CEILING PLAN SYMBOLS LEGEND

- ACP-1 +8'-0" — CEILING MATERIAL DESIGNATION / CEILING HEIGHT
- P3 — ACCENT FINISH DESIGNATION
- GYPSUM BOARD CEILING/ SOFFIT - SEE MATERIAL FINISH LEGEND
- ACOUSTICAL CEILING PANEL SYSTEM - SEE MATERIAL FINISH LEGEND
- SURFACE LIGHT
- RECESSED LIGHT
- SURFACE LIGHT
- SUSPENDED OR PENDANT LIGHT
- RECESSED LIGHT
- STRIP LIGHT
- COVE LIGHT
- E — EXIT SIGN
- ACCESS PANEL
- RETURN AIR GRILLE
- SUPPLY AIR DIFFUSER
- EXHAUST AIR GRILLE
- SPEAKER
- D — SMOKE DETECTOR

* SEE NOTES ON A111A

FINISH PLAN SYMBOLS LEGEND

- Room name 101 — ROOM NUMBER
- W WVLF1 — WALL FINISH MATERIAL DESIGNATION
- B BF1 — WALL BASE MATERIAL DESIGNATION
- F FLR1 — FLOOR FINISH MATERIAL DESIGNATION
- REMARKS (OPTIONAL)
- WALL ACCENT DESIGNATION AND EXTENTS
- LVT — FLOOR MATERIAL DESIGNATION
- CT — FLOOR EDGE
- CPT1, CPT2, CPT3, LVT1, T1, TZ1

* SEE NOTES ON A131A

1 ADD — ROOF TYPES:
ROOF LEVEL A.1
60 MIL EPDM FULLY ADHERED
.25" DENSDECK PRIME
TAPERED POLYISOCYANURATE INSULATION 1/4" SLOPE, 1.5" START
METAL DECK

* SEE NOTES ON A103

ROOF LEGEND

PLAN MARK	DESCRIPTION	REFERENCE
1/4" FT.	TAPERED INSULATION	N/A
X	DESIGNATES ROOF TYPE, SEE ROOF NOTES.	N/A
KN1.01	KEYNOTES	N/A
1 A1.0	DESIGNATES DETAIL MARK *SEE DETAIL 1 ON SHEET A1.0*	N/A
	ROOF EDGE	REFER TO ROOF PLAN
	PARAPET WALL	REFER TO ROOF PLAN
	PRIMARY ROOF DRAIN W/ SUMP	DETAIL D3 &SHEET A521
OS	OVERFLOW SCUPPER	DETAIL G2 & B3 SHEET A521

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, IA 50266
515.223.9104 | www.shive-hattery.com
Iowa | Illinois | Indiana

PERFORMANCE ARTS, INC. DESIGN CONSULTANT INC.
PAD 103 N. WASHINGTON AVE. STREET, SUITE 201
DOWN CITY, IA 50309 USA
PATESIGNINC@GMAIL.COM

STILWELL JUNIOR HIGH 2022 RENOVATIONS AND ADDITION

WEST DES MOINES COMMUNITY SCHOOLS
1601 VINE ST. WEST DES MOINES, IA 50265

ADD 1	2021-12-22	ADDENDUM #1
ADD 2	2021-01-05	ADDENDUM #2

DRAWN: JLC
APPROVED: MJK
ISSUED FOR: BID DOCUMENTS
DATE: 2021-11-15
PROJECT NO: 4020000
FIELD BOOK:

BID ALTERNATES

A450

A RESOLUTION OF THE PLAN AND ZONING COMMISSION
NO. PZC-22-046

WHEREAS, pursuant to the provisions of Title 9, Zoning of the West Des Moines Municipal Code, the applicant and property owner, West Des Moines Community Schools, request approval of a Major Modification to Site Plan for the approximately 13.6-acre property located at 1601 Vine Street as depicted on the location map in the staff report. The applicant requests approval to construct an approximately 12,050-square foot building addition and outdoor recreation area.

WHEREAS, the Major Modification to Site Plan request complies with the findings stated in the applicable provisions of Title 9, the Comprehensive Plan and City Code.

NOW THEREFORE, the Plan and Zoning Commission of the City of West Des Moines recommends the City Council approve the Major Modification to Site Plan (MaM-004975-2020), subject to compliance with all the conditions of approval as stated in the staff report, including conditions added at the meeting, and attached hereto as Exhibit "A", if applicable.

PASSED AND ADOPTED on May 9, 2022.

Jennifer Drake, Chair
Plan and Zoning Commission

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 on May 9, 2022, by the following vote:

AYES: Costa, Crowley, Davis, Drake, Hatfield, Shaw

NAYS:

ABSTENTIONS:

ABSENT: Conlin

ATTEST: Michelle Riesenberg
Recording Secretary

Prepared by: Bryce Johnson, City of West Des Moines Development Services Dept., PO Box 65320, West Des Moines, Iowa 50265-0320 515-222-3620
When Recorded, Return to: City Clerk, City of West Des Moines, PO Box 65320, West Des Moines, IA 50265-0320

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WEST DES MOINES, APPROVING A MAJOR MODIFICATION TO ALLOW CONSTRUCTION OF A BUILDING ADDITION AND OUTDOOR RECREATION AREA AND MODIFY PARKING

WHEREAS, pursuant to the provisions of Title 9, Zoning of the West Des Moines Municipal Code, the applicant and property owner, West Des Moines Community Schools, request approval of the Major Modification to Site Plan for the approximately 13.6-acre property located at 1601 Vine Street and legally described in attached Exhibit 'B' for the purpose of constructing an approximately 12,050-square foot building addition and outdoor recreation area; and

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

WHEREAS, the Major Modification complies with findings stated in the applicable provisions of Title 9, Chapter 1, Subsection 8, the Comprehensive Plan and City Code; and

WHEREAS, on May 9, 2022, the Plan and Zoning Commission recommended to the City Council, by a 6-0 vote, for approval of the Major Modification; and

WHEREAS, on this day the City Council held a duly noticed meeting to consider the application for the Major Modification; and

WHEREAS, the City Council is accepting the streetlight agreement for future installation of street lights adjacent to Vine Street.

NOW, THEREFORE, The City Council does approve the Stilwell Junior High 2022 Renovations and Addition Major Modification (MaM-004975-2020), subject to compliance with all of the conditions of approval, including any conditions added at the meeting, 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 May 16, 2022.

_____

Russ Trimble, Mayor

ATTEST:

_____

Ryan Jacobson, City Clerk

I HEREBY CERTIFY that the foregoing resolution was duly adopted by the City Council of the City of West Des Moines, Iowa, at a regular meeting held on May 16, 2022, by the following vote.

Exhibit A: Conditions of Approval

1. All easements and agreements benefited to the City shall be executed by the School Board and approved and accepted by the City Council prior to the issuance of any building permits for the building additions.
2. The water easement be approved by the School Board and West Des Moines Water Works prior to the issuance of any building permits for the proposed building addition.
3. The Storm Water Management Facility Maintenance Agreement be executed by the School Board and approved and accepted by the City Council prior to the issuance of any building permits for the building additions.
4. As-builts of the storm water improvements shall be provided and the storm sewer accepted by the City Council prior to the issuance of any occupancy permit, including temporary occupancy.

Exhibit B: Legal Description

LOT 7 AND LOT 8, EXCEPT A PORTION OF SAID LOT 8 DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 8; THENCE N89°37'58"W ALONG THE SOUTH LINE OF SAID LOT 8, A DISTANCE OF 455.0 FEET TO THE SOUTHWEST CORNER OF SAID LOT 8, SAID POINT ALSO BEING ON THE EASTERLY RIGHT OF WAY LINE OF GRAND AVENUE, AS IT IS PRESENTLY ESTABLISHED; THENCE NORTHEASTERLY ALONG SAID RIGHT OF WAY LINE, ALSO BEING THE WESTERLY LINE OF SAID LOT 8, ON A 2232.00 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, WHOSE ARC LENGTH IS 25.72 FEET AND WHOSE CHORD BEARS N43°06'26"E, A DISTANCE OF 25.72 FEET; THENCE S44°46'50"E, 18.99 FEET; THENCE S89°37'58"E, 422.75 FEET TO A POINT ON THE EAST LINE OF SAID LOT 8; THENCE S13°13'58"E ALONG SAID LINE, 5.66 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.061 ACRES MORE OR LESS, ALL IN MOUNTAIN PLACE, AN OFFICIAL PLAT, WEST DES MOINES, POLK COUNTY, IOWA.

TOTAL SITE AREA: 590,498 SF