City of Carlisle, Iowa
Planning and Zoning Commission
Regular Meeting
October 19, 2020
7:00 P.M.
Carlisle City Hall

Join Zoom Meeting - https://us02web.zoom.us/j/9951930479 Meeting ID: 995 193 0479

One tap mobile – Call 1-929-205-6099, enter 995-193-0479# when prompted

We encourage all videoconferencing or calling in to let staff know who you are for the record and then mute your microphone or phone until you would like to speak to provide a better overall experience.

### Call to order

## **Determine quorum**

## **New Business and Action Items**

- 1. Discussion and Possible Action on Recommendation for Preliminary Plat for Summertime Potato Company
- 2. Discussion and Possible Action on Recommendation for Summertime Potato Company Site Plan
- 3. Discussion and Possible Action on Recommendation for Construction Drawings for Park Holdings Plat 1
- 4. Discussion and Possible Action on Recommendation for Final Plat for Park Holdings Plat 1
- 5. Discussion and Possible Action on Recommendation for Carlisle Vet Clinic Site Plan

## **Administrator/Engineer/Commission Reports**

## Adjournment

\*\* PLEASE NOTE THAT THIS AGENDA MAY CHANGE UP TO 24 HOURS PRIOR TO THE MEETING \*\*



October 15, 2020

Att: Jeffrey Gaddis, PLS Civil Engineering Consultants, Inc. 2400 86th Street, Suite #12 Des Moines, Iowa 50322

RE: Summertime Potato Company - Preliminary Plat & Site Plan

Carlisle, Iowa

FOX Ref No: 8666-20B.240

Thank you for submitting your project for review. The City is committed to assisting you with the completion of this project. FOX Engineering and the City Staff have completed the second review for the Summertime Potato Preliminary Plat & Site Plan dated October 12, 2020 and have the following comments:

### **General Notes (for P&Z/Council):**

- 1. The subject parcel has previously been rezoned from R-1 Single Family Residential District to M-1 Light Industrial District. This rezone is conditional such that if Summertime Potato does not acquire the property, the property will go back to its original zoning (R-1).
- 2. This review does NOT include the eastern access to the site as said access has yet to be permitted through the IDNR Floodplain Department. Any future construction of this access will require a Floodplain Development Permit from the City of Carlisle and IDNR/Army Corps approval (or sign off).
- 3. It is our understanding that the Developer is requesting the following Code waivers to be Considered by P&Z and Council:
  - Use of gravel surfacing for access from public right of way. Carlisle Code states that "In Industrial properties, the area from the front yard to the front face of the building shall be hard surfaced. The remaining area could be gravel surfaced."
    - i. Access from the SW Because this roadway (in Scotch Ridge) has yet to be provided, the Developer would like to defer paving the entrance driveway to the SW until such time as said roadway is provided.
    - ii. Access to the North Because the access to the north is not a primary entrance and is intended to be used seldom if at all (and is required for Fire Department secondary access), the Developer would like to keep the northern access as gravel.
    - iii. Access to the East Because the access to the east will go away once the primary roadway is provided (to the SW), and because much of this roadway is in 100-yr floodplain, the Developer would like to keep the eastern access as gravel.
  - b. Metal Siding for Storage Buildings Carlisle Code States that "Metal panels may be used on the walls of buildings in M-1, M-2, MM-1 and RM-1 districts that do not face or that are not visible from a public right-of way."
  - c. Public Sidewalks along SE 52<sup>nd</sup> Avenue and SE 72<sup>nd</sup> Avenue Code requires sidewalk in public right of way to be installed as part of development.
  - Parking & Internal Sidewalk Requirements During Phases 1 & 2 Code requires a minimum of two (2) off-street parking stalls be paved as part of development. Code also requires a paved sidewalk from the ADA parking space to structure.

**Discussion is necessary** as to whether the requested waivers shall be granted.

- 4. Please note that this site plan shall be subject to any comments and the approval of the Preliminary Plat and Final Plat for this property.
  - a. The Preliminary Plat is submitted as part of the site plan submittal.
  - b. The Final Plat has yet to be submitted. It is assumed that a Final Plat will be submitted at a later date, but prior to an occupancy permit being issued for the site.

### **General Comments**

- 5. The Owner will be responsible for preparation of all easement/right-of-way vacation documents for review by the City Attorney and consideration by Council. In addition, the release of the restrictions placed on Lot 'C' and Lot 26 shall be reviewed by the City Attorney to verify the proper method to remove the restriction/covenant from the property.
- 6. Please provide an IDNR Permit Application for review/signature for the east/west 8-inch water main provide for this plat. It is intended for this water main to be public.
- 7. An NPDES Permit and SWPPP narrative will be required (in addition to the erosion control plan) prior to construction.
- 8. The Fire Department has reviewed the site plan and have the following comments:
  - a. Please provide water main along the rear of the proposed/future structures to provide fire protection.
- 9. City building officials have reviewed the 2<sup>nd</sup> submittal and have the following comments:
  - a. Regarding the applicants request for waiver of parking: The code requires the accessible parking spaces based on the calculated occupancy and the number of spaces required regardless of the number of proposed full-time staff members on site.
  - b. Depending on types and quantities of items to be stored in the equipment storage building, a fire sprinkler system may be required.
  - c. Regarding egress doors for structures: Both buildings may require additional means on egress doors to comply with Chapter 10 of the IBC, all egress doors are required to have a hard surface walkway leading to the right of way. If onsite sidewalks are allowed to be omitted by a variance, safe dispersal areas may be used with hard surface walkways leading to them. Without seeing actual interior layouts, it is likely that additional egress doors will be required. It is up to the owner and their design professional to verify how many and where they need to be located. The exterior landings and sidewalks leading to the public ROW or safe dispersal areas need to be included on the site plan.
  - d. It was also noted that the drawings provided to indicate the fire hydrant coverage are incorrect and do not show the correct coverages per section 508.5 of the IFC. All portions of the building are required to be within 600' of a hydrant if the building is protected by a fire sprinkler system.
  - e. Verify that fire hydrant locations are in compliance with appendix C of the IFC for spacing along the fire access road and provide updated documentation with the information. The fire flow requirement was not able to be calculated as the building construction type and area of all the buildings to be built on site was not disclosed.
- 10. Please be prepared to discuss schedule of "future" improvements to the site.
- 11. All future pavement/granular surfacing shall be reviewed and approved by staff prior to construction. Any future structure improvements shall be approved by P&Z/Council prior to construction.
- 12. Please provide documentation for the IDNR Wetland Mitigation that has been approved.



### Sheets 3 & 4 - Preliminary Plat - Dimension & Topographic Survey:

- 13. Please review the rim information for SAN-EX-01. It should be approximately 785.8. Please revise.
- 14. Please provide a 10-ft PUE along the:
  - a. West side of the west boundary of Lot 3 of Kenneth Miller Subdivision.
  - b. West side of the south jog in the property lines between Lot 4 and Lot 5 of Kenneth Miller Subdivision.
  - North side of the west jog in the property lines between Lot 4 and Lot 6 of Kenneth Miller Acres.
- 15. The proposed overland flowage easement does not fully encompass the 100-yr floodplain or the wetland limits (which is not required but would be assumed). Please review the easement lines and revise to surround the 100-yr floodplain in the subject parcel. It is assumed that this floodplain easement will be recorded with the final plat after the roadway is installed.
- 16. 180.08, FOX has reviewed the proposed sanitary sewer within this development in relation to the Comprehensive Plan and have the following comments:
  - a. No public sanitary sewer is being proposed for this development other than the SW-303 Connection Manhole.
- 17. 180.08, FOX has reviewed the proposed water main within this development in relation to the Comprehensive Plan and have the following comments:
  - a. Please provide public improvement plans for the proposed 8" water main as required for IDNR public water supply permitting.
  - b. Please call out the 12"x8" TS&V on the east side of SE 52<sup>nd</sup> Street.
- 18. 180.08, FOX Engineering has reviewed the proposed sidewalks within this development in relation to the Comprehensive Plan and we have no comments.

### **Sheets 8-10 – Dimension Plans:**

- 19. Please list the square footages of the proposed structures.
- 20. The trash enclosure shown on Sheet 8 is made of Cedar or PVC Panels. Carlisle Code states that the screened garbage collection areas shall be of similar building material as the primary building (primary building elevations have yet to be provided). Further <u>discussion is necessary</u> regarding what is proposed and what the City will allow for trash enclosure for this site.
- 21. Please show the locations of man doors on these sheets.

### Sheets 21-23 - Utility Plans:

- 22. We understand that the site may require a sand/oil separator due to the amounts of soil that may enter the sanitary sewer waste system. This should be determined prior to construction after discussion with the wash plant manufacturer.
- 23. Please show the location of the post indicator valve on the utility sheets.
- 24. Please provide 225' radii for the hydrants along the east access. It appears that the hydrant near the NW corner of the Goodhue property could be moved westerly to provide more spacing.
- 25. Please dimension the erosion control placement throughout the site plan.



## Sheets 24-25 - Landscaping:

- 26. <u>Discussion is necessary</u> about the screening between the subject parcel and adjacent residential property to the north and east. It would be beneficial to bring photos of existing residential trees and possibly vantage point photos from the proposed site to clarify how far away the improvements will be relative to the residential properties.
- 27. The Developer has stated that future landscaping will be proposed as part of the future parking lot construction.
- 28. The Developer is not proposing any shrubs or earthen berms in the front yards as required by Code (165.06, 5, F, 9). However, considering the front yards are primarily drainageway, FOX recommends allowing the elimination of said requirement for this site as it is nearly impossible to provide berms in a drainage way.

### **Building Elevations**

- 29. Please provide building elevations for <u>all</u> proposed structures. The current submittal only includes the Ag Equipment Storage Building. If it is intended that the Warehouse and Loading Dock shall be reviewed and approved as part of this site plan, the elevations and floor plans need to be submitted.
- 30. It is highly recommended that you bring detailed building materials and color schemes with you to P & Z and Council for discussion.

### **Lighting Plan**

31. The owner has stated that there will be only wall packs over doors at this time (minimum impact design).

### **Storm Water Management Plan**

32. The north pond discharge is 50% higher than the allowed release rate for the 10-year event. Please revise.

<u>Please provide a letter addressing all comments on this comment letter and/or state what was modified on the site plan to address said comments.</u>

## **SITE PLAN REVIEW SCHEDULE:**

**PLANNING & ZONING:** October 19, 2020 at 7:00pm at the Carlisle City Hall

**COUNCIL MEETING:** October 26, 2020 at 6:30pm at the Carlisle City Hall

If you have any questions or concerns, please contact Mitch Holtz (515) 231-6005. The City reserves the right to modify or add to these comments.

FOX ENGINEERING ASSOCIATES, INC.

Mitch Holtz, P.E.

Copy to: Deven Markley, City Administrator



ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF CARLISLE

B. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THIS MEETING WITH THE CITY OF CARLISLE & FOX ENGINEERING.

THE CITY OF CARLISLE MUST BE NOTIFIED BY ALL CONTRACTORS 48 HOURS PRIOR TO COMMENCING WORK. CALL CITY OF CARLISLE (TOMMY THOMPSON 515-505-4299) & FOX ENGINEERING (MITCH HOLTZ 515-233-0000). D. ALL PERMITS (IDNR, IDOT, ARMY CORP., ETC.) SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION. ALL UTILITY CONTRACTORS AND/OR OWNERS SHALL BE RESPONSIBLE TO PROVIDE THE CITY OF CARLISLE

ALL SIGNAGE SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

ALL SITE LIGHTING SHALL NOT SPILL ONTO ADJACENT PROPERTIES OR RIGHT-OF-WAYS

THE CONTRACTOR IS REQUIRED TO PLACE A TEMPORARY PLUG IN THE DOWNSTREAM SANITARY MANHOLE PRIOR TO START OF CONSTRUCTION. THE PLUG SHALL BE REMOVED UPON CITY OF CARLISLE APPROVAL OF THE SANITARY SEWER MAIN CONSTRUCTION.

ALL 4"-6" SANITARY SEWER SERVICE PIPE MATERIAL SHALL BE SDR 23.5. 3. ALL 8"-15" SANITARY SEWER PIPE MATERIAL SHALL BE PVC SDR 26 TRUSS PIPE WITH CLASS "B" BEDDING UNLESS OTHERWISE NOTED ON THE DRAWINGS

. ALL MANHOLES SHALL HAVE INTERNAL CHIMNEY SEALS. 5. ALL MANHOLES SHALL HAVE A MINIMUM 4" SPACER RING AND THE TOTAL SPACER RING HEIGHT SHALL

NOT EXCEED 12" TOTAL. 5. ALL MANHOLES WITHIN PAVEMENT SHALL BE BOXED OUT.

WITH "AS-BUILT" DRAWINGS OF ALL IMPROVEMENTS.

MANHOLE STEPS ARE REQUIRED IN ALL SANITARY SEWER MANHOLES ). SEE SUDAS FOR TYPICAL SANITARY SEWER AND MANHOLE DETAILS.

9. ALL MANHOLES AND MANHOLE CASTINGS MUST BE ROTATED AS REQUIRED TO AVOID MANHOLE CONFLICTS WITH SURFACE PAVING, GRAVEL DRIVE, OR SIDEWALKS.

IO. SANITARY SEWER LINES 8" AND LARGER SHALL HAVE A DEFLECTION MANDREL TEST, PRESSURE TEST, AND TELEVISED. THE SYSTEM SHALL BE FLUSHED WITH WATER PRIOR TO TELEVISING.

# MATER NOTES

ALL WATER MAIN VALVES SHALL BE RESILIENT WEDGE GATE VALVES, WATER MAIN VALVE OPERATION SHALL BE COORDINATED WITH CITY OF CARLISLE WATER DEPARTMENT.

. PIPE MATERIALS: DUCTILE IRON IN ACCORDANCE WITH STANDARD SPECIFICATIONS OR AWWA C900 CLASS 150 PVC INSTALL NO. 10 THHN STANDARD COPPER TRACER WIRE UNDER PIPE, BRING TRACER WIRE TO SURFACE AT FIRE HYDRANTS, VALVES, AND NEW DEAD ENDS. A TRACER WIRE RECEPTACLE SHALL BE INSTALLED AT EACH HYDRANT LOCATION (FLUSH MOUNT VALCO OR APPROVED EQUIVALENT). CONNECT NEW TRACER TO EXISTING.

HYDRANT MINIMUM LEAD SHALL BE 2'. HYDRANTS TO BE MULLER SUPER CENTURION 250 MODEL A423 5-1/4" MAIN VALVE OPENING 3-WAY, 6" M.J. SHOE, I-PUMPER NOZZLE (4-I/2" NST) & 2-HOSE NOZZLES (2-I/2" NST), I-I/2" PENTAGON OPERATING NUT, OPEN LEFT, CHAINS ON . ALL NEW HYDRANTS SHALL BE IMMEDIATELY COVERED WITH A BLACK PLASTIC BAG OR EQUIVALENT COVERING UPON

INSTALLATION. HYDRANT COVERING REMOVAL WILL BE DETERMINED BY THE CITY OF CARLISLE. WATER MAIN TO HAVE 5 1/2 FEET BURY TYPICAL EXCEPT AT CRITICAL CROSSINGS OR AS SPECIFICALLY NOTED ON THE

. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE AS-BUILT LOCATION OF ALL WATER SERVICES.

WATER SERVICES TO BE MINIMUM I-INCH TYPE 'K' COPPER. IO. ALL WATER SERVICE CURB STOPS SHALL BE INSTALLED AS SHOWN ON PLANS.

HYDRANTS, MANHOLE COVERS, AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE ELEVATIONS. 12. THE CONTRACTOR SHALL PROTECT AND BACKFILL AROUND UNDERGROUND UTILITIES. BACKFILL SHALL BE IN SIX-INCH LAYERS, COMPACTED TO 95% STANDARD PROCTOR DENSITY AND WITHIN +4/-0% OF THE OPTIMUM MOISTURE CONTENT.

# CRITICAL CROSSING NOTES:

THE HORIZONTAL SEPARATION DISTANCE BETWEEN A WATER MAIN AND A SANITARY SEWER OR STORM SEWER MUST BE AT LEAST 10 FEET, UNLESS:

A. TOP OF SEWER IS AT LEAST IS INCHES BELOW BOTTOM OF WATER MAIN, AND B. THE SEWER IS PLACED IN SEPARATE TRENCH OR IN SAME TRENCH ON A BENCH OF UNDISTRUBED EARTH AT

MINIMUM HORIZONTAL SEPARATION OF 3 FEET FROM WATER MAIN C. WHEN IT IS IMPOSSIBLE TO OBTAIN REQUIRED HORIZONTAL CLEARANCE OF 3 FEET AND VERTICAL CLEARANCE OF 18 INCHES BETWEEN SEWERS AND WATER MAINS, SEWERS MUST BE CONSTRUCTED OF WATER

MAIN MATERIAL MEETING REQUIREMENTS OF SUDAS SPECIFICATIONS SECTION 5010, 2.01. HOWEVER PROVIDE LINEAR SEPARATION OF AT LEAST 2 FEET. THE VERTICAL SEPARATION DISTANCE BETWEEN A WATER MAIN AND A SANITARY SEWER OR STORM SEWER SHALL BE AT LEAST 18 INCHES WHEN MEASURED FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN: A. WHERE THE SANITARY SEWER MUST CROSS OVER THE WATER MAIN OR BELOW THE WATER MAIN BUT AT LESS THAN 18 INCHES, THE SANITARY SEWER MUST BE REPLACED WITH WATER MAIN MATERIAL 20 FEET CENTERED

WATER MAIN OR 6 INCHES BELOW THE WATER MAIN. B. WHERE THE STORM SEWER MUST CROSS OVER THE WATER MAIN OR BELOW THE WATER MAIN BUT AT LESS THAN 18 INCHES, THE STORM SEWER MUST BE REPLACED WITH WATER MAIN MATERIAL OR RCP WITH O-RING GASKETS 20 FEET CENTERED OVER THE WATER MAIN, AND MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18 INCHES OVER THE WATER MAIN OR 6 INCHES BELOW THE WATER MAIN.

OVER THE WATER MAIN AND MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18 INCHES OVER THE

ALL REINFORCE CONCRETE PIPE (RCP) IS CLASS III RCP . ALL FLARED END SECTIONS SHALL HAVE SUDAS 4030.221 F00TING & APRON GUARDS SUDAS 4030.224

4. ALL PAVEMENT INTAKES SHALL HAVE VANE GRATES. 5. 8-INCH STORM SEWER TO BE PVC SDR 35. 6. SM-513 AREA INTAKES SHALL HAVE STANDARD OPENINGS UNLESS OTHERWISE SPECIFIED ON THIS PLAN SET.

INTAKE CASTING TYPES SHALL FOLLOW THE SUDAS SM-603 SPECIFICATION. MANHOLE CASTING TYPES SHALL FOLLOW THE SUDAS SM-602 SPECIFICATION.

8. ALL F.E.S.'S SHALL HAVE CONCRETE FOOTINGS PER SUDAS FIGURE 4030.221. THE LAST THREE SECTIONS OF PIPE SHALL BE TIED & APRON GUARDS SHALL BE PROVIDED.

1. ALL STORM SEWER IS TO BE PRIVATE EXCEPT THOSE STORM SEWER DRIVEWAY CONNECTIONS WITHIN THE PUBLIC RIGHT-OF-WAY OR LABELED AS PUBLIC

# IO. PAVEMENT REINFORCEMENT IS REQUIRED WHERE EARTH COVER OVER STORM SEWERS IS LESS THAN 2 FEET.

STRIP A MINIMUM OF 6" OF TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT, INCLUDING WASTE AND/OR BORROW AREAS.ADDITIONAL STRIPPING MAY BE REQUIRED TO ADEQUATELY REMOVE THE ORGANICS AND SOFT

2. ALL AREAS WHICH ARE TO RECEIVE EMBANKMENT SHALL HAVE THE TOP 12-INCHES DISCED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

ALL AREAS TO RECEIVE STRUCTURAL FILL SHALL BE BENCHED.

4. ANY LOCALIZED AREAS WHICH CANNOT BE SATISFACTORILY COMPACTED OR WHICH SHOW EVIDENCE OF PUMPING ACTION SHALL BE UNDERCUT AND RECOMPACTED WITH ON-SITE FILL MATERIAL.

ALL FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95.0% OF STANDARD PROCTOR DENSITY WITH MOISTURE LIMITS SET FORTH IN THE SOILS REPORT.

. MAINTAIN ALL CUT AND FILL AREAS TO ACCOMMODATE SURFACE DRAINAGE GRADING CONTRACTOR SHALL STOCKPILE TOP SOIL FOR SHOULDERING & SEED/SOD BEDS.

8. FINISHED GRADE ON ALL NON-PAVED AREAS SHALL BE WITHIN 0.20 FOOT OF PLAN GRADE. PAVED AREAS SHALL BE . THE CONTRACTOR SHALL VERIFY THE LOCATION AND PROTECT ALL EXISTING UTILITIES AND STRUCTURES. DAMAGE TO

UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE UTILITY OWNER. IO. TOPSOIL SHALL BE SPREAD TO A MINIMUM THICKNESS OF 6-INCHES ON ALL LANDSCAPED AREAS AND 8-INCHES INSIDE

BACKFILL TO THE TOP OF ALL CURBS. I2. ALL ELEVATIONS ARE TO THE GUTTER OR TOP OF PAVEMENT FORM GRADE/SLAB GRADE UNLESS NOTED OTHERWISE. 13. ALL DEBRIS SPILLED ON CITY R.O.W. AND ADJOINING PROPERTY SHALL BE REMOVED BY OWNER/CONTRACTOR IN A

14. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2 5. ALL EXISTING TILE LINES ENCOUNTERED SHALL BE RESTORED OR ROUTED TO A STORM SEWER WHETHER ACTIVE OR NOT. NOTIFY THE CITY OF CARLISLE AND SHOW ON THE AS-BUILTS.



I. \*\*\*\*\* ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF CARLISLE SUPPLEMENTAL SPECIFICATIONS. \*\*\*\*\*

2. CIVIL ENGINEERING CONSULTANTS, INC SHALL NOT BE HELD LIABLE FOR ANY INJURIES, DAMAGES, OR GRIEVANCES THAT OCCUR WITH THIS PROJECT CONSTRUCTION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO TRENCH FAILURES FROM VARYING SOIL STRATA OR INJURIES CAUSED BY UNDERGROUND UTILITIES THAT ARE NOT SHOWN ON THE PRELIMINARY PLAT & SITE PLAN.

3. THE CONTRACTOR IS LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTION OR INACTION IN PROVIDING FOR STORM WATER FLOW

4. DURING CONSTRUCTION. DO NOT RESTRICT FLOWS IN EXISTING DRAINAGE CHANNELS, STORM SEWER, OR

5. THE CONTRACTOR SHALL ARRANGE FOR TESTING AND INSPECTION AND NOTIFY THE FOLLOWING AT LEAST ONE WEEK PRIOR TO BEGINNING CONSTRUCTION:

a. CITY OF CARLISLE DEVEN MARKLEY 515-989-3224

b. CITY OF CARLISLE PUBLIC WORKS, 515-989-4012

RON PETERSON, OWNER, 515-240-2729 d. JASON WEGNER, GENERAL CONTRACTOR ABSOLUTE GROUP, 515-657-3938

e. CIVIL ENGINEERING CONSULTANTS, INC. 515-276-4884 f. IOMA ONE-CALL I-800-292-8989

3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND LEASES NEEDED TO CONSTRUCT THIS PROJECT.

4. THE LOCATION OF EXISTING FACILITIES AND APPURTENANCES SHOWN ON THIS PLAN ARE BASED ON AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING TO DETERMINE EXACT FACILITIES LOCATIONS. CIVIL ENGINEERING CONSULTANTS, INC. DOES NOT GUARANTEE THE ACCURACY OF EXISTING FACILITIES AS SHOWN, OR THAT ALL EXISTING FACILITIES ARE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL PUBLIC AND PRIVATE UTILITY PROVIDERS SERVING THIS AREA, AND IOWA ONE CALL, TO DETERMINE THE EXTENT AND PRECISE LOCATION OF EXISTING FACILITIES BEFORE

5. THE CONTRACTOR SHALL PROTECT EXISTING ON-SITE FACILITIES FROM DAMAGE RESULTING FROM THE CONTRACTOR'S WORK. IF DAMAGE, BREAKAGE, INTERRUPTION OF SERVICE, ETC. OF EXISTING FACILITIES DOES OCCUR THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE UTILITY'S OWNER.

6. NO GEOTECHNICAL REPORT WAS PROVIDED FOR THIS PROJECT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE/EXCAVATION SAFETY AND COMPLIANCE WITH OSHA REGULATIONS. 7. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH MUTCD.

8. IN THE EVENT THAT THERE IS A DISCREPANCY BETWEEN THE QUANTITIES AND THE PLANS, THE DETAILED PLANS SHALL GOVERN.

9. ALL SITE UTILITY WORK SHALL HAVE A PLUMBING PERMIT AND BE INSPECTED AS PER CITY OF CARLISLE ENGINEERING SPECIFICATIONS.

IO. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR INSPECTIONS. II. ENGINEERING AND TECHNICAL DECISIONS MADE BY THE JURISDICTIONAL REPRESENTATIVE IDENTIFIED IN THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF CARLISLE SUPPLEMENTAL SPECIFICATIONS SHALL BE MADE UNDER THE ADVISEMENT AND CONCURRENCE OF A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF

IOWA. THESE DECISIONS SHALL BE DOCUMENTED AND FILED AS PART OF THE CITY'S RECORDS. 12. ADDITIONAL RIP RAP MAY BE REQUIRED BY CITY OF CARLISLE.

# **DEMOLITION NOTES:**

I. ALL DEMOLITION WORK SHALL COMPLY WITH SECTION 10.010 OF THE CURRENT EDITION OF THE SUDAS

# HORIZONTAL & VERTICAL DIMENSION NOTES:

I. ALL DIMENSIONS ARE TO BACK OF CURB, EDGE OF PAVEMENT TO EDGE OF PAVEMENT, OUTSIDE OF BUILDING WALL, AND TO PROPERTY LINES.

2. ALL ELEVATIONS ARE TO THE GUTTER, TOP OF SLAB (AKA TOP OF PAVEMENT FORM GRADE) OR FINISHED GRADE UNLESS NOTED OTHERWISE.

# SHEET INDEX SHEET # SHEET TITLE

COVER LEGEND & CONTROL POINTS

PRELIMINARY PLAT - DIMENSION PRELIMINARY PLAT -

TOPOGRAPHIC SURVEY OVERALL SHEET INDEX CONCEPT MASTER PLAN PHASING

**& SURFACING** DEMOLITION PLAN DIMENSION PLAN - SOUTHEAST

DIMENSION PLAN - SOUTHWEST DIMENSION PLAN - NORTHWEST GRADING & PAVING DETAILS

CONSTRUCTION STAGING PLAN GRADING PLAN - SOUTHEAST

GRADING PLAN-SOUTHWEST GRADING PLAN - NORTHWEST SANITARY DETAILS

STORM DETAILS STORM DETAILS

STORM DETAILS - CASTINGS

WATER MAIN DETAILS UTILITY PLAN - SOUTHEAST

UTILITY PLAN - SOUTHWEST UTILITY PLAN - NORTHWEST

LANDSCAPING - NORTH HALF LANDSCAPING - SOUTH HALF

WHOLESALE ESTABLISHMENT OR WAREHOUSE I SPACE PER EMPLOYEE: 34 EMPLOYEES

34 SPACES PROVIDED

THE OWNER OF THE LOT IS RESPONSIBLE FOR THE COSTS ASSOCIATED MITH PLACING FUTURE SIDEWALKS (ALONG SE 72ND AVENUE AND SE 52ND STREET). THE SIDEWALKS SHALL BE INSTALLED WITHIN 3 MONTHS OF NOTIFICATION FROM THE CITY.

# PUBLIC RIGHT-OF-WAY & EASEMENT VACATION NOTES:

I. LOTS 'B' & 'D', KENNETH MILLER SUBDIVISION, SHALL BE VACATED WITH THE RECORDING OF THE FINAL PLAT AND HAVING BEEN FORMERLY APPROVED BY THE CITY OF CARLISLE CITY COUNCIL.

2. THE PUBLIC UTILITY EASEMENTS AS SHOWN ON LOTS 2, 9-26, KENNETH MILLER SUBDIVISION, SHALL BE VACATED WITH THE RECORDING OF THE FINAL PLAT AND HAVING BEEN FORMERLY APPROVED BY THE CITY OF

CARLISLE CITY COUNCIL 3. THE LOT 'C' & LOT 26 RESTRICTION AS NOTED ON THE FACE OF THE PLAT SHALL BE VACATED AND OR RELEASED WITH THE RECORDING OF THE

# FEMA F.I.R.M. CLASSIFICATION

THIS PARCEL LIES WITHIN FLOOD ZONE 'X', 'X' (SHADED) & 'A' ALL BEING IDENTIFIED ON FEMA FLOOD INSURANCE RATE MAP NO. 19181C0069G WITH EFFECTIVE DATE OF NOVEMBER 16, 2018

COMMUNITY NUMBER PANEL SUFFIX • CITY OF CARLISLE 190274 0069 G • WARREN COUNTY 190912 0069 G

\*\*\* FEMA MAPS ARE SUBJECT TO CHANGE \*\*\* PLEASE SEE FEMA FLOOD MAP SERVICE CENTER FOR CURRENT MAPS

MEB: WWW.FEMA.GOV MAIL: FEMA REGION VII, 9221 WARD PARKWAY, KANSAS CITY, MO 64114 PHONE: 1-877-336-2627

EMAIL: FEMAMAPSPECIALIST@RISKMAPCDS.COM

# UTILITY PROVIDERS

ELECTRIC - CARLISLE MUNICIPAL ELECTRIC NATURAL GAS - MIDAMERICAN ENERGY COMPANY

COMMUNICATIONS - MEDIACOM, CENTURYLINK, IOWA COMMUNICATIONS NETWORK, UPN SANITARY - CITY OF CARLISLE STORM - CITY OF CARLISLE WATER - CITY OF CARLISLE

# PHASING SCHEDULE

AGRICULTURAL EQUIPMENT STORAGE BUILDING

 WASH PLANT & COLD STORAGE BUILDING • 3 STALL LOADING DOCK

• TEMPORARY GRAVEL DRIVE AISLE

• PERMANENT GRAVEL EMS ENTRANCE DRIVE TO THE NORTH • SPRING 2021 SITE PLAN AMENDMENT FOR TEMPORARY GRAVEL ENTRANCE TO SE 52ND STREET UPON APPROVAL OF ARMY CORPS OF ENGINEERS JOINT 404

PHASE 2 (2022-2024)

• COLD STORAGE BUILDING ADDITIONS ONLY

COLD STORAGE BUILDING ADDITION

PARKING LOT AND DRIVEWAY PAVING

(CITY PROVIDES BITTERSWEET DRIVE CONNECTION AT THE SW PROPERTY CORNER) THE FUTURE CORPORATE OFFICE SITE PLAN WILL INCLUDE: CORPORATE OFFICE BUILDING

SE 52ND STREET TEMPORARY GRAVEL DRIVE REMOVAL

PROPERTY OWNER: JJJJ FAMILY FARM LLC ATTN: JERILYNN D. MICKELSON 13177 CEDARWOOD AVENUE CLIVE, IA 50325-8815

APPLICANT:

SUMMERTIME POTATO COMPANY ATTN: RON & BECKY PETERSON 2001 EAST GRAND AVENUE DES MOINES, IA 50317 515-265-9865

PROPERTY LOCATION: 5031 SE 75TH AVENUE CARLISLE, IA 50047

PROJECT MANAGER: JEFFREY A. GADDIS, PLS CIVIL ENGINEERING CONSULTANTS, INC. 2400 86TH STREET, SUITE 12

URBANDALE, IA 50322

515-276-4884 EXT 221

PROFESSIONAL LAND SURVEYOR: JEFFREY A. GADDIS, PLS CIVIL ENGINEERING CONSULTANTS, INC 2400 86TH STREET, SUITE 12 URBANDALE, IA 50322

# PROFESSIONAL ENGINEER:

515-276-4884 EXT 221

CODY WEAVER, PE CIVIL ENGINEERING CONSULTANTS, INC 2400 86TH STREET, SUITE 12 URBANDALE, IA 50322 515-276-4884

LOTS 'B', 'C', 'D', AND LOTS 2, 9, II THROUGH 26, KENNETH MILLER SUBDIVISION, AN OFFICIAL PLAT RECORDED IN BOOK 'R', PAGE 58 AT THE POLK COUNTY RECORDER'S OFFICE, CITY OF CARLISLE, POLK COUNTY, IOWA

LAND AREA: 1,127,603 SQUARE FEET 25.89 ACRES

LAND USE: EXISTING: AGRICULTURAL

PROPOSED: AGRICULTURAL / STORAGE M-I: LIGHT INDUSTRIAL DISTRICT

ZONING BULK REGULATIONS: LOT AREA MINIMUM: 10,000 S.F

LOT WIDTH MINIMUM: 75' SETBACKS:

 FRONT: 45' • SIDEYARD: IO' \*\* \* ALL YARDS IN THE M-I DISTRICT ABUTTING A PUBLIC THOROUGHFARE SHALL BE CONSIDERED FRONT YARDS AND

SHALL COMPLY WITH THE REQUIREMENTS FOR A FRONT YARD. \*\* (M-I DISTRICT ADJACENT TO ANY R DISTRICT, THE MINIMUM SETBACK SHALL BE 50 FEET FROM THE M-I DISTRICT BOUNDARY LINE, EXCEPT IN SUCH CASES WHERE THE DISTRICT LINE IS CONSTRUED TO FOLLOWING THE CENTERLINE OF A PUBLIC THOROUGHFARE, WHEREIN SUCH CASES SHALL BE DETERMINED BY THE PROVISIONS FOR THE REQUIRED MINIMUM

FRONT YARD DEPTH. MAXIMUM BUILDING HEIGHT: 45'

CONSTRUCTED OR USED.

I. THE BEARINGS SHOWN ON THIS PRELIMINARY PLAT & SITE PLAN ARE BASED ON THE WEST LINE OF NEX SWY OF SECTION 33-78-23 HAVING AN BEARING ASSUMED AS \$87°07'09"E AS DETERMINED FROM THE IONA STATE PLANE 1983 SOUTH ZONE CALCULATED FROM THE IOWA DEPARTMENT OF TRANSPORTATION REAL-TIME NETWORK

2. THE UNADJUSTED ERROR OF CLOSURE IS NOT GREATER THAN 1:10000 FOR SUBDIVISION BOUNDARIES AND IS NOT GREATER THAN 1:5000 FOR INDIVIDUAL

3. THIS PARCEL MAY BE SUBJECT TO EASEMENTS OF RECORD. NO TITLE WORK WAS PERFORMED BY THIS SURVEYOR. 4. MONUMENTS TO BE SET WITHIN I YEAR OF RECORDING DATE.

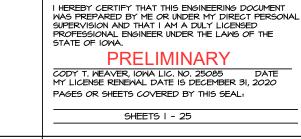
• THIS IS A SUBDIVISION PLAT FOR THE PURPOSE OF CREATING A

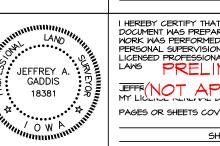
SINGLE LOT AND VACATING THE EXISTING STREET LOTS &

ASSOCIATED PUBLIC UTILITY EASEMENTS THAT WERE NEVER

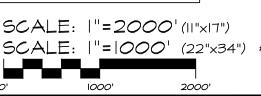
5. EASEMENTS SHOWN WERE TRANSCRIBED FROM THE FOLLOWING RECORDED • KENNETH MILLER SUBDIVISION, AN OFFICIAL PLAT RECORDED IN BOOK 'R', PAGE 58 AT THE POLK COUNTY RECORDER'S OFFICE.

 KENNETH MILLER ACRES, AN OFFICIAL PLAT RECORDED IN BOOK 'R' PAGE 52 AT THE POLK COUNTY RECORDER'S OFFICE. PURPOSE OF SURVEY



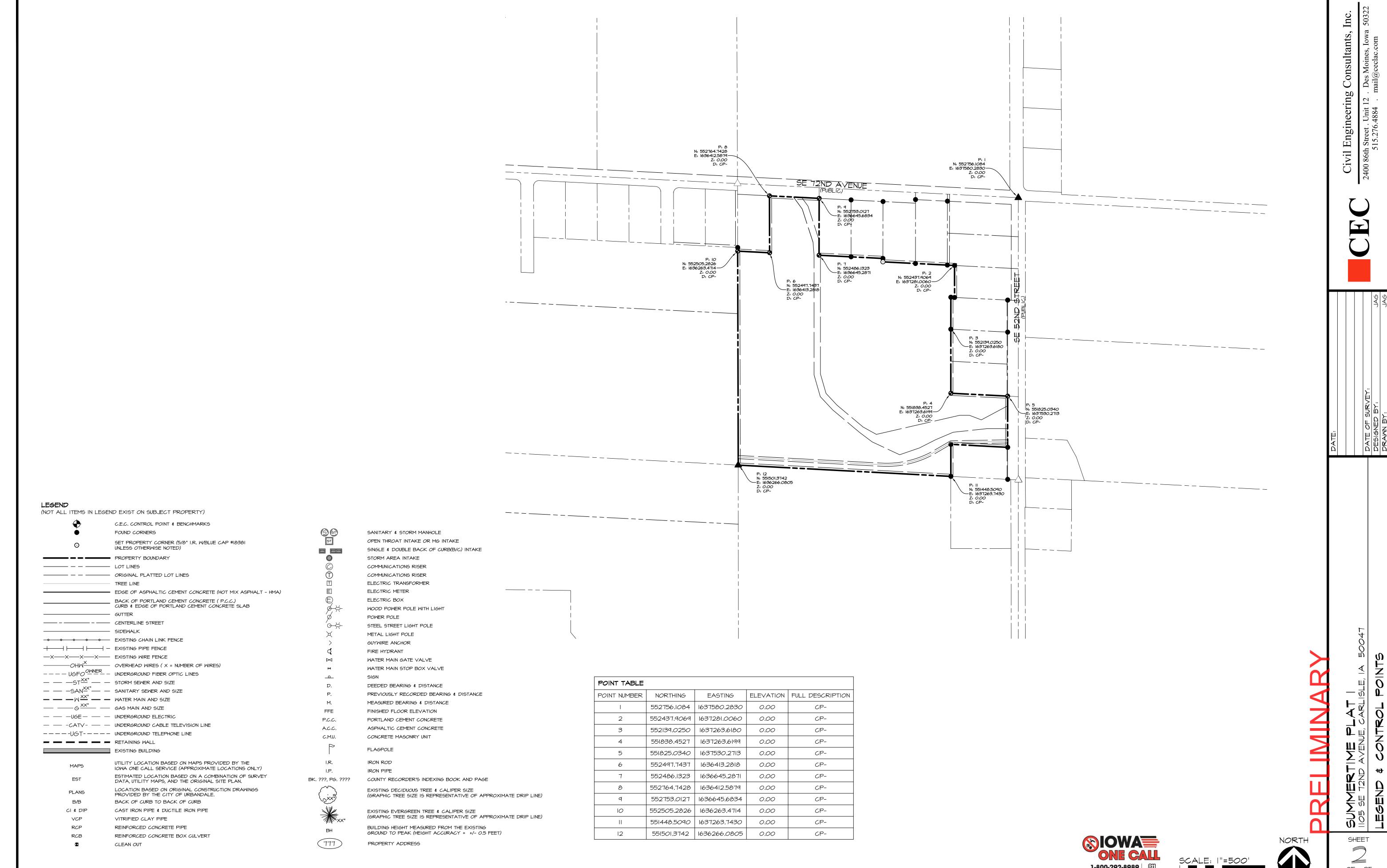


HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY ICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LICENSED PROFESSIONAL ET MARY October 12, 2020 MY LICENSE PARE PARE DATE PAGES OR SHEETS COVERED BY THIS SEAL:



SHEET *O*F 25

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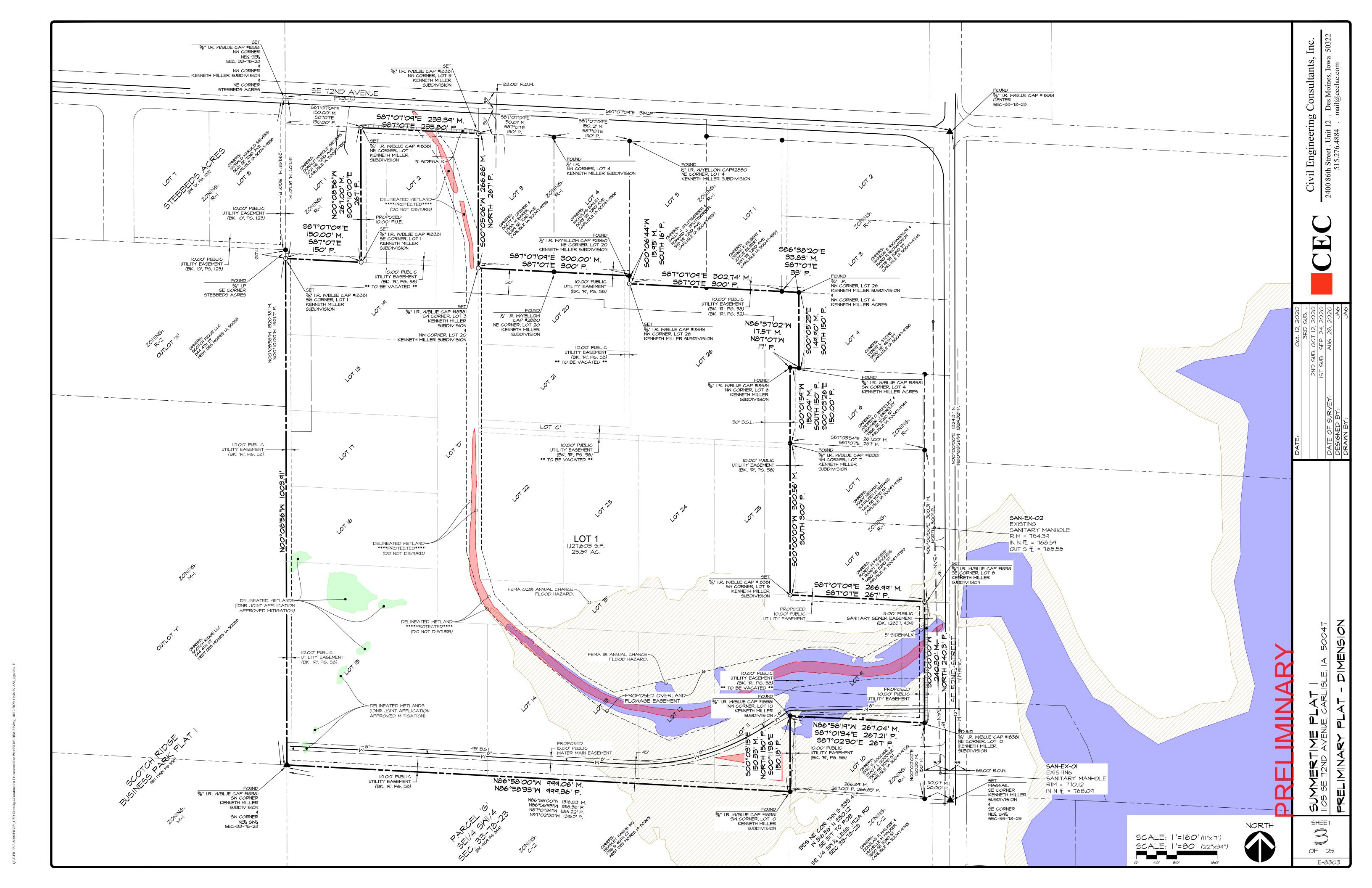


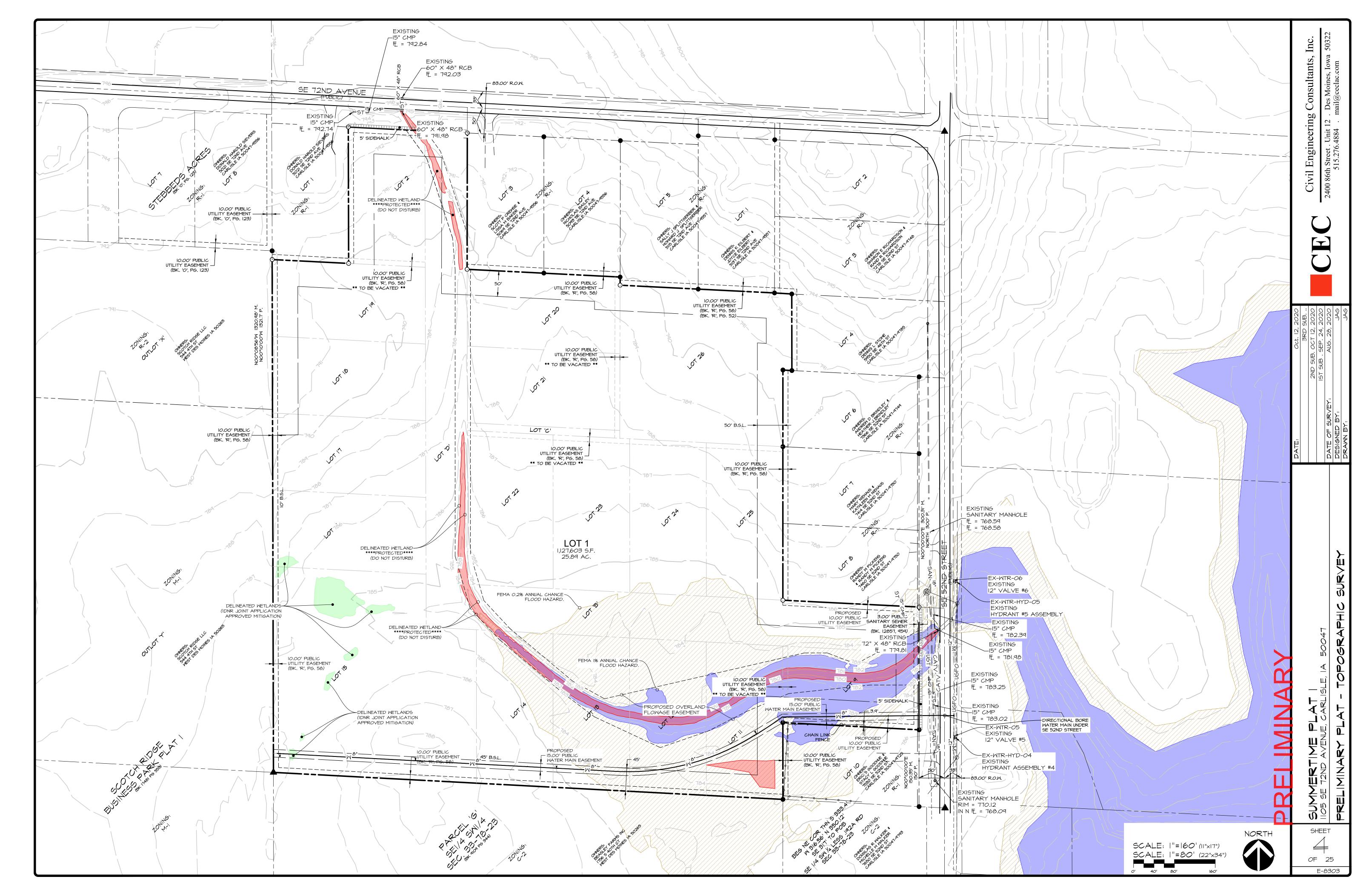




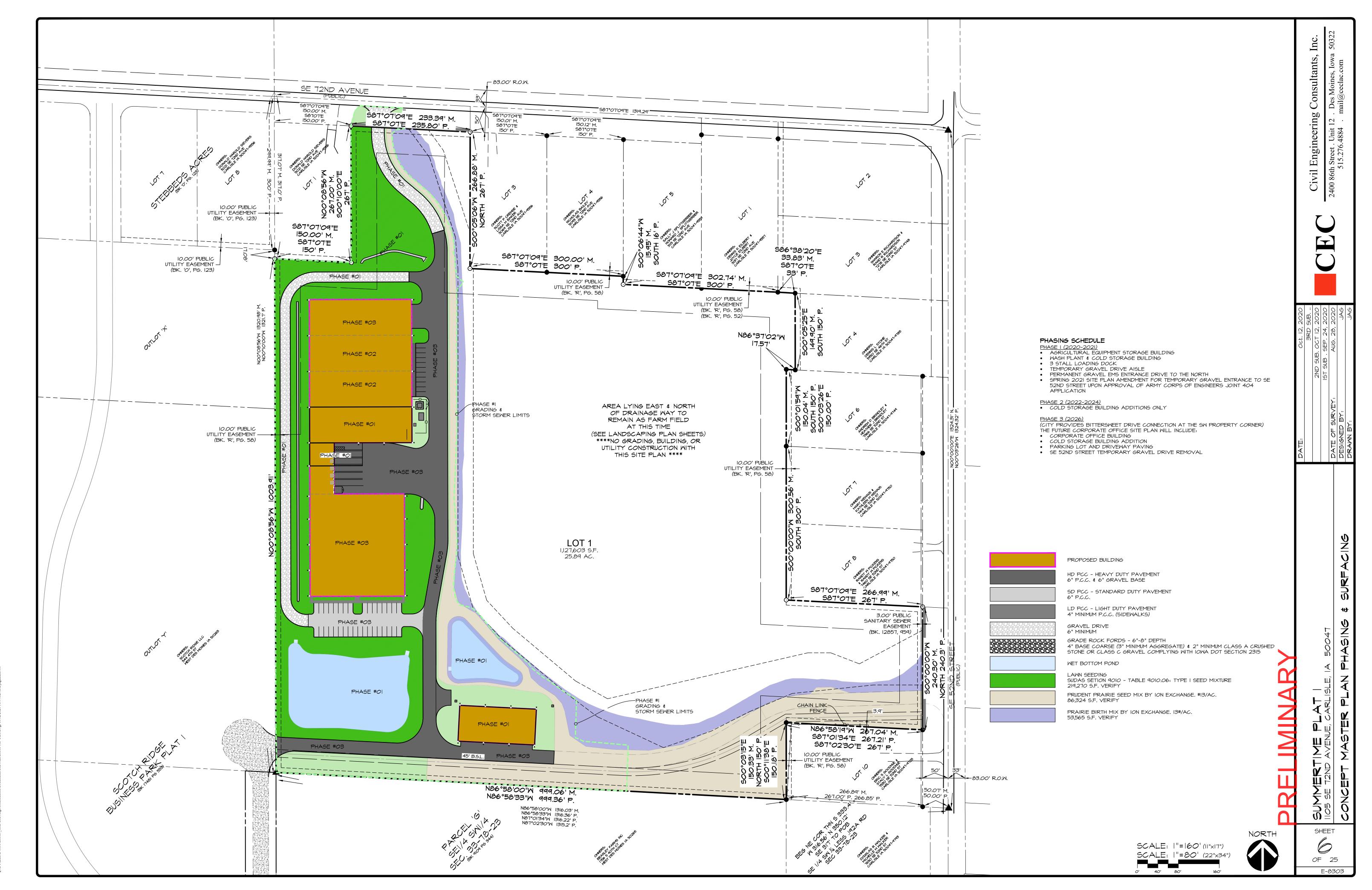


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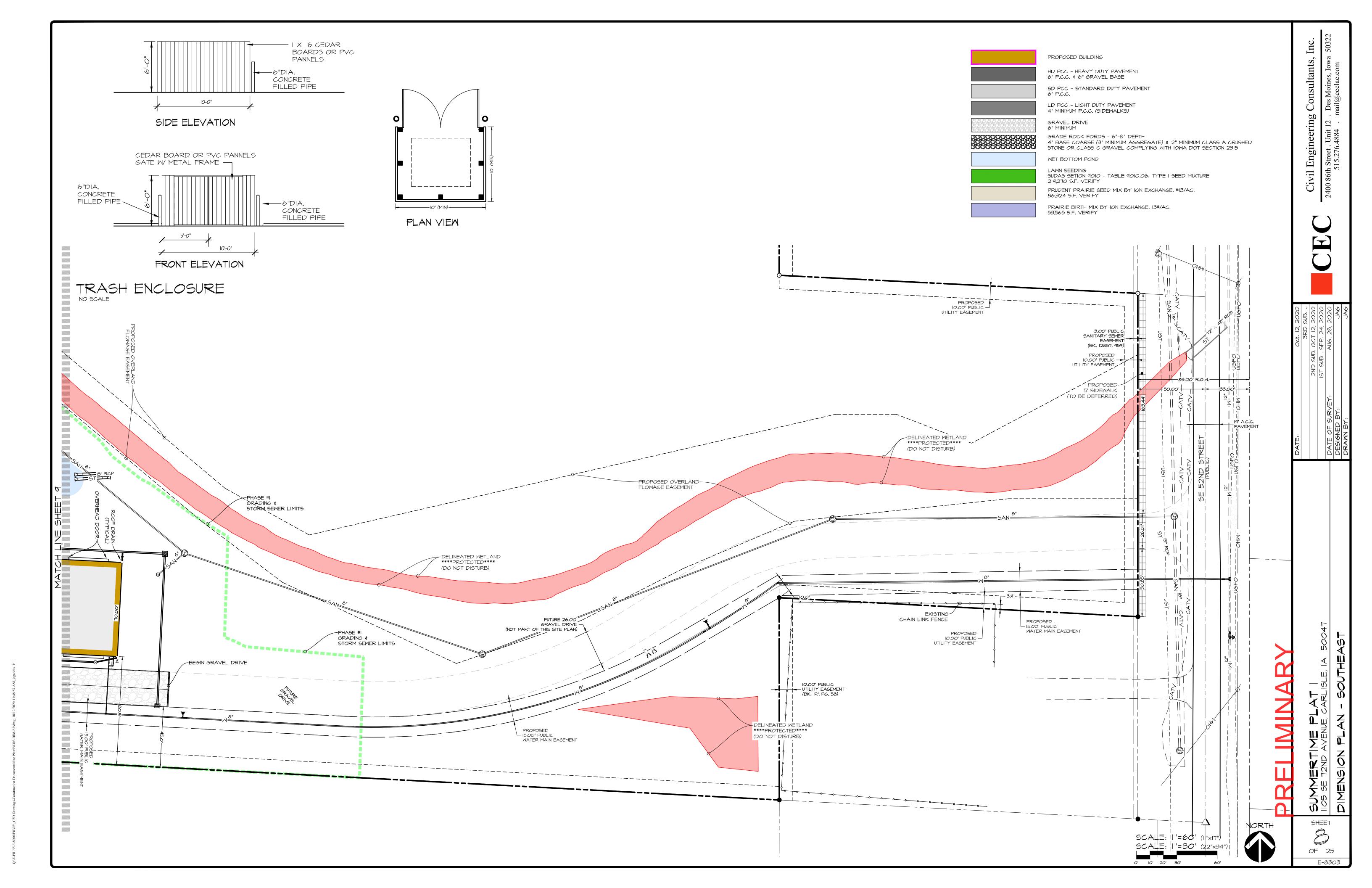


Q?E-FILES/E-8000/E8303/\_C3D Drawings/Construction Documents/Site Plan/E8303 OVERALL SHEET LAYOUT.dwg, 10/12/2020 11:47:28 AM, jagad



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# GENERAL NOTES:

- I. \*\*\*\*\* ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF
- CARLISLE SUPPLEMENTAL SPECIFICATIONS. \*\*\*\*\* 2. CIVIL ENGINEERING CONSULTANTS, INC SHALL NOT BE HELD LIABLE FOR ANY INJURIES, DAMAGES, OR GRIEVANCES THAT OCCUR WITH THIS PROJECT CONSTRUCTION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO TRENCH FAILURES FROM VARYING SOIL STRATA OR INJURIES CAUSED BY UNDERGROUND UTILITIES
- THAT ARE NOT SHOWN ON THE PRELIMINARY PLAT & SITE PLAN. 3. THE CONTRACTOR IS LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR
- ACTION OR INACTION IN PROVIDING FOR STORM WATER FLOW 4. DURING CONSTRUCTION. DO NOT RESTRICT FLOWS IN EXISTING DRAINAGE CHANNELS, STORM SEWER, OR
- 5. THE CONTRACTOR SHALL ARRANGE FOR TESTING AND INSPECTION AND NOTIFY THE FOLLOWING AT
- LEAST ONE WEEK PRIOR TO BEGINNING CONSTRUCTION: a. CITY OF CARLISLE DEVEN MARKLEY 515-989-3224
- b. CITY OF CARLISLE PUBLIC WORKS, 515-989-4012
- c. RON PETERSON, OWNER, 515-240-2729

f. IOMA ONE-CALL I-800-292-8989

- d. JASON WEGNER, GENERAL CONTRACTOR ABSOLUTE GROUP, 515-657-3938
- e. CIVIL ENGINEERING CONSULTANTS, INC. 515-276-4884
- 3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND LEASES NEEDED TO CONSTRUCT THIS PROJECT.
- 4. THE LOCATION OF EXISTING FACILITIES AND APPURTENANCES SHOWN ON THIS PLAN ARE BASED ON AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING TO DETERMINE EXACT FACILITIES LOCATIONS. CIVIL ENGINEERING CONSULTANTS, INC. DOES NOT GUARANTEE THE ACCURACY OF EXISTING FACILITIES AS SHOWN, OR THAT ALL EXISTING FACILITIES ARE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL PUBLIC AND PRIVATE UTILITY PROVIDERS SERVING THIS AREA, AND IOMA ONE CALL, TO DETERMINE THE EXTENT AND PRECISE LOCATION OF EXISTING FACILITIES BEFORE
- 5. THE CONTRACTOR SHALL PROTECT EXISTING ON-SITE FACILITIES FROM DAMAGE RESULTING FROM THE CONTRACTOR'S WORK. IF DAMAGE, BREAKAGE, INTERRUPTION OF SERVICE, ETC. OF EXISTING FACILITIES DOES OCCUR THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE UTILITY'S OWNER.
- 6. NO GEOTECHNICAL REPORT WAS PROVIDED FOR THIS PROJECT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE/EXCAVATION SAFETY AND COMPLIANCE WITH OSHA REGULATIONS.
- 7. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH MUTCD.
- 8. IN THE EVENT THAT THERE IS A DISCREPANCY BETWEEN THE QUANTITIES AND THE PLANS, THE DETAILED PLANS SHALL GOVERN.
- 9. ALL SITE UTILITY WORK SHALL HAVE A PLUMBING PERMIT AND BE INSPECTED AS PER CITY OF CARLISLE ENGINEERING SPECIFICATIONS.
- IO. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR INSPECTIONS.
- II. ENGINEERING AND TECHNICAL DECISIONS MADE BY THE JURISDICTIONAL REPRESENTATIVE IDENTIFIED IN THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF CARLISLE SUPPLEMENTAL SPECIFICATIONS SHALL BE MADE UNDER THE ADVISEMENT AND CONCURRENCE OF A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF IOWA. THESE DECISIONS SHALL BE DOCUMENTED AND FILED AS PART OF THE CITY'S RECORDS.
- 12. ADDITIONAL RIP RAP MAY BE REQUIRED BY CITY OF CARLISLE.

## DEMOLITION NOTES:

CONSTRUCTION BEGINS.

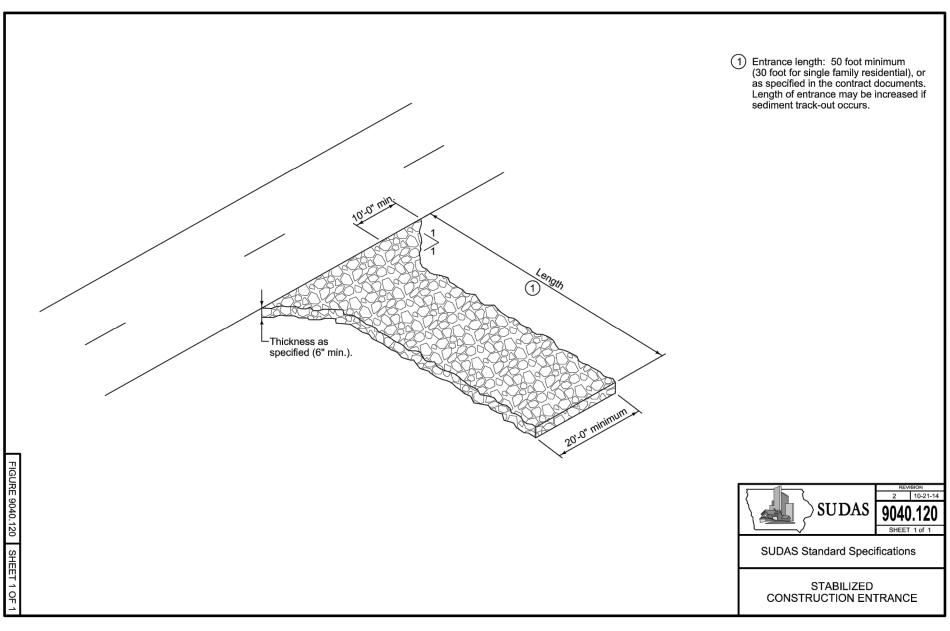
I. ALL DEMOLITION WORK SHALL COMPLY WITH SECTION 10.010 OF THE CURRENT EDITION OF THE SUDAS SPECS.

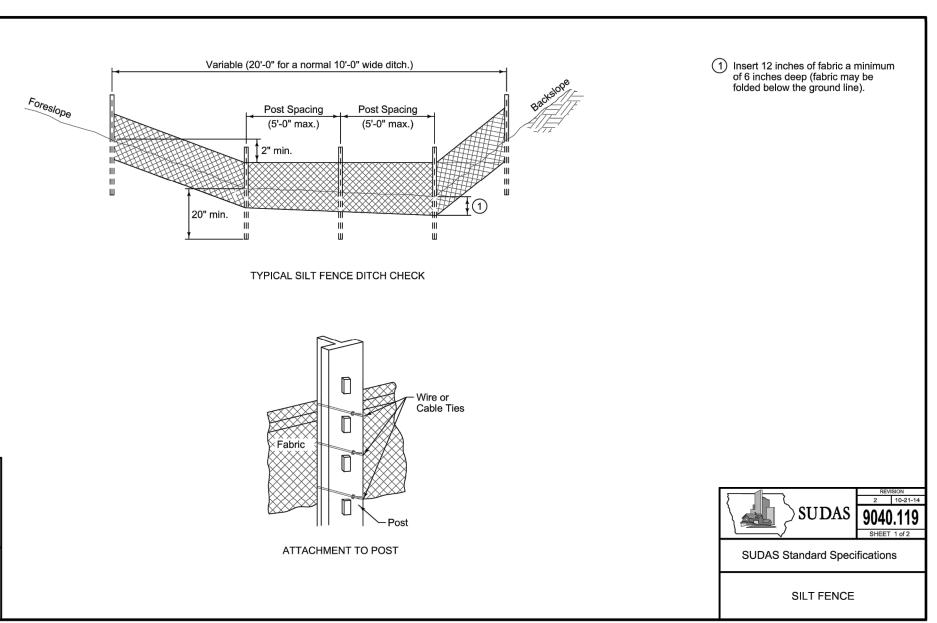
# HORIZONTAL & VERTICAL DIMENSION NOTES:

- . ALL DIMENSIONS ARE TO BACK OF CURB, EDGE OF PAVEMENT TO EDGE OF PAVEMENT, OUTSIDE OF BUILDING WALL, AND TO PROPERTY LINES.
- 2. ALL ELEVATIONS ARE TO THE GUTTER, TOP OF SLAB (AKA TOP OF PAVEMENT FORM GRADE) OR FINISHED GRADE UNLESS NOTED OTHERWISE.

RIGHT OF WAY.

- I. STRIP A MINIMUM OF 6" OF TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT, INCLUDING WASTE AND/OR BORROW AREAS, ADDITIONAL STRIPPING MAY BE REQUIRED TO ADEQUATELY REMOVE THE ORGANICS AND SOFT
- 2. ALL AREAS WHICH ARE TO RECEIVE EMBANKMENT SHALL HAVE THE TOP 12-INCHES DISCED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- 3. ALL AREAS TO RECEIVE STRUCTURAL FILL SHALL BE BENCHED.
- 4. ANY LOCALIZED AREAS WHICH CANNOT BE SATISFACTORILY COMPACTED OR WHICH SHOW EVIDENCE OF PUMPING ACTION SHALL BE UNDERCUT AND RECOMPACTED WITH ON-SITE FILL MATERIAL.
- 5. ALL FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95.0% OF STANDARD PROCTOR DENSITY WITH MOISTURE LIMITS SET FORTH IN THE SOILS REPORT.
- 6. MAINTAIN ALL CUT AND FILL AREAS TO ACCOMMODATE SURFACE DRAINAGE.
- GRADING CONTRACTOR SHALL STOCKPILE TOP SOIL FOR SHOULDERING & SEED/SOD BEDS. 8. FINISHED GRADE ON ALL NON-PAVED AREAS SHALL BE WITHIN 0.20 FOOT OF PLAN GRADE. PAVED AREAS SHALL BE
- WITHIN O.IO FOOT 9. THE CONTRACTOR SHALL VERIFY THE LOCATION AND PROTECT ALL EXISTING UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE, TO THE
- SATISFACTION OF THE UTILITY OWNER. 10. TOPSOIL SHALL BE SPREAD TO A MINIMUM THICKNESS OF 6-INCHES ON ALL LANDSCAPED AREAS AND 8-INCHES INSIDE
- II. BACKFILL TO THE TOP OF ALL CURBS. 12. ALL ELEVATIONS ARE TO THE GUTTER OR TOP OF PAVEMENT FORM GRADE/SLAB GRADE UNLESS NOTED OTHERWISE.
- 13. ALL DEBRIS SPILLED ON CITY R.O.W. AND ADJOINING PROPERTY SHALL BE REMOVED BY OWNER/CONTRACTOR IN A
- 14. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2
- 15. ALL EXISTING TILE LINES ENCOUNTERED SHALL BE RESTORED OR ROUTED TO A STORM SEWER WHETHER ACTIVE OR NOT. NOTIFY THE CITY OF CARLISLE AND SHOW ON THE AS-BUILTS.





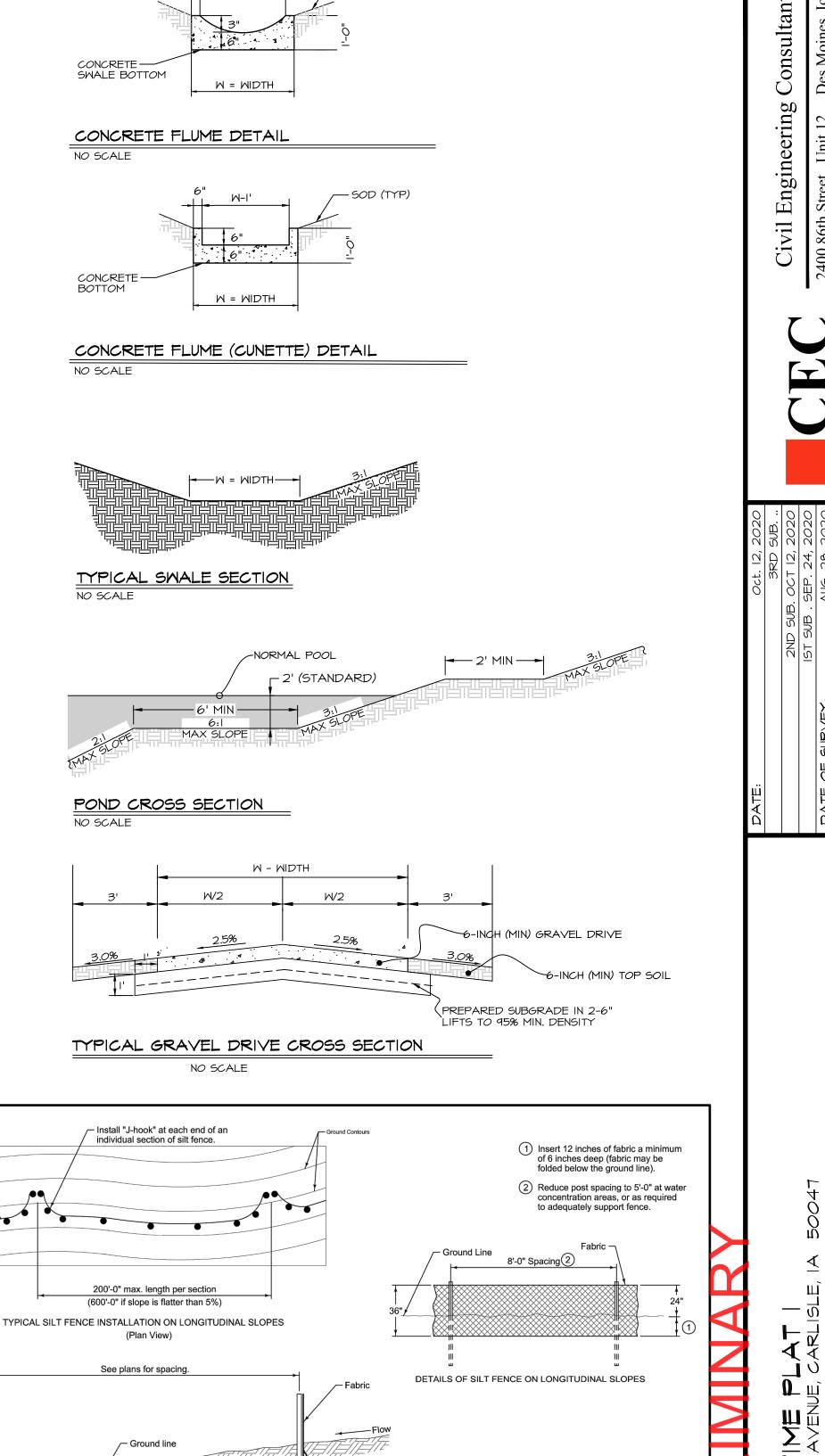
Install parallel to

Fence Post -4'-0" min.

TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES

(Profile View)

ground contour.



SUDAS 9040.119

SHEET

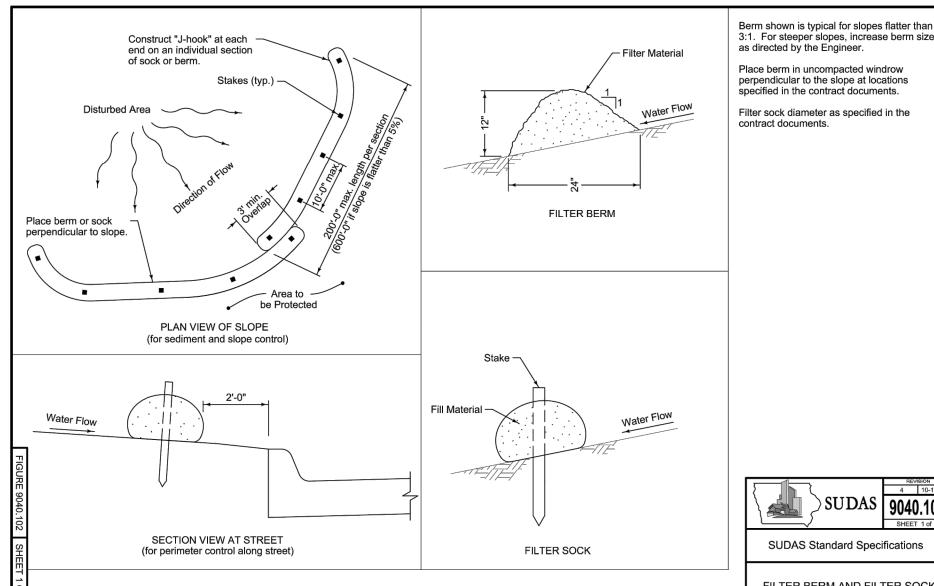
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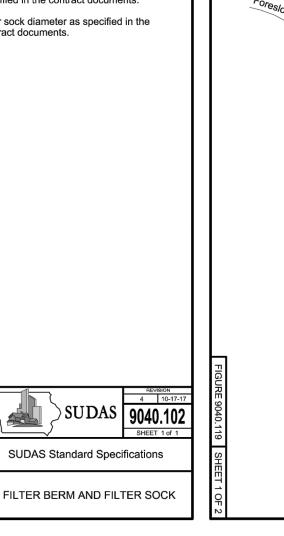
SUDAS Standard Specifications

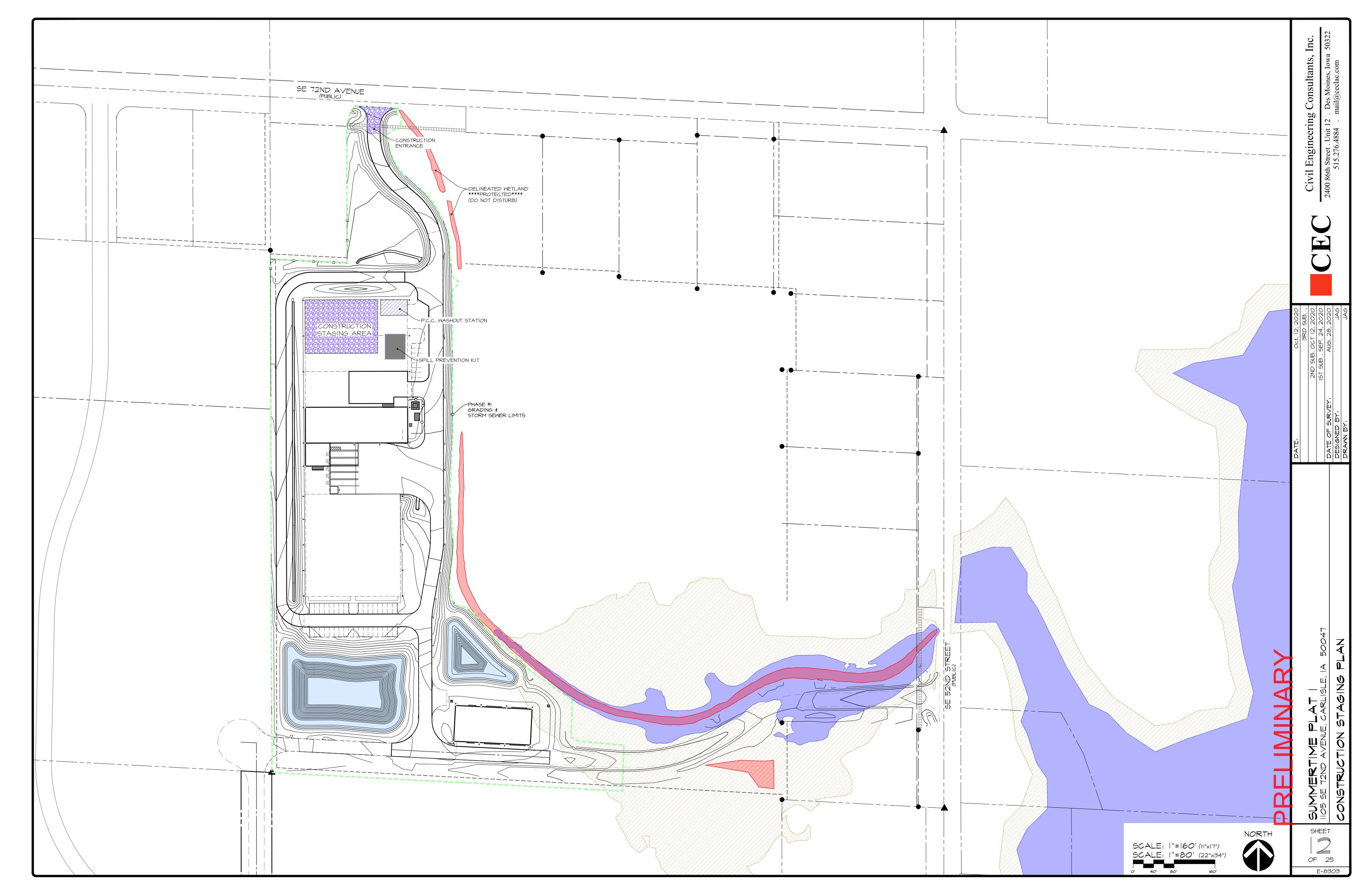
SILT FENCE

- SOD (TYP)

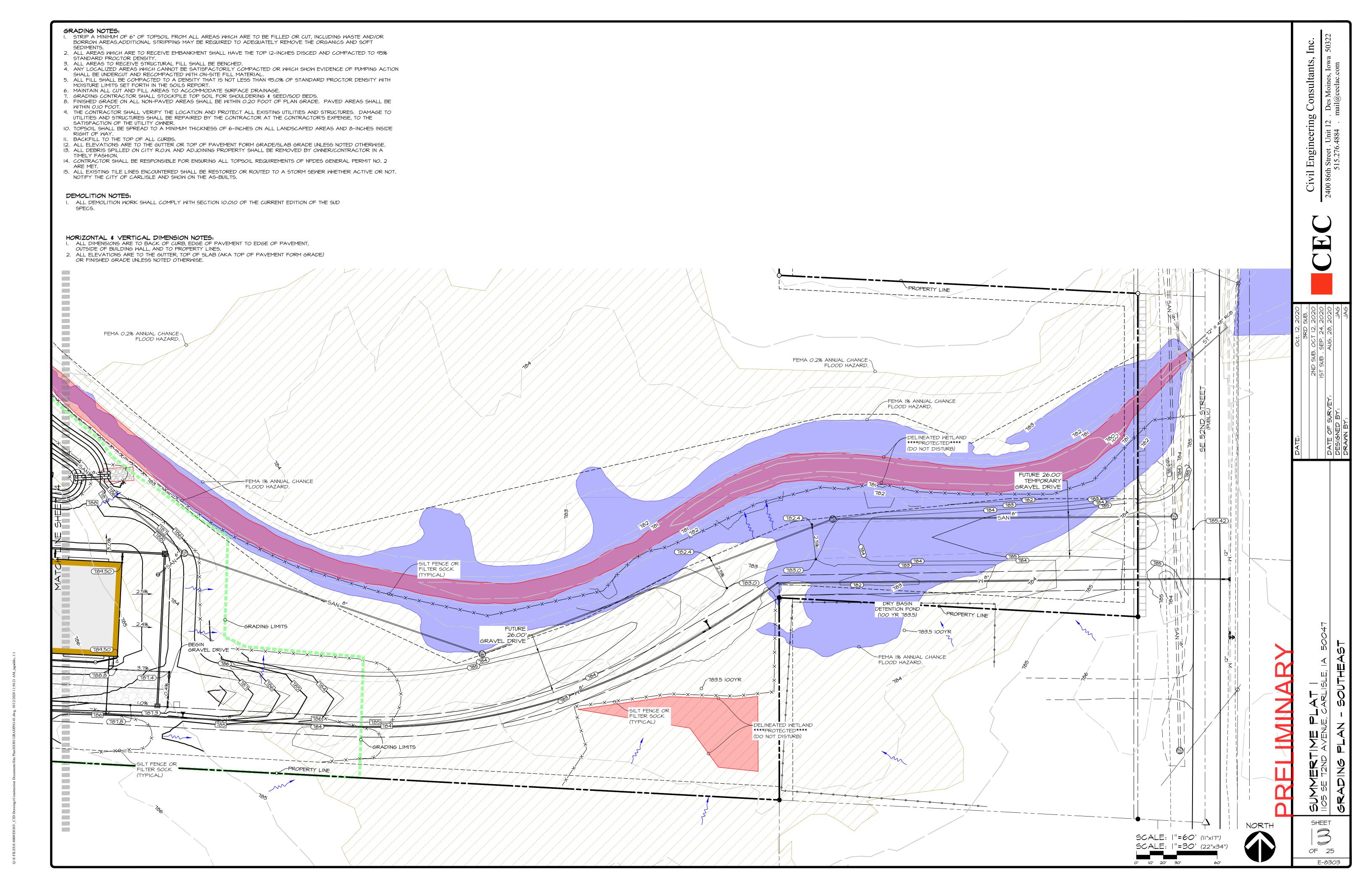


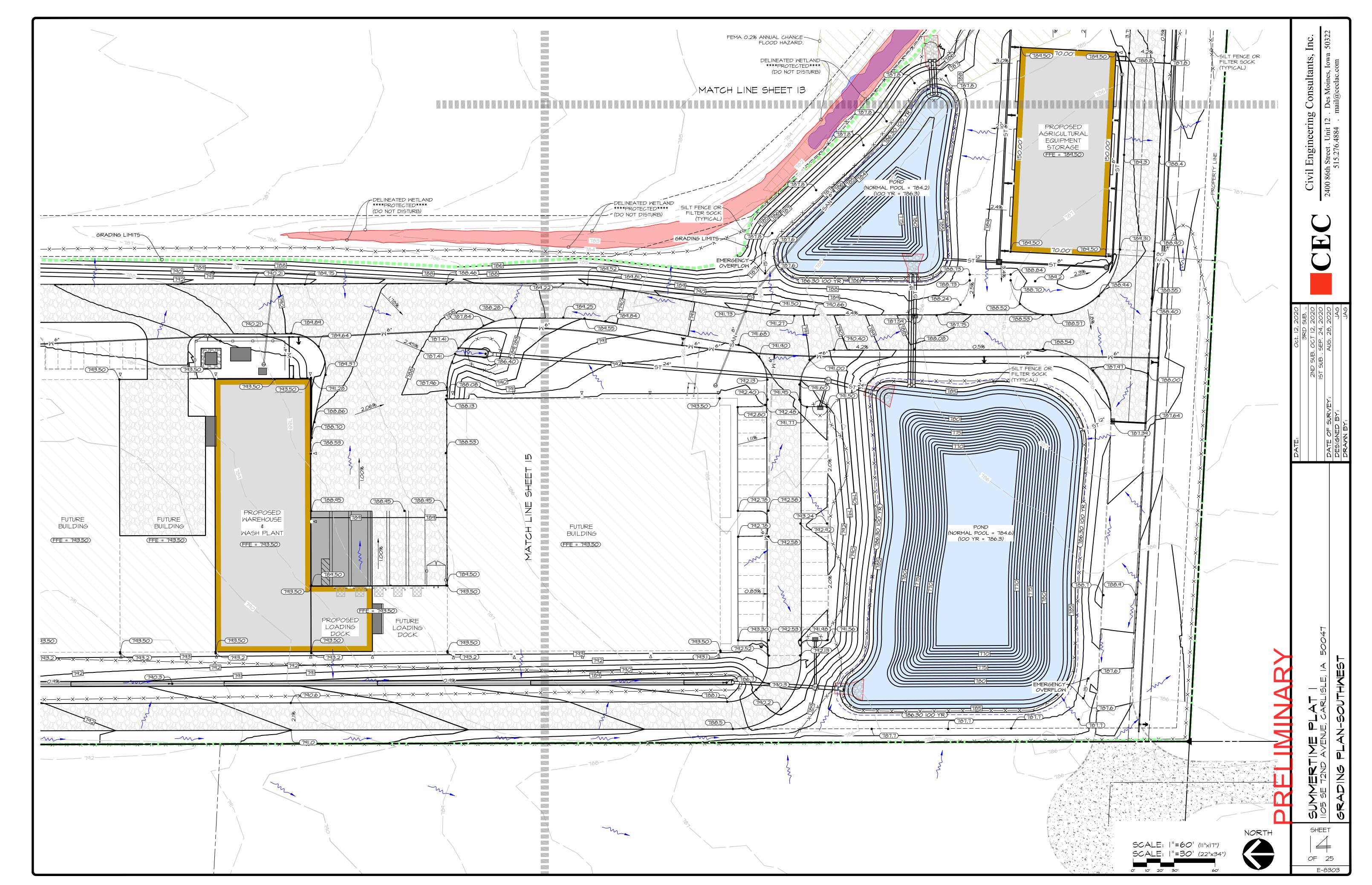
TYPICAL PLACEMENT OF BERM OR SOCK





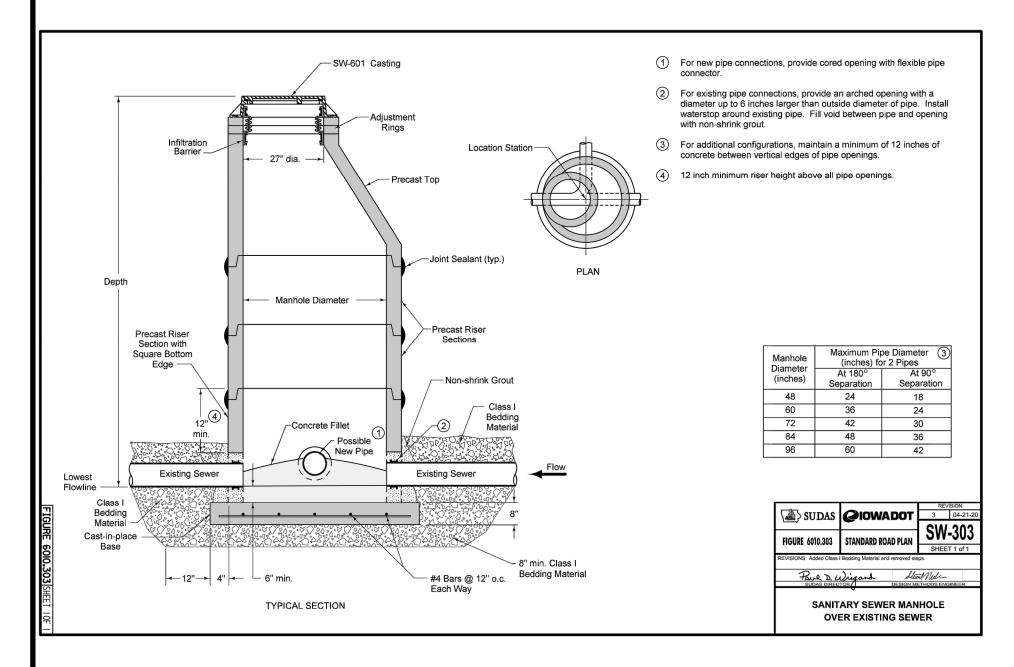
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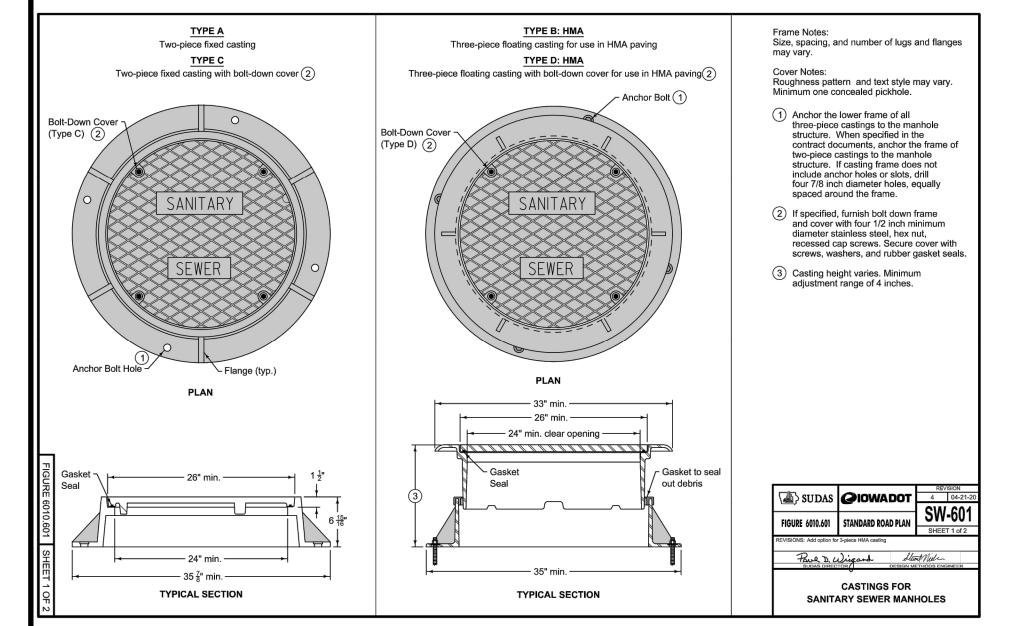




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## SANITARY NOTES

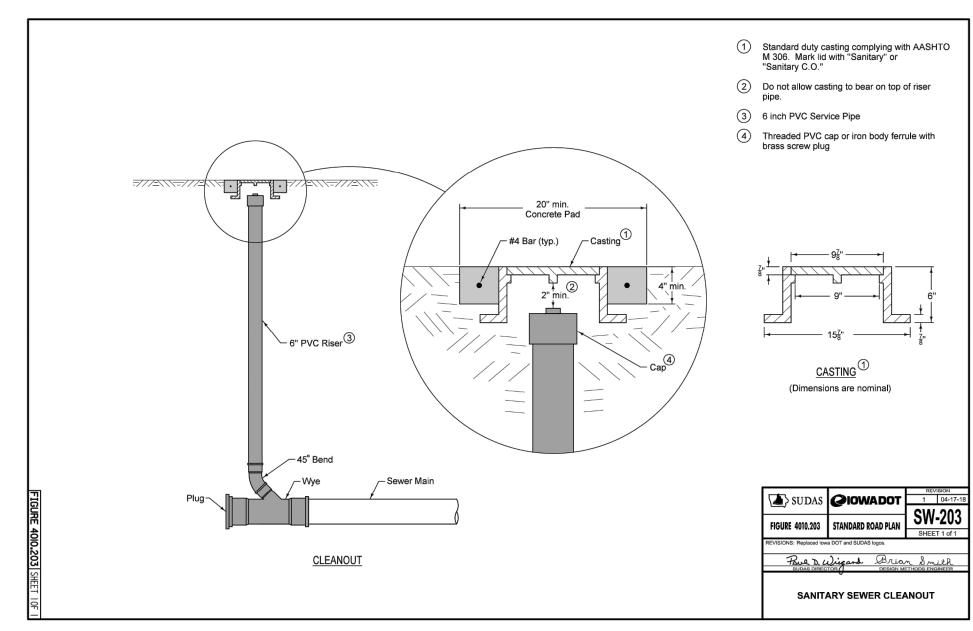
- I. THE CONTRACTOR IS REQUIRED TO PLACE A TEMPORARY PLUG IN THE DOWNSTREAM SANITARY MANHOLE PRIOR TO START OF CONSTRUCTION. THE PLUG SHALL BE REMOVED UPON CITY OF CARLISLE APPROVAL OF THE SANITARY SEWER MAIN CONSTRUCTION.
- 2. ALL 4"-6" SANITARY SEWER SERVICE PIPE MATERIAL SHALL BE SDR 23.5.
- 3. ALL 8"-15" SANITARY SEMER PIPE MATERIAL SHALL BE PVC SDR 26 TRUSS PIPE WITH CLASS "B" BEDDING UNLESS OTHERWISE NOTED ON THE DRAWINGS. 4. ALL MANHOLES SHALL HAVE INTERNAL CHIMNEY SEALS.
- 5. ALL MANHOLES SHALL HAVE A MINIMUM 4" SPACER RING AND THE TOTAL SPACER RING HEIGHT SHALL NOT EXCEED 12" TOTAL.
- 6. ALL MANHOLES WITHIN PAVEMENT SHALL BE BOXED OUT.
  7. MANHOLE STEPS ARE REQUIRED IN ALL SANITARY SEWER MANHOLES.
- 8. SEE SUDAS FOR TYPICAL SANITARY SEWER AND MANHOLE DETAILS. 9. ALL MANHOLES AND MANHOLE CASTINGS MUST BE ROTATED AS REQUIRED TO AVOID MANHOLE
- CONFLICTS WITH SURFACE PAVING, GRAVEL DRIVE, OR SIDEWALKS. 10. SANITARY SEWER LINES 8" AND LARGER SHALL HAVE A DEFLECTION MANDREL TEST, PRESSURE TEST,
- AND TELEVISED. THE SYSTEM SHALL BE FLUSHED WITH WATER PRIOR TO TELEVISING.

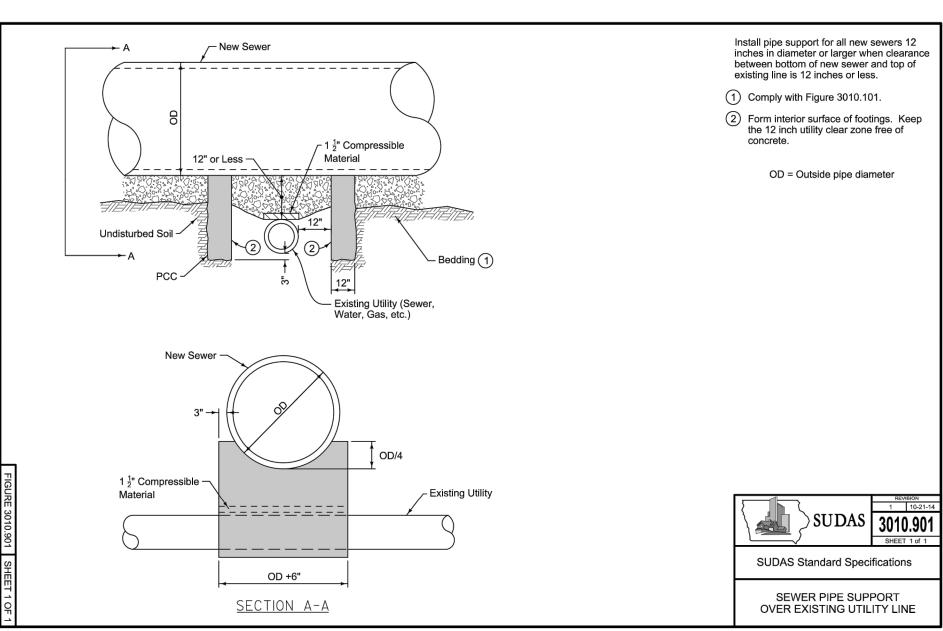
SANITARY STRUCTURE TABLE					
STRUCTURE NAME	NORTHING	EASTING	STRUCTURE DETAILS		
55- <i>0</i> I	551659.24	1637557.32	TYPE SW-303 (48" DIA) SANITARY MANHOLE W/ SW-60I, TYPE 'A' CASTING		
55-02	551657.34	1637303.51	TYPE SW-301 (48" DIA) SANITARY MANHOLE W/ SW-601, TYPE 'A' CASTING		
55-03	551556.89	1637042.89	TYPE SW-301 (48" DIA) SANITARY MANHOLE W/ SW-601, TYPE 'A' CASTING		
55-04	551631.94	1636821.54	TYPE SW-301 (48" DIA) SANITARY MANHOLE W/SW-601, TYPE 'A' CASTING		
SS- <i>0</i> 5	551621.40	1636805.49	TYPE SW-203 SANITARY CLEANOUT		
55-06	551822.96	1636592.07	TYPE SW-301 (48" DIA) SANITARY MANHOLE W SW-601, TYPE 'A' CASTING		
55-07	551848.86	1636527.19	TYPE SW-203 SANITARY CLEANOUT		
55-08	552172.51	1636609.88	TYPE SW-301 (48" DIA) SANITARY MANHOLE W/ SW-601, TYPE 'A' CASTING		
55-09	552180.13	1636542.60	TYPE SW-203 SANITARY CLEANOUT		
SS-10	552217.51	1636609.69	TYPE SW-203 SANITARY CLEANOUT		

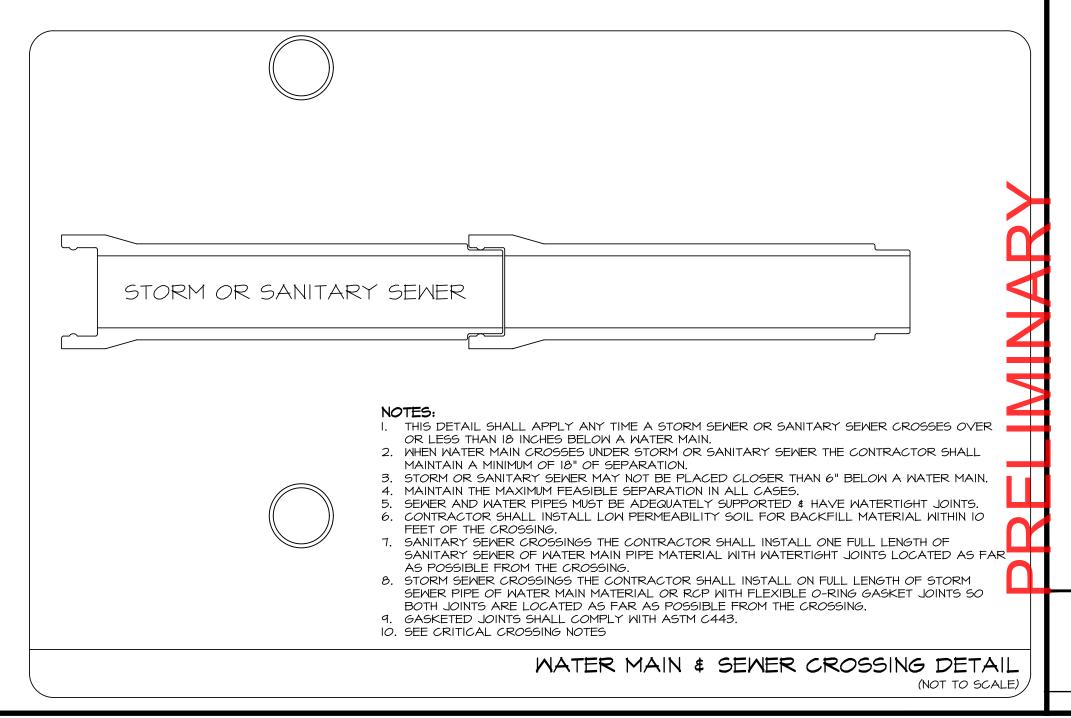




- A. TOP OF SEWER IS AT LEAST 18 INCHES BELOW BOTTOM OF WATER MAIN, AND B. THE SEWER IS PLACED IN SEPARATE TRENCH OR IN SAME TRENCH ON A BENCH OF UNDISTRUBED EARTH AT MINIMUM HORIZONTAL SEPARATION OF 3 FEET FROM WATER MAIN
- C. WHEN IT IS IMPOSSIBLE TO OBTAIN REQUIRED HORIZONTAL CLEARANCE OF 3 FEET AND VERTICAL CLEARANCE OF 18 INCHES BETWEEN SEWERS AND WATER MAINS, SEWERS MUST BE CONSTRUCTED OF WATER MAIN MATERIAL MEETING REQUIREMENTS OF SUDAS SPECIFICATIONS SECTION 5010, 2.01. HOWEVER PROVIDE LINEAR SEPARATION OF AT LEAST 2 FEET.
- THE VERTICAL SEPARATION DISTANCE BETWEEN A WATER MAIN AND A SANITARY SEWER OR STORM SEWER SHALL BE AT LEAST 18 INCHES WHEN MEASURED FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN: A, WHERE THE SANITARY SEWER MUST CROSS OVER THE WATER MAIN OR BELOW THE WATER MAIN BUT AT LESS THAN 18 INCHES, THE SANITARY SEWER MUST BE REPLACED WITH WATER MAIN MATERIAL 20 FEET CENTERED OVER THE WATER MAIN AND MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18 INCHES OVER THE
- WATER MAIN OR 6 INCHES BELOW THE WATER MAIN. B. WHERE THE STORM SEWER MUST CROSS OVER THE WATER MAIN OR BELOW THE WATER MAIN BUT AT LESS THAN 18 INCHES, THE STORM SEWER MUST BE REPLACED WITH WATER MAIN MATERIAL OR RCP WITH O-RING GASKETS 20 FEET CENTERED OVER THE WATER MAIN, AND MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18 INCHES OVER THE WATER MAIN OR 6 INCHES BELOW THE WATER MAIN.





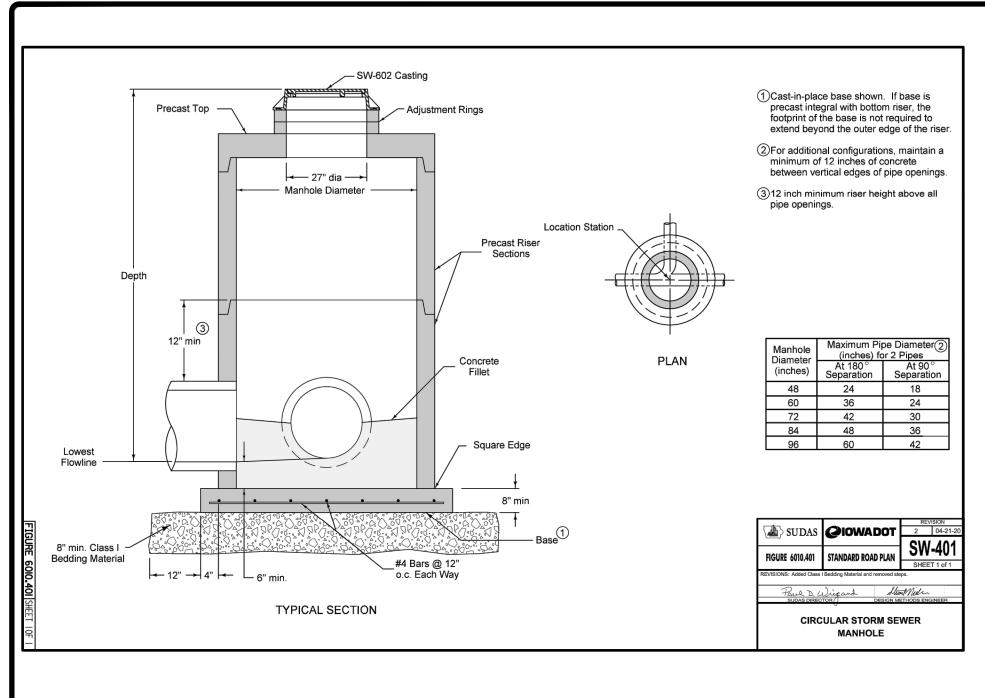


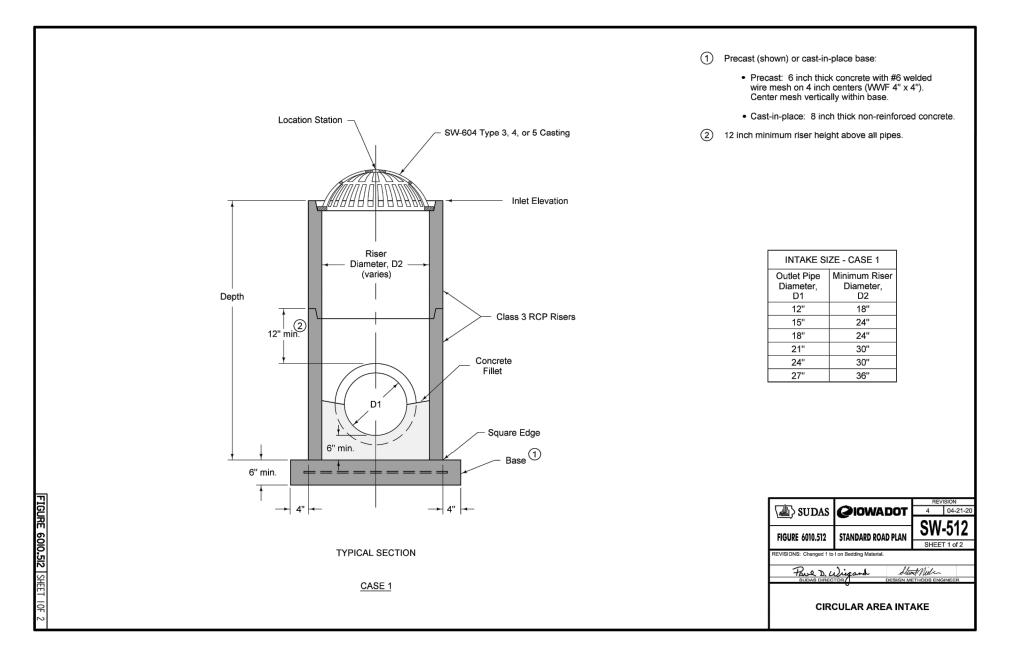
SHEET *O*F 25

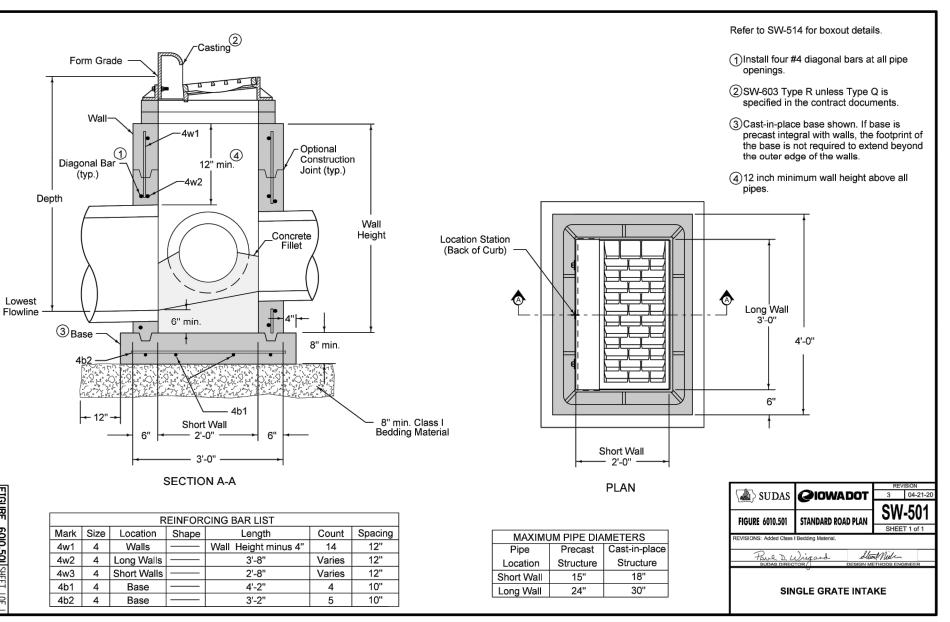
Consultants, Inc.

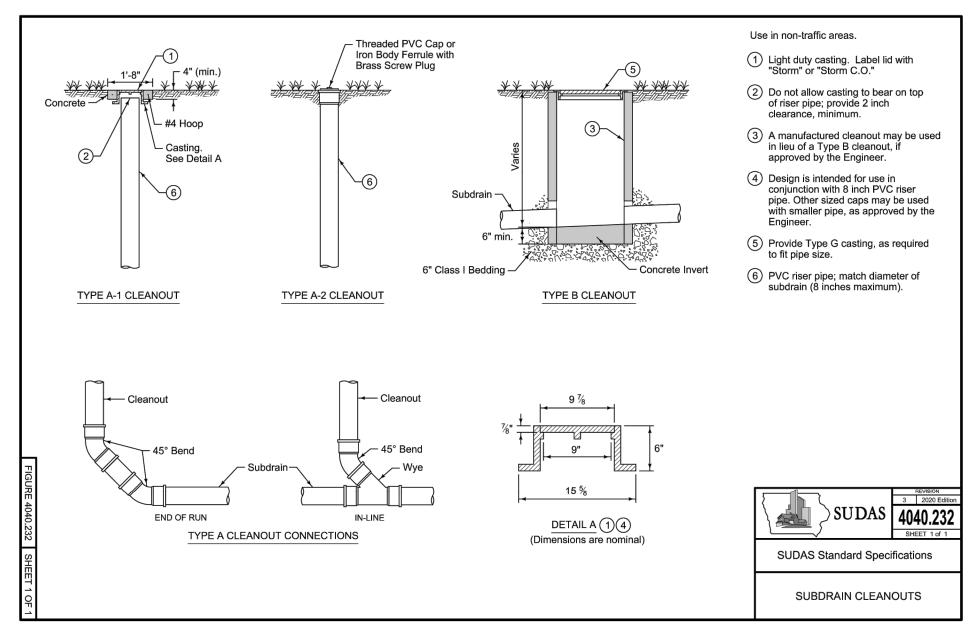
Civil Engineering

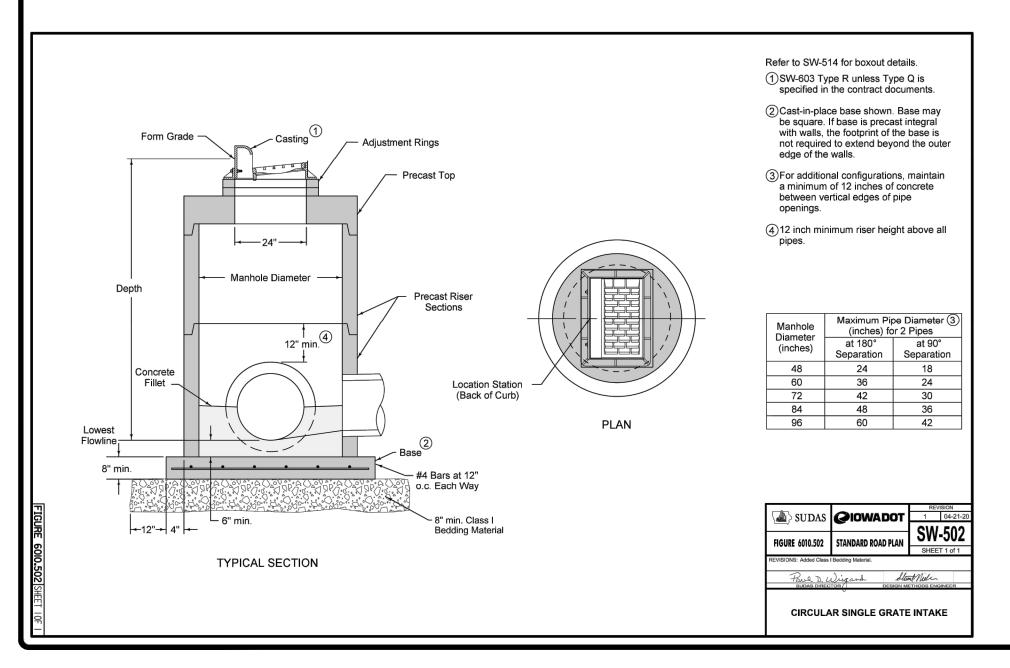
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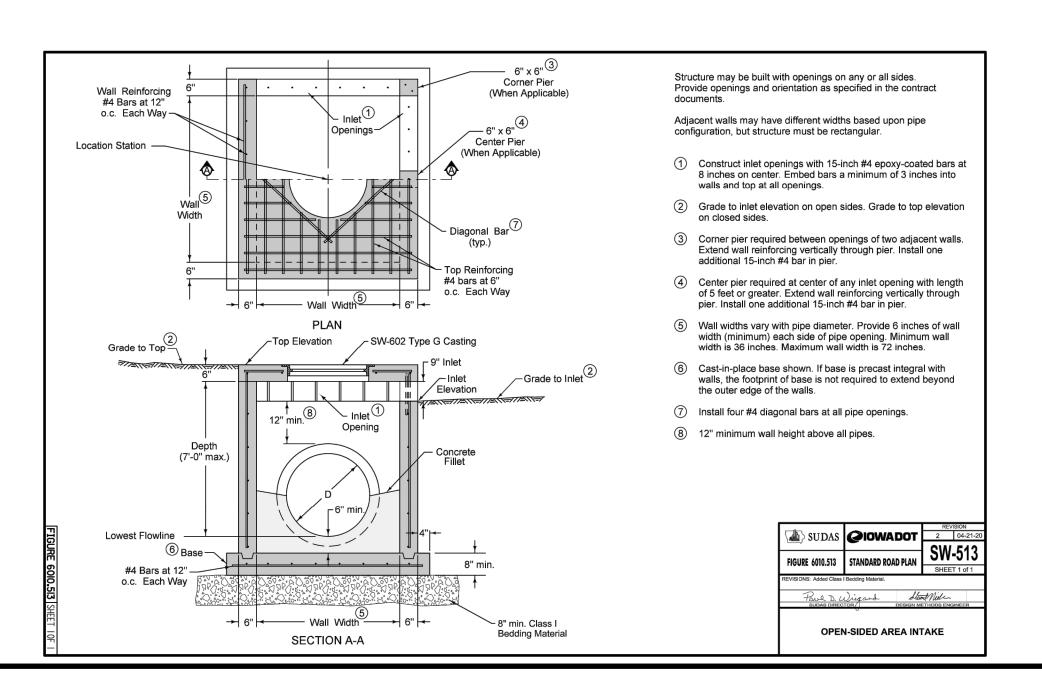












STORM NOTES

I. ALL REINFORCE CONCRETE PIPE (RCP) IS CLASS III RCP

2. ALL ELARED END SECTIONS SHALL HAVE SUDAS 4/30 221 EQUATING # APRON GUARDS SUDAS 4/30.

2. ALL FLARED END SECTIONS SHALL HAVE SUDAS 4030.221 FOOTING & APRON GUARDS SUDAS 4030.224 3. ALL PVC PIPE IS TO BE SDR 35

4. ALL PAVEMENT INTAKES SHALL HAVE VANE GRATES.

FOLLOW THE SUDAS SW-602 SPECIFICATION.

5. 8-INCH STORM SEWER TO BE PVC SDR 35. 6. SW-513 AREA INTAKES SHALL HAVE STANDARD OPENINGS UNLESS OTHERWISE SPECIFIED ON THIS PLAN SET. 7. INTAKE CASTING TYPES SHALL FOLLOW THE SUDAS SW-603 SPECIFICATION. MANHOLE CASTING TYPES SHALL

8. ALL F.E.S.'S SHALL HAVE CONCRETE FOOTINGS PER SUDAS FIGURE 4030.221. THE LAST THREE SECTIONS OF PIPE SHALL BE TIED & APRON GUARDS SHALL BE PROVIDED.

9. ALL STORM SEWER IS TO BE PRIVATE EXCEPT THOSE STORM SEWER DRIVEWAY CONNECTIONS WITHIN THE PUBLIC RIGHT-OF-WAY OR LABELED AS PUBLIC.

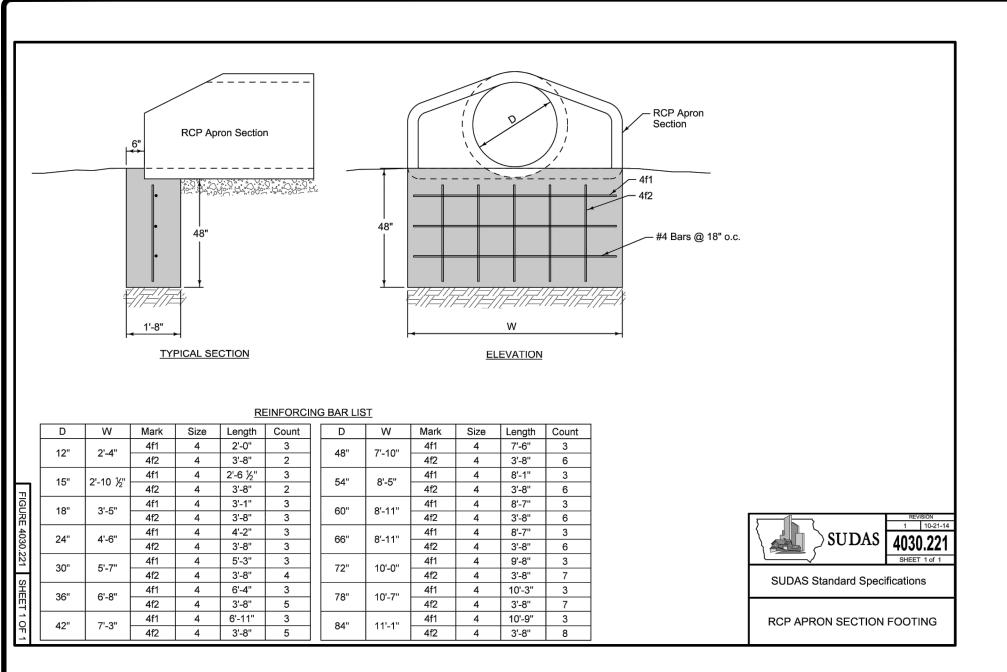
IO. PAVEMENT REINFORCEMENT IS REQUIRED WHERE EARTH COVER OVER STORM SEWERS IS LESS THAN 2 FEET.

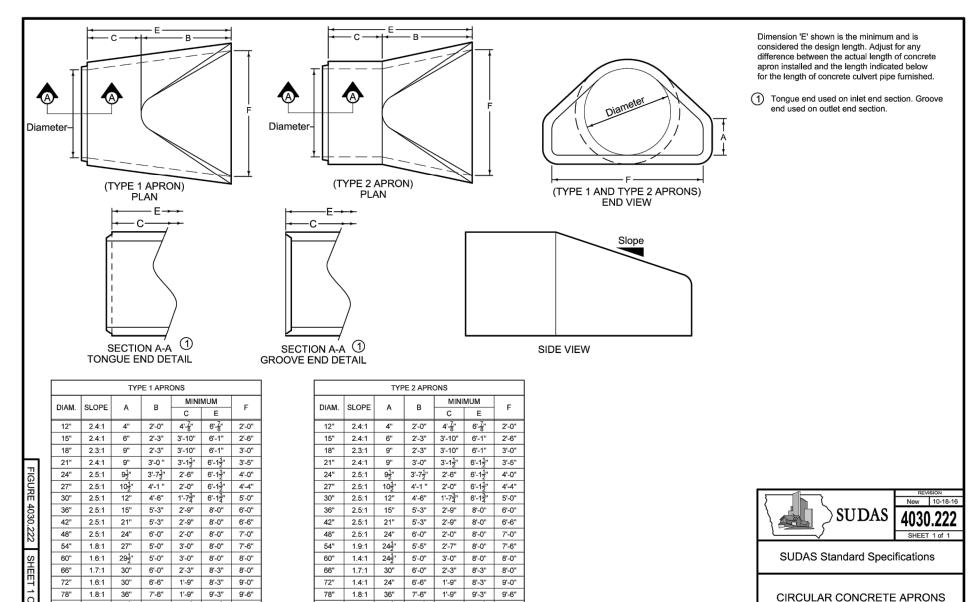
STRUCTURE NAME	NORTHING	EASTING	STRUCTURE DETAILS
FUTURE-ST-OI	551581.56	1636494.71	12" FES
FUTURE-ST-02	551558.69	1636500.86	TYPE SM-501 W/SM-603 TYPE 'R' CASTINO
ST-OI	551677.66	1637540.90	15" FES
ST-02	551613.38	1637552.76	15" FES
ST-03	551671.18	1637336.75	24" FES
ST-03A	551671.03	1637331.75	24" FES
ST-04	551616.20	1637338.34	24" FES
ST-04A	551616.06	1637333.34	24" FES
ST-05	551618.68	1637168.39	24" FES
ST-05A	551615.84	1637164.27	24" FES
ST-06	551575.01	1637198.42	24" FES
ST-06B	551572.18	1637194.30	24" FES
ST-07	551681.70	1636619.77	12" FES
ST-08	551640.93	1636617.75	TYPE SM-512 (24" DIA) W/TYPE '4A' CASTING
ST-09	551562.26	1636613.82	TYPE SM-512 (18" DIA) W/TYPE '3A' CASTING
ST-IO	551550.89	1636755.29	SUDAS 4040.232 W/TYPE 'A-I' CLEANOUT
ST-II	551632.65	1636783.54	SUDAS 4040.232 WTYPE 'A-I' CLEANOUT
ST-I2	551686.87	1636740.13	15" FES
ST-I2A	551690.29	1636739.95	15" FES
ST-I3	551688.25	1636766.42	15" FES
ST-I3A	551691.67	1636766.24	I5" FES
ST-I4	551703.38	1636525.80	15" FES
ST-I5	551702.34	1636608.84	18" FES
ST-16	551702.71	1636579.11	TYPE SM-501 W/SM-603 TYPE 'R' CASTINO
ST-I7	551706.80	1636525.84	18" FES
ST-18	551705.76	1636608.91	18" FES
ST-19	552015.52	1636550.37	24" FES
ST-20	551772.10	1636511.93	TYPE SM-501 W/SM-603 TYPE 'R' CASTINO
ST-2I	551766.28	1636530.80	TYPE SM-401 (48" DIA) W/SM-602 TYPE 'E' CASTING
ST-22	551730.53	1636521.52	24" FES
ST-23	551837.18	1636309.49	18" FES
ST-24	551775.73	1636339.92	TYPE SM-501 W/SM-603 TYPE 'R' CASTINO
ST-25	551775.58	1636305.91	TYPE SM-401 (48" DIA) WSM-602 TYPE 'E' CASTING
ST-26	551755.31	1636304.73	24" FES
ST-27	552446.77	1636431.02	12" FES
ST-28	552497.27	1636433.08	12" FES
ST-29	552515.01	1636575.98	TYPE SM-501 WSM-603 TYPE 'R' CASTING
ST-30	552514.94	1636561.72	I5" FES
ST-3I	552503.63	1636557.46	18" FES
ST-3IA	552506.48	1636559.35	18" FES
ST-3IB	552500.78	1636555.57	18" FES
ST-32	552463.64	1636617.76	18" FES
ST-32A	552466.48	1636619.65	18" FES
ST-32B	552460.79	1636615.88	18" FES
ST-33	552790.52	1636429.58	15" FES
ST-34	552779.57	1636502.65	15" FES

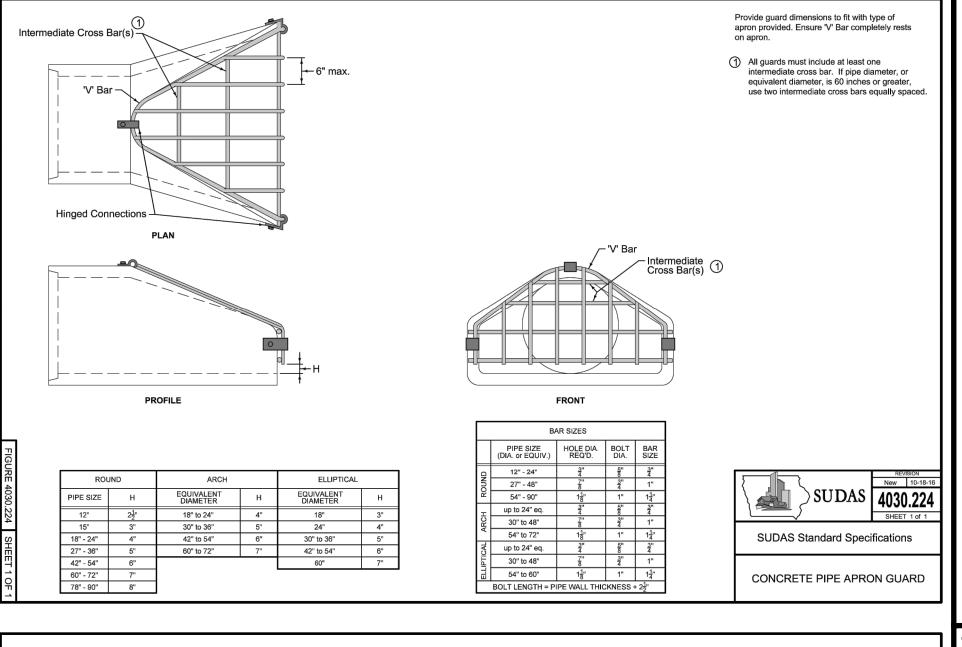
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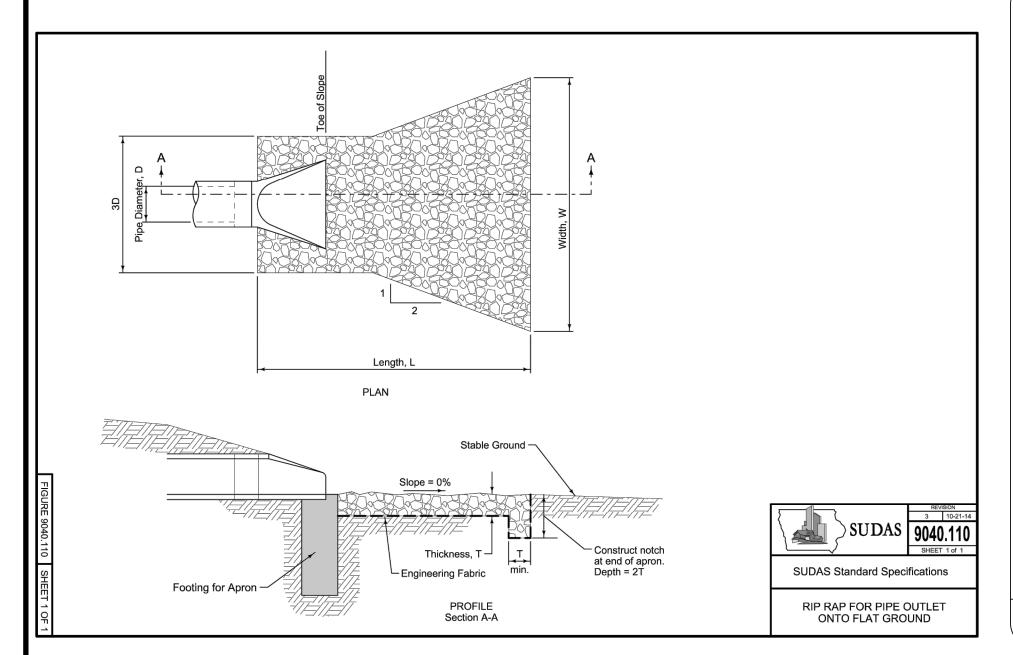
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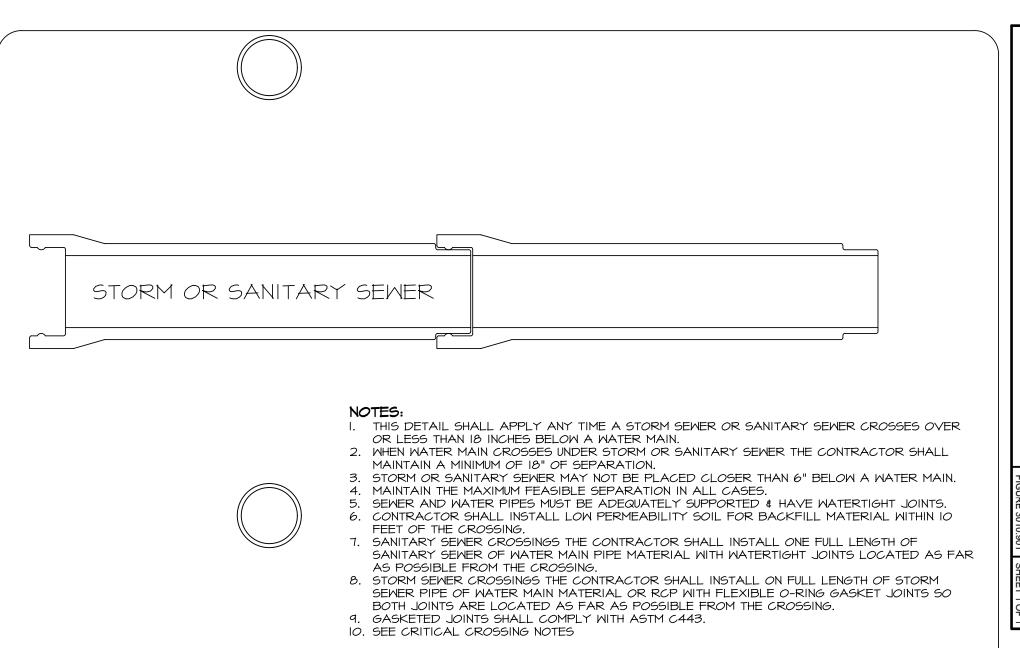


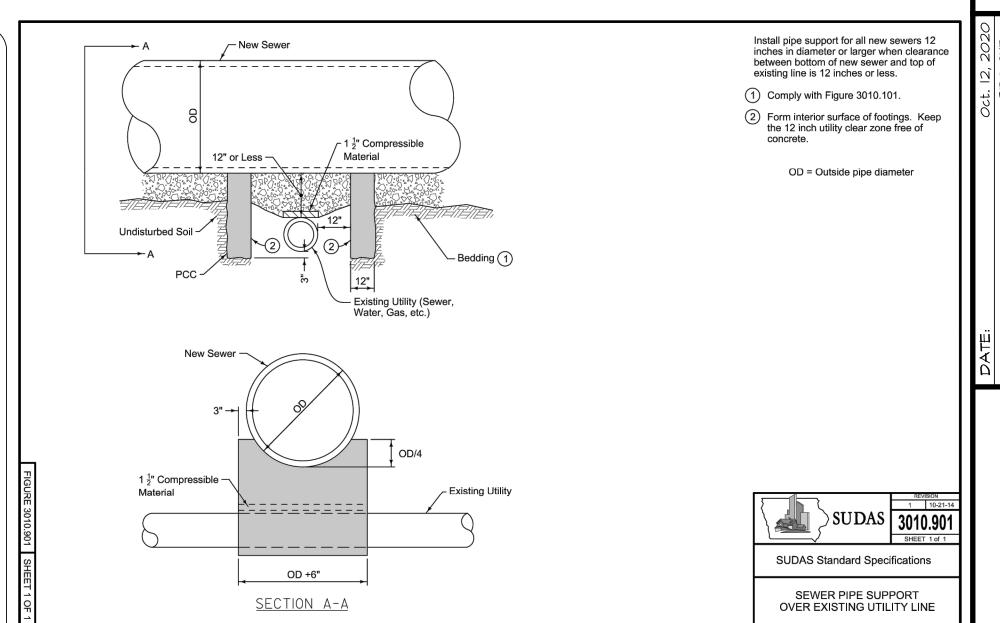


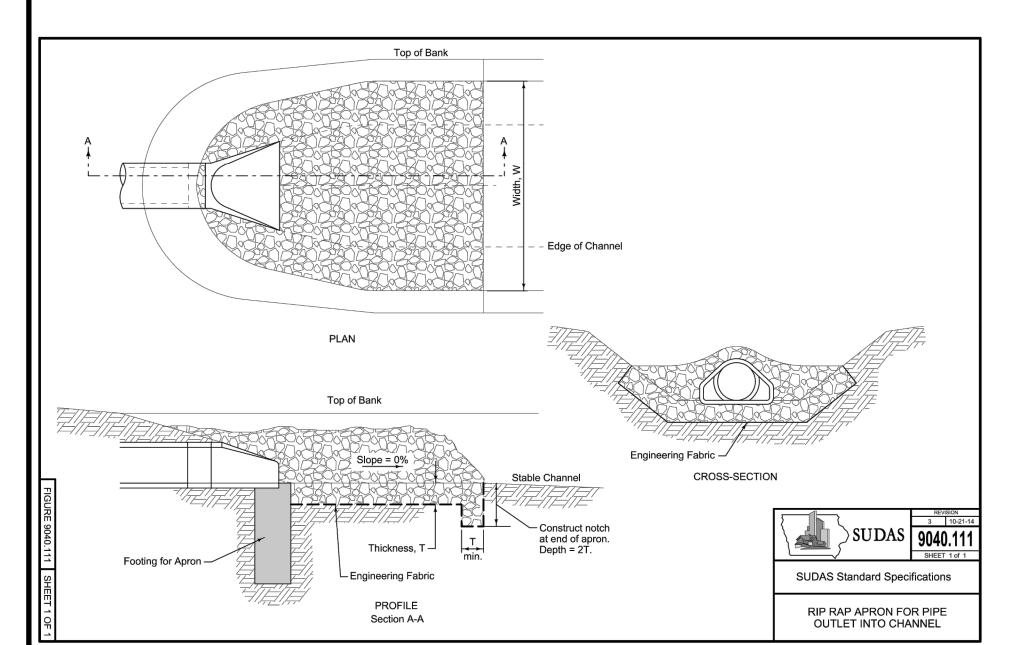


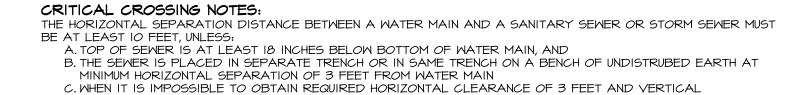
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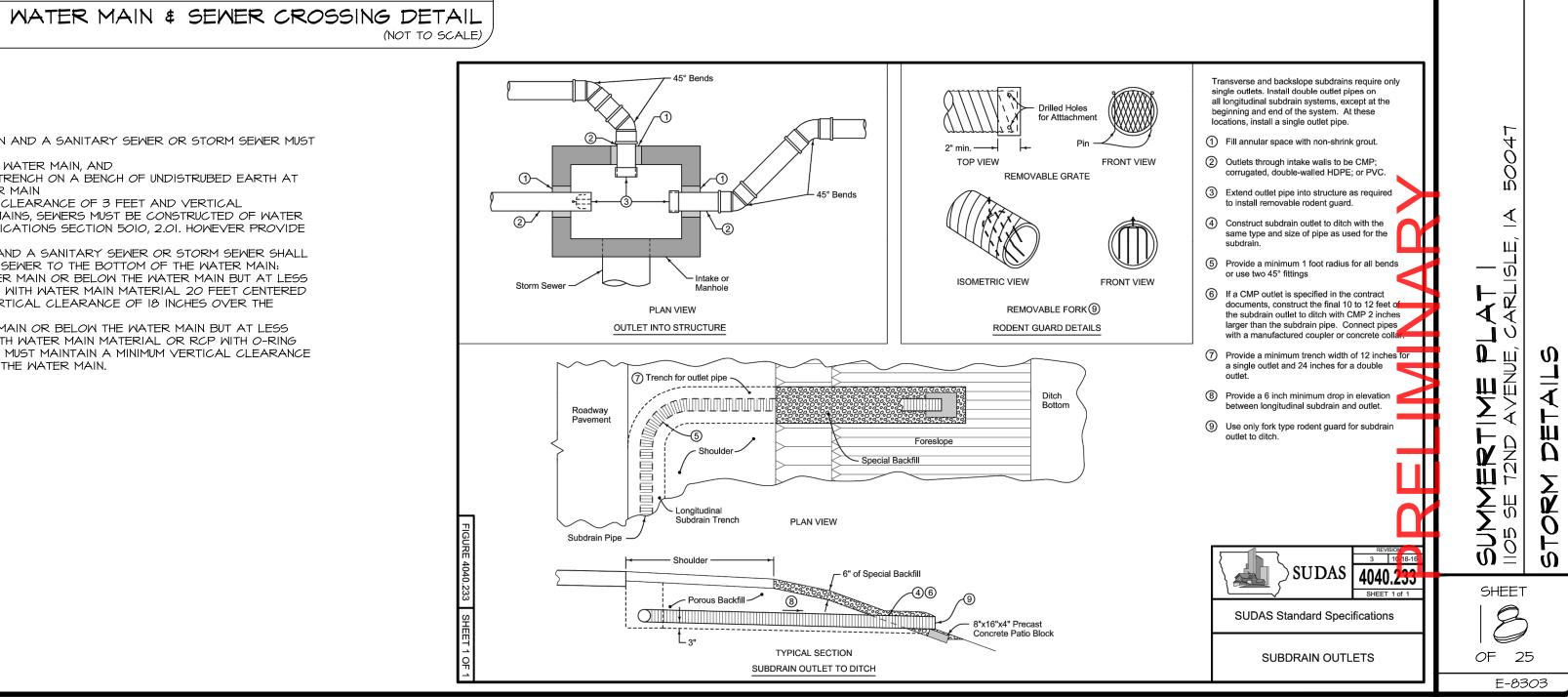
CLEARANCE OF 18 INCHES BETWEEN SEWERS AND WATER MAINS, SEWERS MUST BE CONSTRUCTED OF WATER MAIN MATERIAL MEETING REQUIREMENTS OF SUDAS SPECIFICATIONS SECTION 5010, 2.01. HOWEVER PROVIDE LINEAR SEPARATION OF AT LEAST 2 FEET.

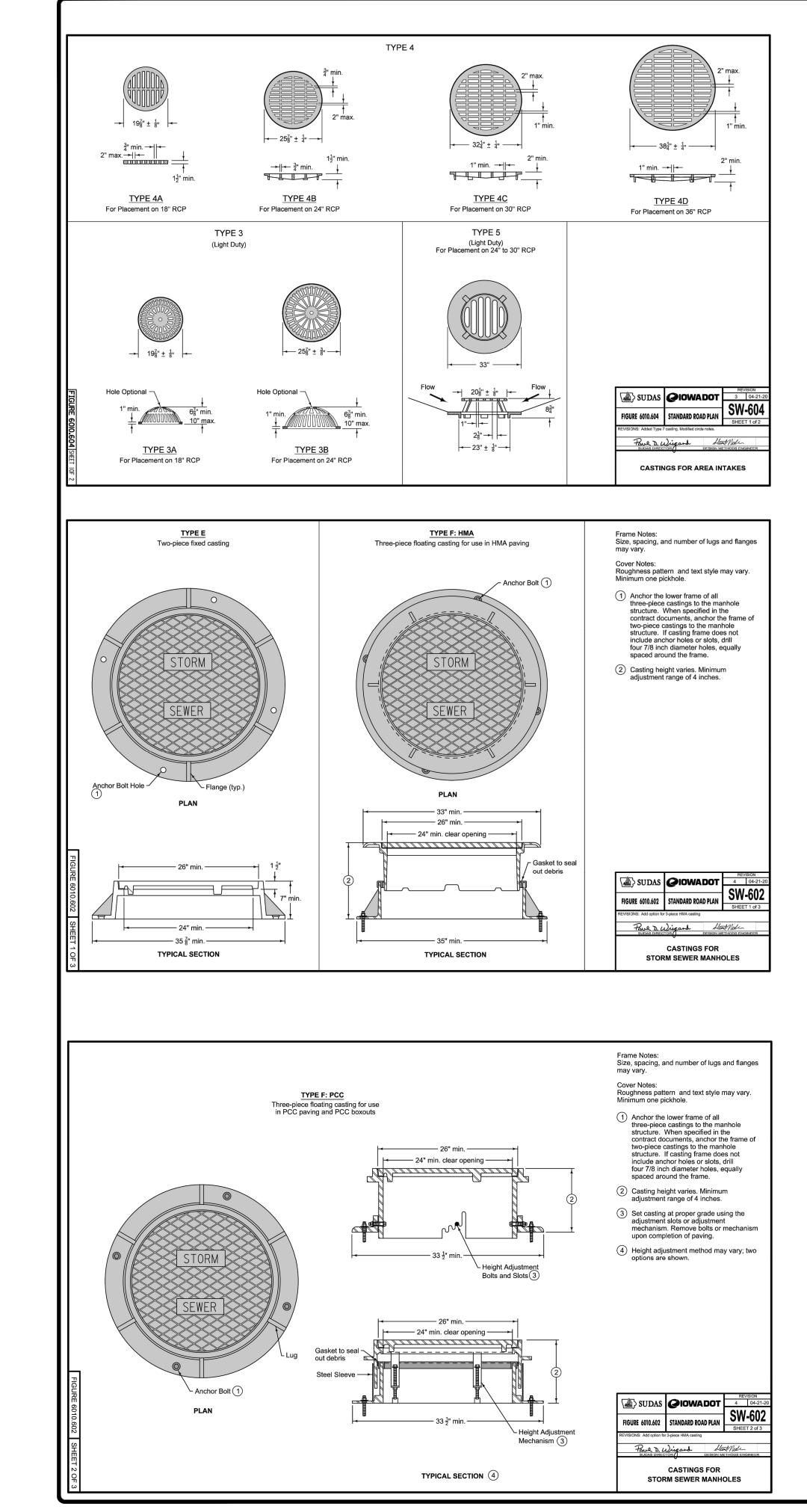
THE VERTICAL SEPARATION DISTANCE BETWEEN A WATER MAIN AND A SANITARY SEWER OR STORM SEWER SHALL BE AT LEAST 18 INCHES WHEN MEASURED FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN:

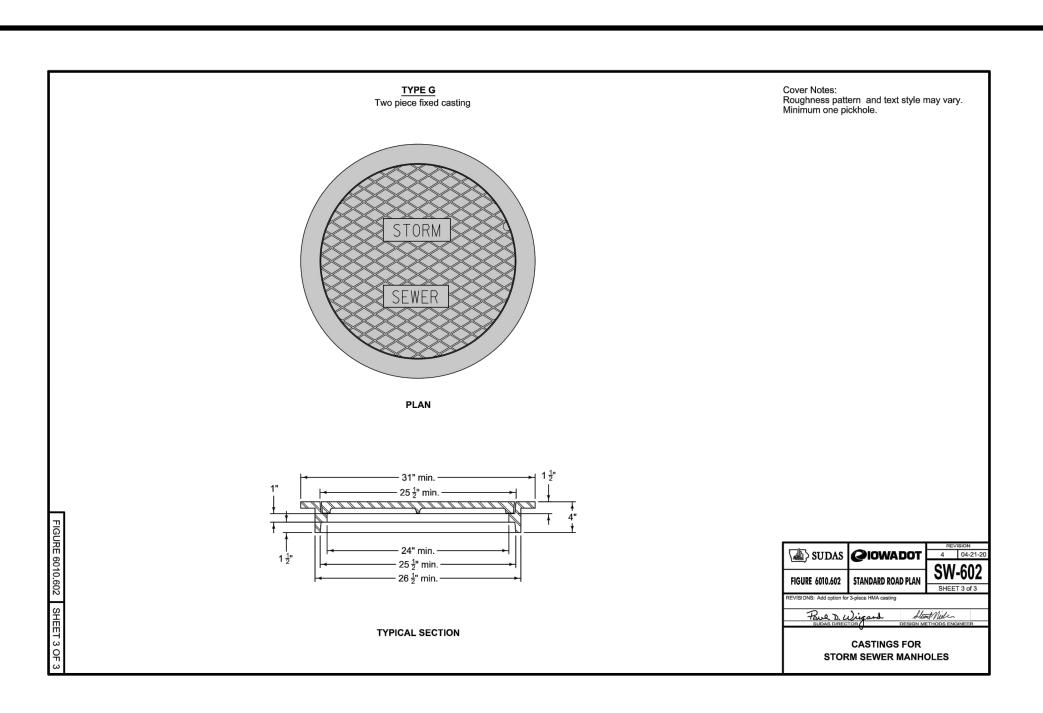
THE VERTICAL SEPARATION DISTANCE BETWEEN A WATER MAIN AND A SANITARY SEWER OR STORM SEWER SHALL BE AT LEAST IB INCHES WHEN MEASURED FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN:

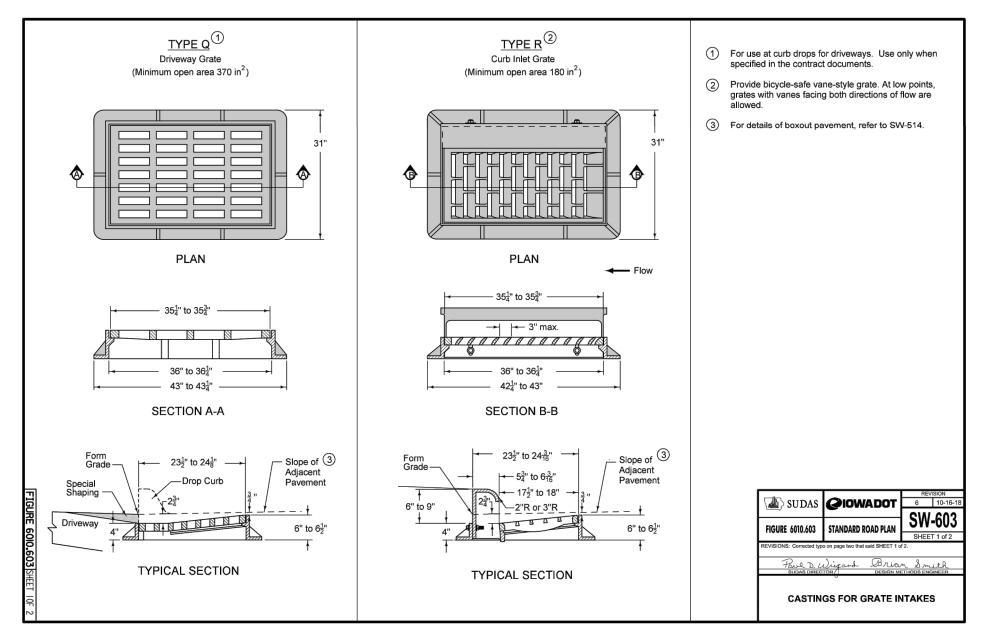
A. WHERE THE SANITARY SEWER MUST CROSS OVER THE WATER MAIN OR BELOW THE WATER MAIN BUT AT LESS THAN IB INCHES, THE SANITARY SEWER MUST BE REPLACED WITH WATER MAIN MATERIAL 20 FEET CENTERED OVER THE WATER MAIN AND MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF IB INCHES OVER THE WATER MAIN OR 6 INCHES BELOW THE WATER MAIN.

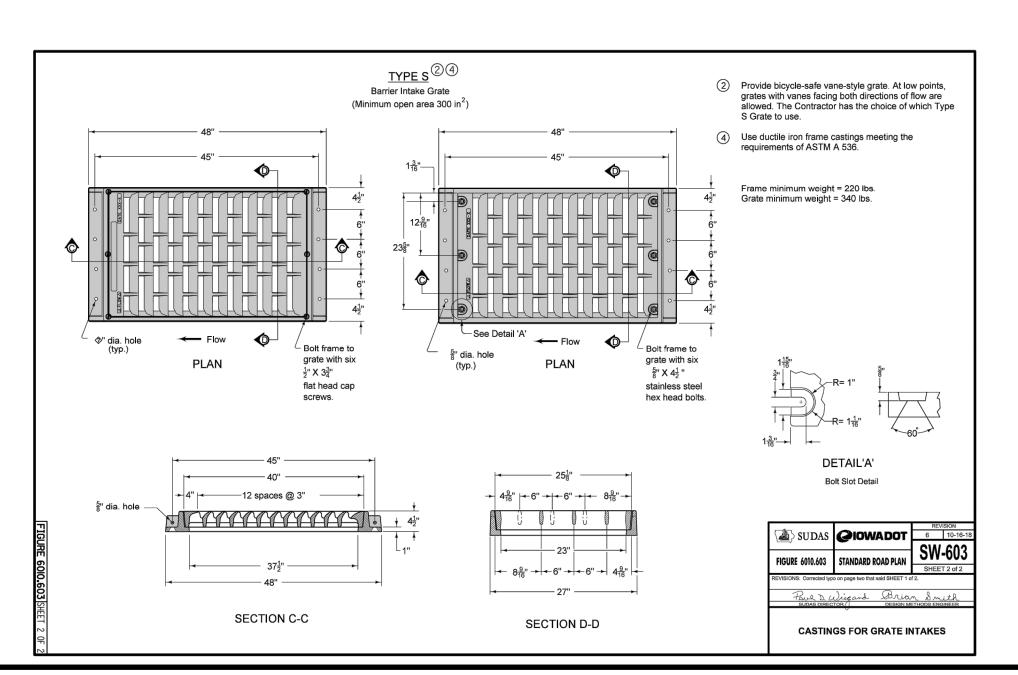
B. WHERE THE STORM SEWER MUST CROSS OVER THE WATER MAIN OR BELOW THE WATER MAIN BUT AT LESS THAN 18 INCHES, THE STORM SEWER MUST BE REPLACED WITH WATER MAIN MATERIAL OR RCP WITH O-RING GASKETS 20 FEET CENTERED OVER THE WATER MAIN, AND MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18 INCHES OVER THE WATER MAIN OR 6 INCHES BELOW THE WATER MAIN.











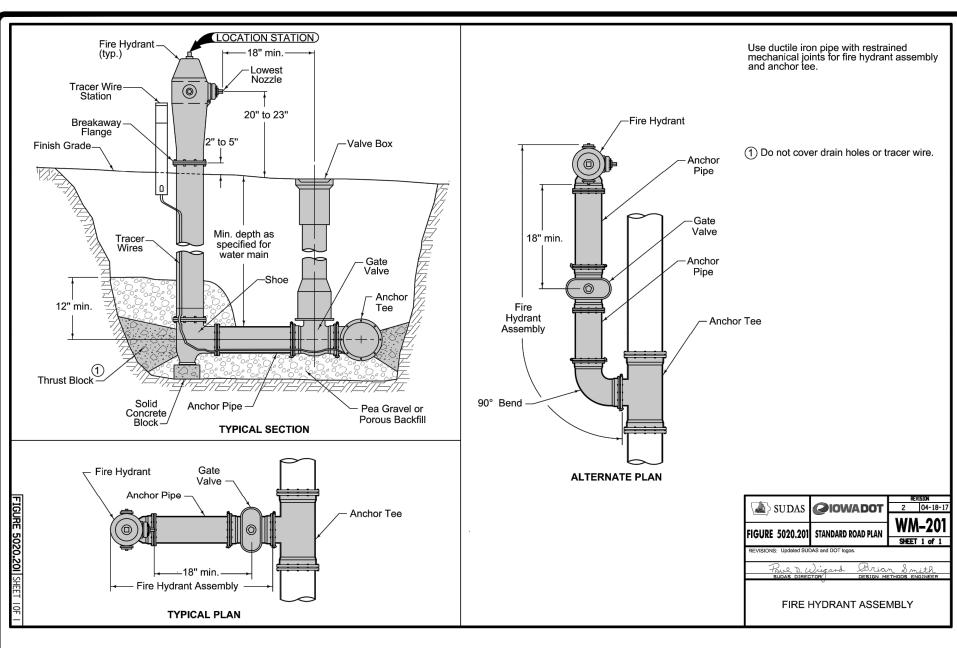
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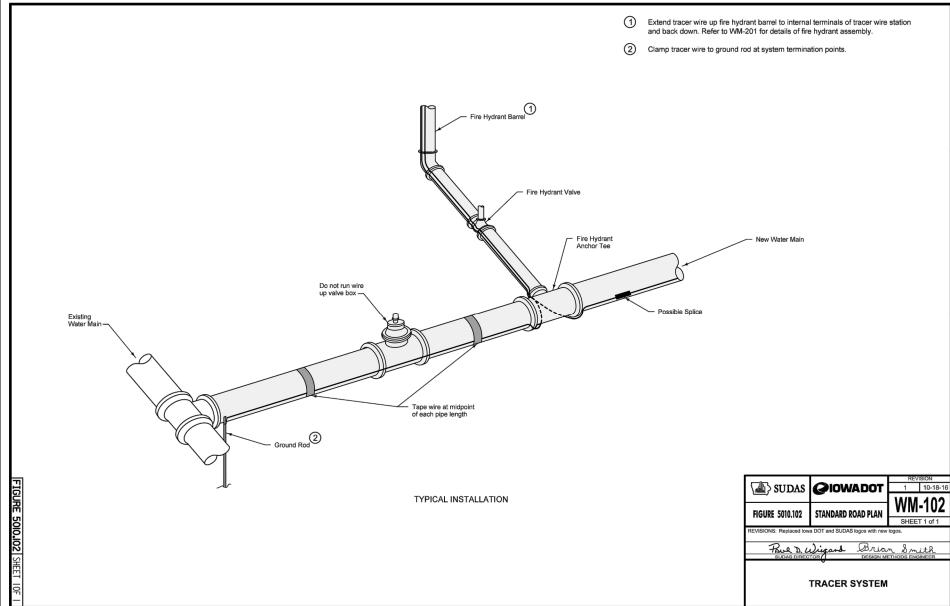
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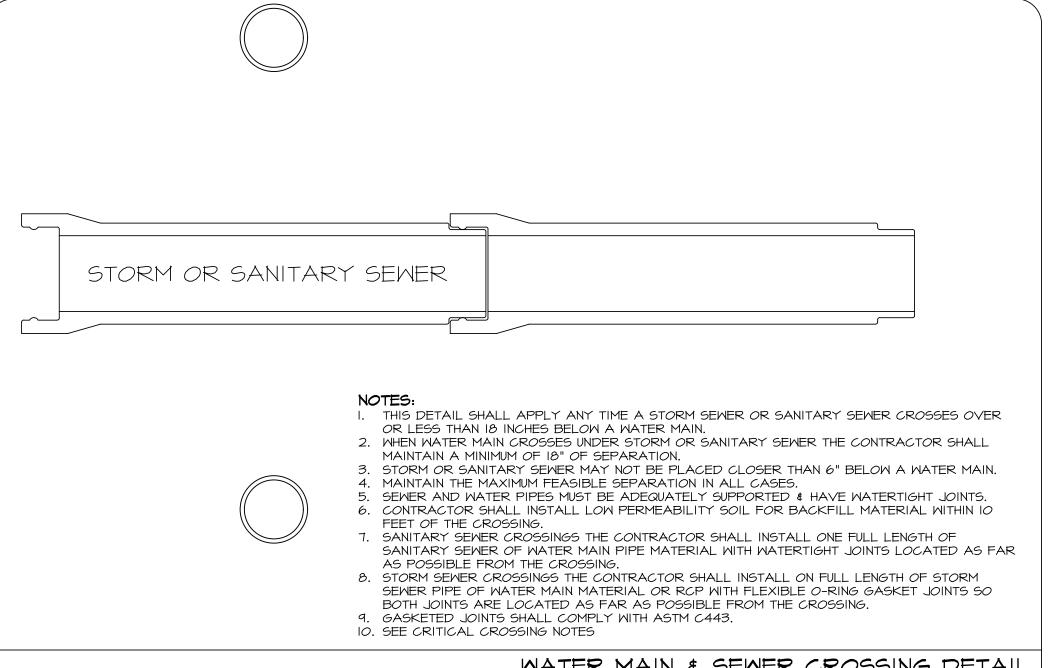
Civil Engineering Consultants, Inc. 400 86th Street. Unit 12. Des Moines, Iowa 50322

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# WATER NOTES

- I. ALL WATER MAIN VALVES SHALL BE RESILIENT WEDGE GATE VALVES. WATER MAIN VALVE OPERATION SHALL BE COORDINATED WITH CITY OF CARLISLE WATER DEPARTMENT.
- 2. PIPE MATERIALS: DUCTILE IRON IN ACCORDANCE WITH STANDARD SPECIFICATIONS OR AWWA C900 CLASS I50 PVC
  3. INSTALL NO. IO THHN STANDARD COPPER TRACER WIRE UNDER PIPE, BRING TRACER WIRE TO SURFACE AT FIRE
  HYDRANTS, VALVES, AND NEW DEAD ENDS. A TRACER WIRE RECEPTACLE SHALL BE INSTALLED AT EACH HYDRANT

LOCATION (FLUSH MOUNT VALCO OR APPROVED EQUIVALENT). CONNECT NEW TRACER TO EXISTING.

4. HYDRANT MINIMUM LEAD SHALL BE 2'.

- 5. HYDRANTS TO BE MULLER SUPER CENTURION 250 MODEL A423 5-I/4" MAIN VALVE OPENING 3-WAY, 6" M.J. SHOE, I-PUMPER NOZZLE (4-I/2" NST) & 2-HOSE NOZZLES (2-I/2" NST), I-I/2" PENTAGON OPERATING NUT, OPEN LEFT, CHAINS ON CAPS, & FACTORY PAINTED RED.
   6. ALL NEW HYDRANTS SHALL BE IMMEDIATELY COVERED WITH A BLACK PLASTIC BAG OR EQUIVALENT COVERING UPON
- INSTALLATION. HYDRANT COVERING REMOVAL WILL BE DETERMINED BY THE CITY OF CARLISLE.

  7. WATER MAIN TO HAVE 5 1/2 FEET BURY TYPICAL EXCEPT AT CRITICAL CROSSINGS OR AS SPECIFICALLY NOTED ON THE
- CONSTRUCTION DRAWINGS..

  8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE AS-BUILT LOCATION OF ALL WATER SERVICES.
- 9. WATER SERVICES TO BE MINIMUM I-INCH TYPE 'K' COPPER.
  10. ALL WATER SERVICE CURB STOPS SHALL BE INSTALLED AS SHOWN ON PLANS.
- II. HYDRANTS, MANHOLE COVERS, AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE ELEVATIONS.
   I2. THE CONTRACTOR SHALL PROTECT AND BACKFILL AROUND UNDERGROUND UTILITIES. BACKFILL SHALL BE IN SIX-INCH LAYERS, COMPACTED TO 95% STANDARD PROCTOR DENSITY AND WITHIN +4/-0% OF THE OPTIMUM MOISTURE CONTENT.

## CRITICAL CROSSING NOTES:

THE HORIZONTAL SEPARATION DISTANCE BETWEEN A WATER MAIN AND A SANITARY SEWER OR STORM SEWER MUST BE AT LEAST 10 FEET, UNLESS:

- A. TOP OF SEWER IS AT LEAST 18 INCHES BELOW BOTTOM OF WATER MAIN, AND B. THE SEWER IS PLACED IN SEPARATE TRENCH OR IN SAME TRENCH ON A BENCH OF UNDISTRUBED EARTH AT
- MINIMUM HORIZONTAL SEPARATION OF 3 FEET FROM WATER MAIN

  C. WHEN IT IS IMPOSSIBLE TO OBTAIN REQUIRED HORIZONTAL CLEARANCE OF 3 FEET AND VERTICAL

  CLEARANCE OF 18 INCHES BETWEEN SEWERS AND WATER MAINS, SEWERS MUST BE CONSTRUCTED OF WATER
- CLEARANCE OF 18 INCHES BETWEEN SEWERS AND WATER MAINS, SEWERS MUST BE CONSTRUCTED OF WATER MAIN MATERIAL MEETING REQUIREMENTS OF SUDAS SPECIFICATIONS SECTION 5010, 2.01. HOWEVER PROVIDE LINEAR SEPARATION OF AT LEAST 2 FEET.
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- B. WHERE THE STORM SEWER MUST CROSS OVER THE WATER MAIN OR BELOW THE WATER MAIN BUT AT LESS THAN 18 INCHES, THE STORM SEWER MUST BE REPLACED WITH WATER MAIN MATERIAL OR RCP WITH O-RING GASKETS 20 FEET CENTERED OVER THE WATER MAIN, AND MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18 INCHES OVER THE WATER MAIN OR 6 INCHES BELOW THE WATER MAIN.

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515.276.4884 . mail@ceclac.c

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DATE: 0ct. 12, 2020
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1ST SUB. SEP. 24, 2020
DATE OF SURVEY: AUG. 28, 2020
DESIGNED BY: JAG

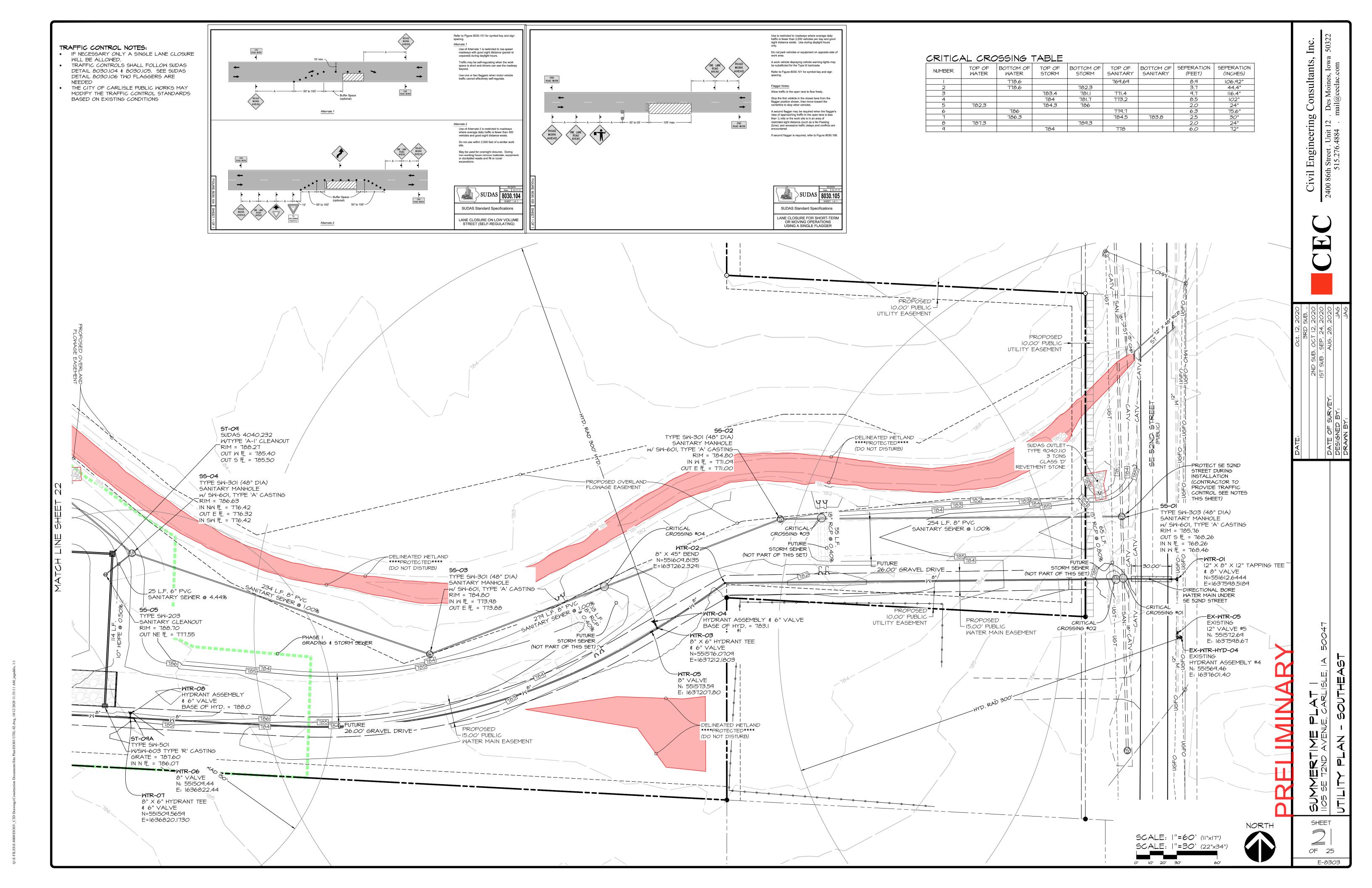
ZERTIME PLAT | 172nd avenue, carlisle, 1a 50047

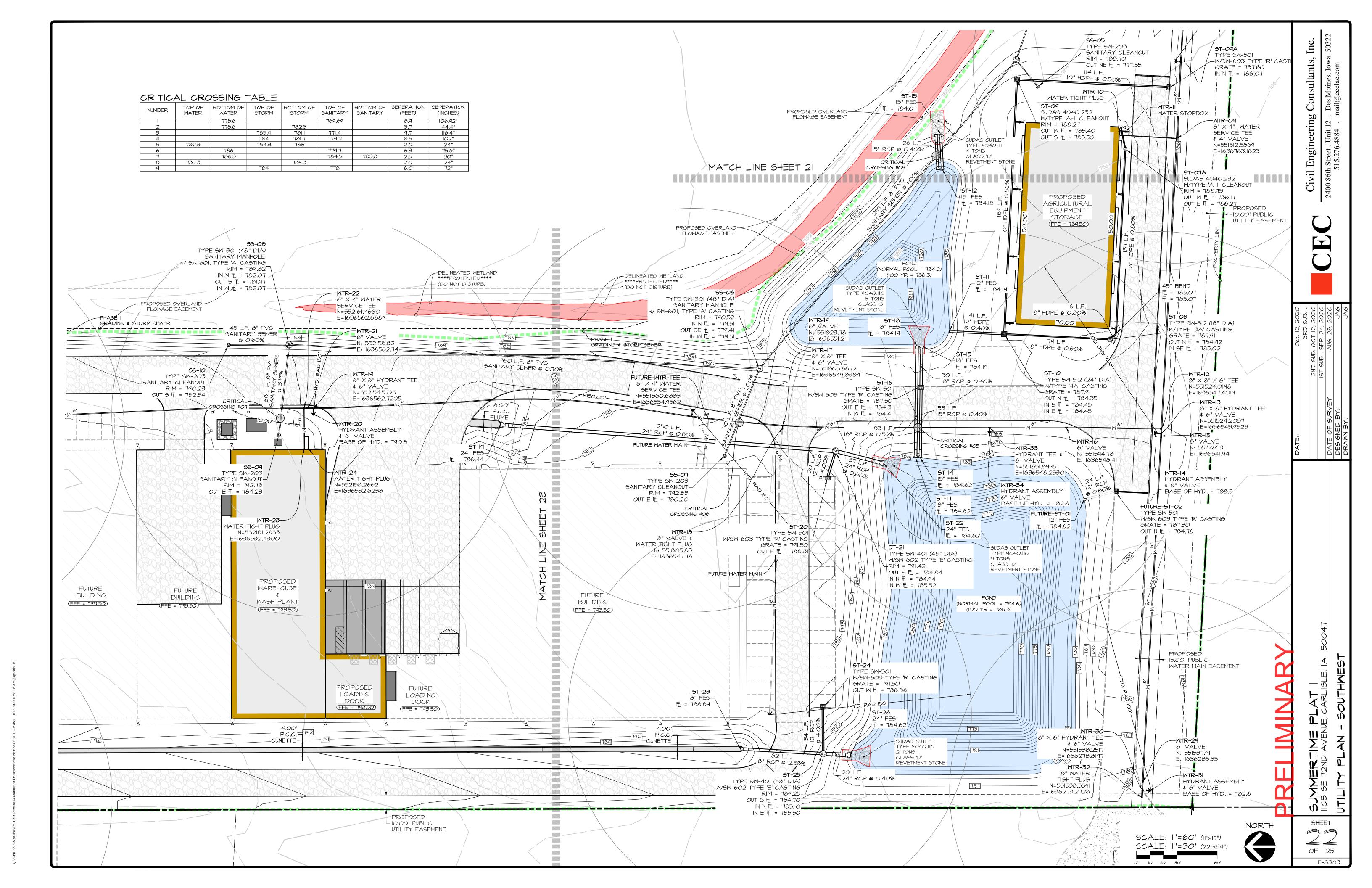
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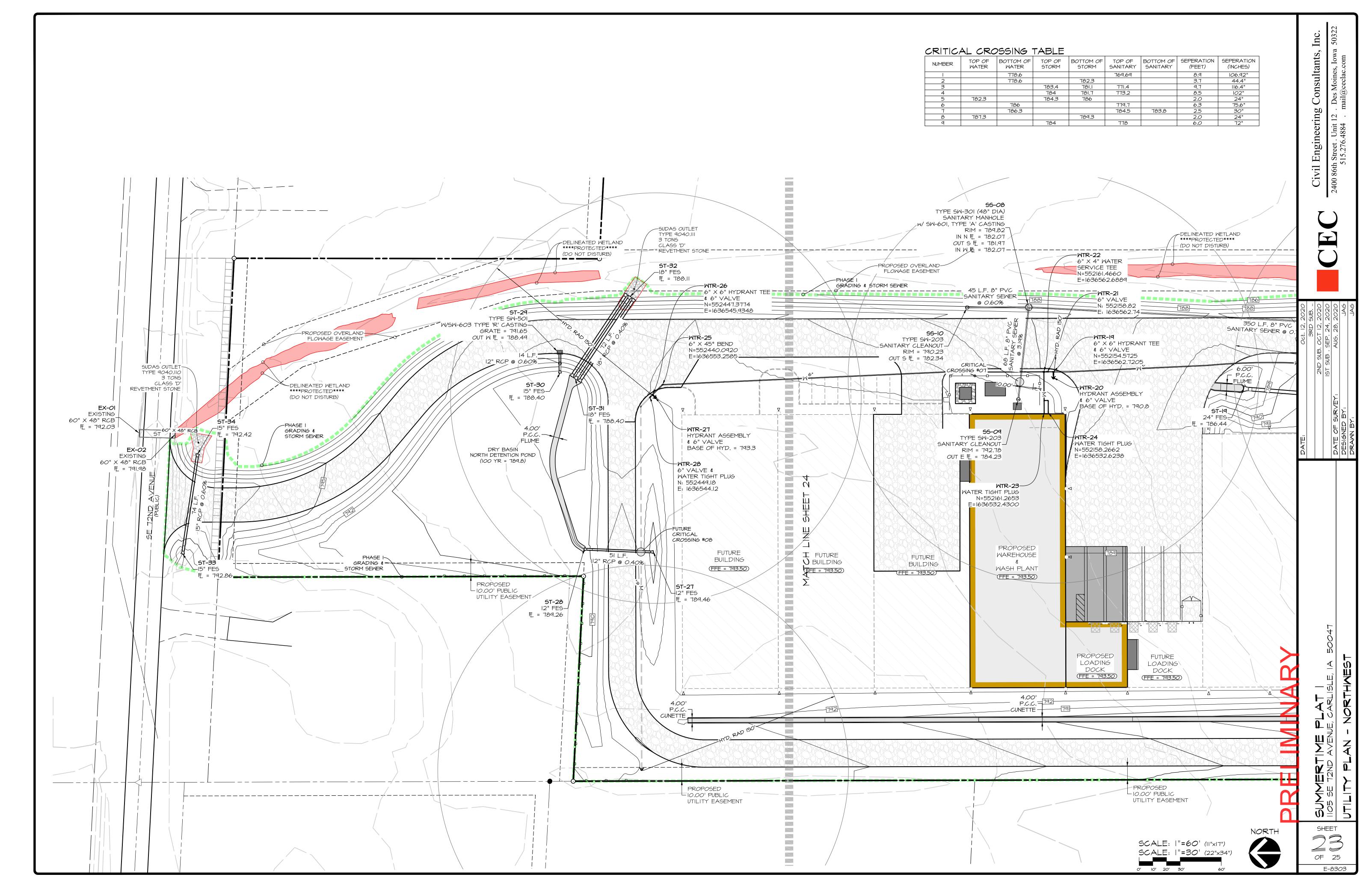
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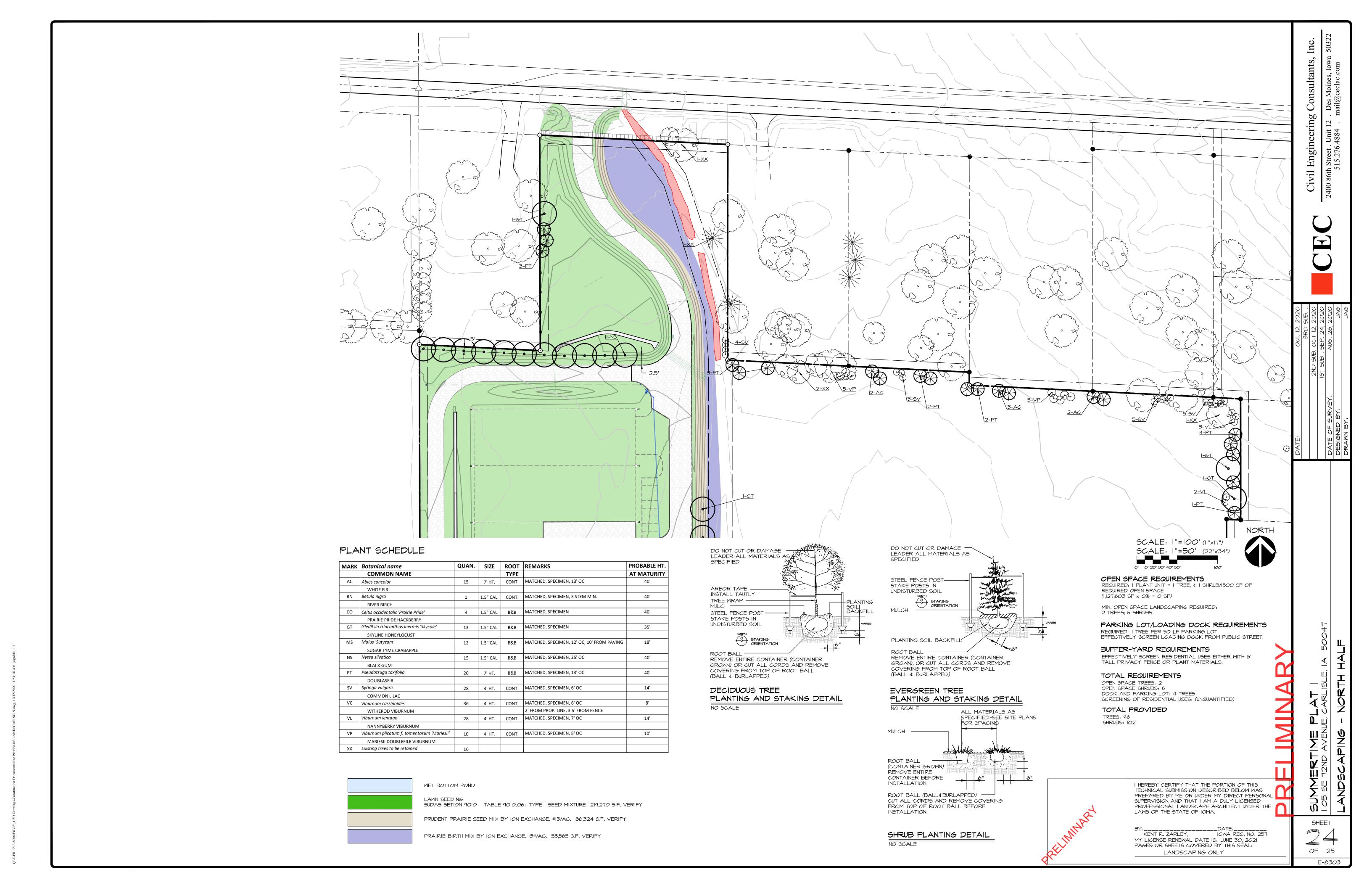
WATER MAIN & SEWER CROSSING DETAIL







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# Proposed Maintenance Building

## Maintenance Building: (machine shed)

- \* 70' Wide x 150' Long x 20'-0" High (height measures from finished floor to bottom of truss)
- \* 4-Ply 2x8 glu-lam columns on sidewalls 8' spacing. 4-Ply 2x8 glu-lam columns on ends 8' max spacing
- \* Posts are wrapped with Post-Saver advanced treatment application system
- \* Gable roof with a 3.5/12 roof pitch and flat bottom-chord
- \* Trusses spaced 8' on-center with 30# ground snow-load, 4# top-chord dead-load, and 5# ceiling-load
- \* Trusses are bolted to columns with two bolts per side
- \* Dri-crete posthole footings. 2' diameter sidewalls, 1.5' diameter end walls
- \* 1" road stone for backfilling column holes
- \* 1 Row MCA Treated Tongue-and-groove splash .23 PCF treatment retention, 372 linear feet total
- \* 1' Sidewall overhang with ventilated soffit on both sidewalls
- \* 1' End wall overhang with solid soffit on both gable ends with recessed corners
- \* Vented ridge on both sides of roof for the entire length
- \* Wainscot, both sidewalls Metal, both end walls Metal 36" tall
- \* 2 30'x16' Overhead Door openings on End wall , interior trims
- \* 2 14'x14' Overhead Door openings on Sidewall, high-lift framing, interior trims
- \* 3 3'0" x 6'8" Plyco 20 Series walk doors with solid panel, polar white
- \* 5 3x3 Single Pane Windows, horizontal slider
- \* 6 4x4 Double Pane/Thermal Windows, horizontal slider
- Insulated exterior walls using 6" R-19 Anco Textrafine insulation, w/ 6-mil plastic vapor barrier
- \* Interior Wall Liner: 26 Gauge Quad-Panel Liner Metal, with vapor barrier
- \* Ceiling liner using 26 Gauge Quad-Panel Liner Metal with 6-mil plastic vapor barrier
- \* Insulation bumpers at eaves included
- \* Exterior Wall Metal: 26 Gauge Quad-Panel Profile Trinar Paint G90 Substrate
- \* Roof Metal: 26 Gauge Quad-Panel Profile Trinar Paint G90 Substrate
- \* Standard hex-head screws with matching color heads to attach metal panels and trims
- \*Cellulose blow-in attic insulation, R-value 38, blown 12 inches thick

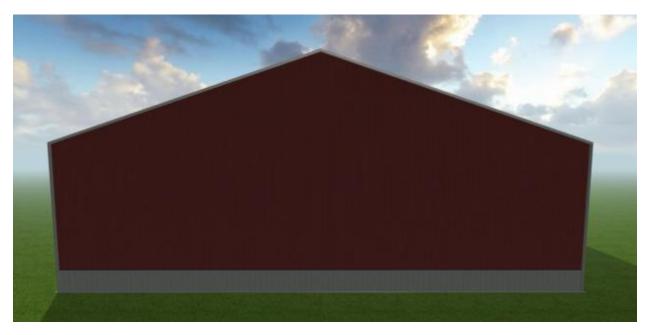
## North Elevation



## **South Elevation**



# East Elevation



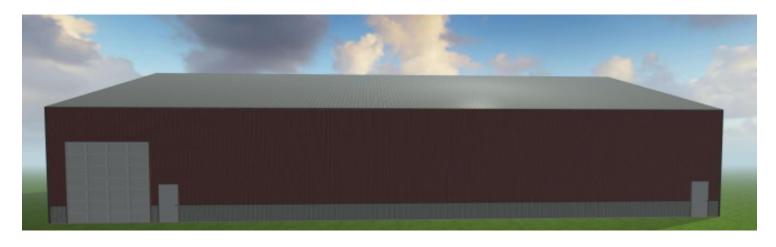
# West Elevation





# **Summertime Wash Plant/Storage Building - Phase 1**

- 120'-0" L x 70'-0" W x 20'-0" T
- (2) 14'-0" x 14'-0" OH Sectional Doors; Overhead Door Company Model 591 overhead doors, High-Lift
  - Commercial R-14.86 1-5/8" thick Urethane injected overhead door
  - o Commercial Heavy-Duty Jackshaft Model J 501 L5 1/2 HP or equivalent
  - 4 3 Button Deluxe Transmitter (remote controls)
- (3) 3'-0" W x 6'-8" T Walk Doors; Plyco 20 Series walk doors with solid panel
- (3) 4'-0" W x 3'-0" T Windows; Single Pane Windows, horizontal slider
- 6" Concrete SOG; 4000 PSI Concrete over vapor barrier
- 4-Ply 2x8 glu-lam columns on sidewalls 8' spacing. 4-Ply 2x8 glu-lam columns on ends 8' max spacing
- Posts are wrapped with PostSaver advanced treatment application system
- Gable roof with a 3.5/12 roof pitch and flat bottom-chord
- Trusses spaced 8' on-center with 30# ground snow-load, 4# top-chord dead-load, and 5# ceiling-load
- Trusses are bolted to columns with two bolts per side
- Dri-crete posthole footings. 2' diameter sidewalls, 1.5' diameter end walls
- 1" road stone for backfilling column holes
- 1 Row MCA Treated Tongue-and-groove splash .23 PCF treatment retention
- · Vented ridge on both sides of roof for the entire length
- Wainscot, both sidewalls Metal, both end walls Metal 36" tall
- 2 14'x14' Overhead Door openings on Sidewall, high-lift framing, interior trims
- Cellulose blow-in attic insulation, R-value 38, blown 12 inches thick
- 3 3'0" x 6'8" Plyco 20 Series walk doors with solid panel, polar white
- Door Accessories: 3 locksets, 3 foam-injected jambs
- 5 3x3 Single Pane Windows, horizontal slider
- 6 4x4 Double Pane/Thermal Windows, horizontal slider
- Insulated exterior walls using 6" R-19 Anco Textrafine insulation, w/ 6-mil plastic vapor barrier
- Interior Wall Liner: 26 Gauge Quad-Panel Liner Metal, with vapor barrier
- Ceiling liner using 26 Gauge Quad-Panel Liner Metal with 6-mil plastic vapor barrier
- Insulation bumpers at eaves
- Exterior Wall Metal: 26 Gauge Quad-Panel Profile Trinar Paint G90 Substrate
- Roof Metal: 26 Gauge Quad-Panel Profile Trinar Paint G90 Substrate
- Standard hex-head screws with matching color heads to attach metal panels and trims



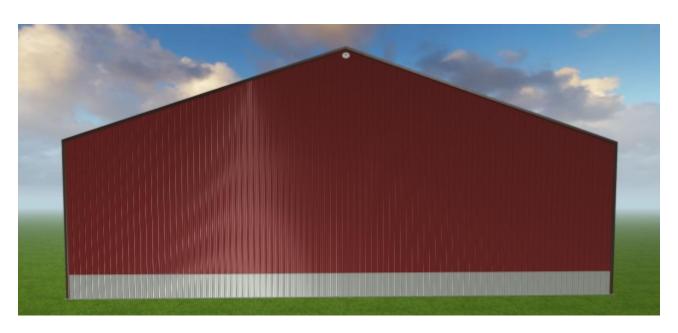
**South Elevation** 



**North Elevation** 



**West Elevation** 



**East Elevation** 



October 15, 2020

#### Monte Appelgate, PLA

Snyder & Associates, Inc. 2727 SW Snyder Blvd PO Box 1159 Ankeny, IA 50023

RE: Park Holdings Plat 1 - Construction Plan Review

Carlisle, Iowa

FOX Ref No: 8666-08E.250

FOX Engineering has completed the second review for of the Park Holdings Plat 1 Construction Plans, with date of October 12, 2020 and offer the following comments:

#### **General Notes (for P&Z/Council)**

The public roadway plans and storm sewer plans are submitted as part of the Carlisle Vet Clinic Site Plan and not as part of the provided water/sewer public construction drawings to reduce the complexity of the development submittals.

#### **Construction Plan - General**

- 2. Please provide an IDNR Permit Application for review/signature for all water main provide for this plat.
- 3. **Discussion is necessary** as to what the street name should be. The current proposal is Frontline Road.
- 4. City Observation of public water main and sanitary sewer will be necessary during construction. It will be the responsibility of the Developer to coordinate a preconstruction conference with City and FOX Staff prior to construction of public infrastructure.
- 5. SWPPP comments will be sent under separate cover.

#### <u>Sheet C200 – Sanitary Sewer Plan and Profile</u>

- 6. Please provide a cap/plug on the existing sanitary sewer to the west of the new manhole (where the existing sanitary sewer was placed) to allow for a future extension to the west if needed. It would be helpful to extend and cap the existing sanitary sewer at the right of way line since the light pole will be replaced. This will save Park Holdings from having to move the light pole in the future if a connection to the west is necessary.
- 7. Please provide a 6-inch sanitary sewer stub to the west near where the existing sanitary sewer service is being removed/plugged (toward the Norgard Trust property). Please provide a 2x4 and tee post painted green to mark this service location.

#### Sheet C300 - Water Main Plan and Profile

Please revise the 12-inch connection note as it references an 8" valve.

Please provide a letter addressing all comments on this comment letter and/or state what was modified on the site plan to address said comments.

#### **CONSTRUCTION PLAN REVIEW SCHEDULE:**

**PLANNING & ZONING:** October 19, 2020 at 7:00pm at the Carlisle City Hall

**COUNCIL MEETING:** October 26, 2020 at 6:30pm at the Carlisle City Hall

If you have any questions or concerns, please contact Mitch Holtz at (515) 231-6005. The City reserves the right to add or modify these comments.

FOX ENGINEERING ASSOCIATES, INC.

Mitch Holtz, P.E.

CC: Deven Markley, City Administrator



# CONSTRUCTION PLANS FOR

# PARK HOLDINGS PLAT 1

PUBLIC SANITARY SEWER AND WATER MAIN PLANS CITY OF CARLISLE, WARREN COUNTY, IOWA

OWNER PARK HOLDINGS, LC PO BOX 150 CARLISLE, IA 50047

APPLICANT/DEVELOPER





NOT TO SCALE

**VICINITY MAP** 

# **Sheet List Table**

Sheet # Sheet Title

TITLE SHEET

SANITARY SEWER PLAN AND PROFILE WATER MAIN PLAN AND PROFILE

> I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa. JON L. Jon L. Hanson, P.E. HANSON License Number P15562 My License Renewal Date is December 31, 2020 Pages or sheets covered by this seal:



N N

Project No: 120.0776 Sheet C100

#### LEGEND **FEATURES** <u>FOUND</u> Section Corner 1/2" Rebar, Cap # 11579 (Unless Otherwise Noted) ROW Marker ROW Rail Control Point Bench Mark Platted Distance Measured Bearing & Distance Recorded As **Deed Distance** Calculated Distance Minimum Protection Elevation MPE Centerline \_\_\_\_\_\_ Section Line \_\_\_\_\_ 1/4 Section Line 1/4 1/4 Section Line \_\_\_\_\_ Easement Line **EXISTING FEATURES** X 1225.25 Spot Elevation -725\_\_\_\_\_X Contour Elevation \_\_\_\_X Fence (Barbed, Field, Hog) \_\_\_\_//\_\_\_\_ \_\_\_\_//\_\_\_ Fence (Chain Link) \_\_\_\_o\_\_\_ Fence (Wood) Fence (Silt) Tree Line Tree Stump Deciduous Tree \\ Shrub Coniferous Tree \\ Shrub \_\_\_\_ c \_\_\_\_ Communication Overhead Communication ---- OC(\*) ----\_\_\_\_OC\_\_\_\_ —— FO(\*) —— — \_\_\_\_FO\_\_\_\_ Fiber Optic **Underground Electric** —— E(\*) —— —— —— F —— —— OE(\*) —— —— \_\_\_\_\_OF\_\_\_\_ Overhead Electric —— G(\*)—— —— —— G —— Gas Main with Size High Pressure Gas Main with Size — HPG(\*) — — ——— HPG ——— —— W(\*)—— \_\_\_\_ w \_\_\_\_ Water Main with Size —— S(\*)—— —— \_\_\_\_ s \_\_\_\_ Sanitary Sewer with Size — DUCT(\*) — — — \_\_\_\_\_ DUCT \_\_\_\_\_ Duct Bank Test Hole Location for SUE w/ID (\*) Denotes the survey quality service level for utilities

Sanitary Manhole	$\oslash$	$\oslash$
Storm Sewer with Size		<u> </u>
Storm Manhole	$\oslash$	$\oslash$
Single Storm Sewer Intake		
Double Storm Sewer Intake		
Fire Hydrant	Q	
Fire Hydrant on Building	₹,	æ
Water Main Valve	$\bowtie$	×
Water Service Valve	$\otimes$	<b>⊗</b>
Well	<b>W</b>	₩
Utility Pole	<del></del>	<del>===</del>
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Utility Pole with Light	0	ō-≪
Utility Pole with Transformer	<del>_</del>	<del></del>
Street Light		□-≪
Yard Light	Ø	¤
Electric Box	EB	EB
Electric Transformer	E	E
Traffic Sign	_O_	_
Communication Pedestal	C	C
Communication Manhole	©	<u>©</u>
Communication Handhole	C	C
Fiber Optic Manhole	FO	<u></u>
Fiber Optic Handhole	FO	FO
Gas Valve	ÞG⊲	<b>PG</b> 4
Gas Manhole	©	<b>©</b>
Gas Apparatus	G	G
Fence Post or Guard Post	•	•
Underground Storage Tank	(UST)	
Above Ground Storage Tank	(AST)	
Sign	0	_
Satellite Dish	Q	Q
Mailbox	•	•1
Sprinkler Head	+	+
Irrigation Control Valve	⋈ICV	⋈ICV

#### UTILITY QUALITY SERVICE LEVELS

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI/ ASCE 38-02 STANDARD.

QUALITY LEVEL (D) INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS.

QUALITY LEVEL (C) INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH

QUALITY LEVEL (B) INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QUALITY LEVEL (A) IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

## UTILITY WARNING

QUALITY D INFORMATION.

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

#### **GENERAL NOTES**

NOTIFY UTILITY PROVIDERS PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES AND COORDINATE WITH UTILITY PROVIDERS AS NECESSARY DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION, AND DEPTH OF ALL UTILITIES. PROTECT ALL UTILITY LINES AND STRUCTURES NOT SHOWN FOR REMOVAL OR MODIFICATION. ANY DAMAGES TO UTILITY ITEMS NOT SHOWN FOR REMOVAL OR MODIFICATION SHALL BE REPAIRED TO THE UTILITY OWNER'S SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

2. CONSTRUCTION OF ALL STREET AND UTILITY IMPROVEMENTS SHALL CONFORM TO THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE SOILS REPORTS PREPARED BY OTHERS.

LENGTH OF UTILITIES SHOWN ON PLANS ARE DIMENSIONED FROM CENTERLINE OF STRUCTURE TO CENTERLINE OF STRUCTURE.

ALL TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). WHEN CONSTRUCTION ACTIVITIES OBSTRUCT PORTIONS OF THE ROADWAY, FLAGGERS SHALL BE PROVIDED. FLAGGERS SHALL CONFORM TO THE MUTCD IN

APPEARANCE, EQUIPMENT AND ACTIONS. 5. NOTIFY OWNER, ENGINEER, CITY OF CARLISLE, AND IOWA DEPARTMENT OF TRANSPORTATION AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.

CONSTRUCT MANHOLES AND APPURTENANCES AS WORK PROGRESSES. BACKFILL WITH SUITABLE MATERIAL AND COMPACT TO 95% MAXIMUM

IN THE EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS. THE DETAILED PLANS SHALL GOVERN.

8. ALL FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE RECONNECTED AND NOTED ACCORDINGLY ON THE AS-BUILT DOCUMENTS.

DIMENSIONS, BUILDING LOCATION, UTILITIES AND GRADING OF THIS SITE ARE BASED ON AVAILABLE INFORMATION AT THE TIME OF DESIGN. DEVIATIONS MAY BE NECESSARY IN THE FIELD. ANY SUCH CHANGES OR CONFLICTS BETWEEN THIS PLAN AND FIELD CONDITIONS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT VERIFICATION OF ALL SITE IMPROVEMENTS PRIOR TO

10. CONTRACTOR TO LOAD AND TRANSPORT ALL MATERIALS CONSIDERED TO BE UNDESIRABLE TO BE INCORPORATED INTO THE PROJECT TO AN APPROVED OFF-SITE WASTE SITE.

11. CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL FROM ALL AREAS TO BE CUT OR FILLED. RESPREAD TO MINIMUM 6" DEPTH TO FINISH

12. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE FINISHED GRADES AND/OR TOP OF PAVING SLAB (GUTTER), UNLESS

13. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM NEIGHBORING STREETS, DRIVEWAYS, AND SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES IN A TIMELY MANNER.

14. THE ADJUSTMENT OF ANY EXISTING UTILITY APPURTENANCES TO FINAL GRADE IS CONSIDERED INCIDENTAL TO THE SITE WORK.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING EROSION CONTROL MEASURES AS NECESSARY. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING ANY EXISTING EROSION CONTROL MEASURES ON SITE AT THE TIME OF CONSTRUCTION. GRADING AND SOIL EROSION CONTROL CODE REQUIREMENTS SHALL BE MET BY CONTRACTOR. A GRADING PERMIT IS REQUIRED FOR THIS PROJECT

16. CONTRACTOR TO COORDINATE NATURAL GAS, ELECTRICAL, TELEPHONE AND ANY OTHER FRANCHISE UTILITY SERVICES WITH UTILITY SERVICE PROVIDER, CITY OF CARLISLE, AND THE OWNER PRIOR TO CONSTRUCTION.

17. CONTRACTOR TO VERIFY ALL UTILITY CROSSINGS AND MAINTAIN MINIMUM 18" VERTICAL AND HORIZONTAL CLEARANCE BETWEEN UTILITIES. CONTRACTOR TO COORDINATE UTILITY ROUTING TO BUILDING AND VERIFY CONNECTION LOCATIONS AND INVERTS PRIOR TO CONSTRUCTION.

## NOTES

BUILDING LINES AND CORNERS ARE FOR USE IN PREPARING CIVIL SITE PLAN DOCUMENTS. BUILDING CORNERS AND BUILDING LINES SHOULD BE SPECIFICALLY VERIFIED, AS NECESSARY, PRIOR TO DESIGN FOR CONSTRUCTION OF ANY PROPOSED EXPANSION OR CONNECTION OF BUILDING COMPONENTS.

FOR CLARITY PURPOSES, SURVEY SPOT ELEVATIONS ARE NOT SHOWN ON THIS SURVEY, BUT ARE CONTAINED WITHIN THE DIGITAL CADD FILES.

FOR THE PURPOSE OF THIS SURVEY, STORM SEWER, SANITARY SEWER AND WATER MAIN LINES ARE ASSUMED TO FOLLOW A STRAIGHT LINE FROM STRUCTURE TO STRUCTURE.

4. UTILITY SERVICE LINES TO BUILDINGS ARE APPROXIMATE ONLY. AN INTERNAL BUILDING INVESTIGATION, EXCAVATION AND/OR SUBSURFACE LOCATING/DESIGNATING WOULD NEED TO BE PERFORMED TO DETERMINE THE LOCATION OF SERVICES ENTERING THE BUILDING.

UNDERGROUND PIPE MATERIALS AND SIZES ARE BASED UPON VISIBLE EVIDENCE VIEWED FROM ACCESS MANHOLES/STRUCTURES. DUE TO THE CONFIGURATION AND/OR CONSTRUCTION OF THE STRUCTURE, IT MAY BE DIFFICULT TO ACCURATELY DETERMINE THE PIPE MATERIAL AND/OR SIZE. THE SURVEYOR WILL USE THEIR JUDGMENT AND EXPERIENCE TO ATTEMPT TO DETERMINE, BUT COMPLETE ACCURACY CANNOT BE GUARANTEED.

BOUNDARY LINES SHOWN ON THE EXISTING SITE SURVEY ARE TO FACILITATE DESIGN OR CONCEPT NEEDS AND ENABLE CREATION OF SAID CONSTRUCTION DOCUMENTS. THESE LINES DO NOT CONSTITUTE A CERTIFIED BOUNDARY SURVEY AND MISSING MONUMENTS WILL NOT BE

#### LEGAL DESCRIPTION

LOT 1 PARK HOLDINGS PLAT 1

#### SIDEWALK NOTE:

THE OWNERS OF PLATTED LOTS ARE RESPONSIBLE FOR THE COSTS ASSOCIATED WITH CONSTRUCTING FUTURE SIDEWALKS WHEN THEY ARE DEFERRED. THE CITY RESERVES THE RIGHT TO REQUIRE A SIDEWALK TO BE INSTALLED AT A FUTURE DATE. THE DEFERRED SIDEWALK SHALL BE INSTALLED WITHIN 3 MONTHS OF NOTIFICATION OF CITY.

#### CITY OF CARLISLE STANDARD NOTES

1. GENERAL NOTES:

A. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF CARLISLE SUPPLEMENTAL SPECIFICATIONS.

B. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THIS MEETING WITH THE CITY OF CARLISLE & FOX ENGINEERING.

C. THE CITY OF CARLISLE MUST BE NOTIFIED BY ALL CONTRACTORS 48 HOURS PRIOR TO COMMENCING WORK. CALL CITY OF CARLISLE

(TOMMY THOMPSON 515-505-4299) & FOX ENGINEERING (MITCH HOLTZ 515-233-0000) D. ALL PERMITS (IDNR, IDOT, ARMY CORP., ETC.) SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION

E. ALL UTILITY CONTRACTORS AND/OR OWNERS SHALL BE RESPONSIBLE TO PROVIDE THE CITY OF CARLISLE WITH "AS-BUILT" DRAWINGS OF ALL IMPROVEMENTS.

F. ALL SIGNAGE SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

G. ALL SITE LIGHTING SHALL NOT SPILL ONTO ADJACENT PROPERTIES OR RIGHT-OF-WAYS.

2. SANITARY SEWER NOTES:

A. THE CONTRACTOR IS REQUIRED TO PLACE A TEMPORARY PLUG IN THE EXISTING DOWNSTREAM SANITARY SEWER MANHOLE PRIOR TO THE START OF CONSTRUCTION. THE PLUG SHALL BE REMOVED FOLLOWING APPROVAL OF CONSTRUCTION BY THE CITY OF CARLISLE.

B. SANITARY GRAVITY PIPE MATERIAL SHALL BE PVC SDR 26 OR TRUSS (8" TO 15").

C. SANITARY GRAVITY SERVICE PIPE MATERIAL SHALL BE PVC SDR 23.5 (4" TO 6"). D. ALL SANITARY SEWER MANHOLES CASTINGS SHALL BE SEALED WITH INTERIOR CHIMNEY SEALS. IN ADDITION, THE MINIMUM SPACER

RING SIZE IS 4-INCHES AND THE MAXIMUM NUMBER OF SPACER RINGS SHALL NOT EXCEED 12-INCHES. E. ALL SANITARY SEWER MANHOLES SHALL HAVE STEPS.

F. ALL SANITARY SEWER MANHOLE CASTINGS LOCATED WITHIN PAVEMENT SHALL BE BOXED OUT

G. MANDREL AND PRESSURE TESTS ARE REQUIRED FOR ALL SANITARY SEWER LINES (8" AND ABOVE) PRIOR TO PAVING. IN ADDITION, ALL SANITARY SEWER LINES SHALL BE TELEVISED. THE SEWER SYSTEM SHALL BE FLUSHED WITH WATER PRIOR TO TELEVISING

#### 3. WATER MAIN NOTES:

A. ALL FIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION 250 (3-WAY A-423), 6" MJ SHOE, 2-1/2" HOSE NOZZLE, 4-1/2" STEAMER NOZZLE, NST THREADS, PENTAGON OPERATING NUT, CHAIN ON CAP, OPEN LEFT, AND FACTORY PAINTED RED. THE MINIMUM HYDRANT

B. ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY OF CARLISLE WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.

C. A TRACER WIRE RECEPTACLE SHALL BE INSTALLED AT EACH HYDRANT (FLUSH MOUNT VALVCO OR APPROVED EQUAL).

D. TRACER WIRE SHALL BE ADDED TO ALL WATER MAIN.

E. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.

F. WATER SERVICE SHALL BE 1-INCH MINIMUM TYPE K COPPER.

G. THE CONTRACTOR IS RESPONSIBLE FOR PRESSURE TESTING, CHLORINATION, AND BACTERIA TEST.

4. STORM SEWER NOTES:

A. ALL STORM SEWER IN THE ROW SHALL BE RCP, UNLESS OTHERWISE APPROVED BY THE CITY.

B. ALL FLARED END SECTIONS SHALL HAVE FOOTINGS AND APRON GRATES. THE LAST 3 PIPE SECTIONS AND THE FLARED END SECTION ON

ALL CULVERTS SHALL BE TIED. ALL STORM SEWER JOINTS SHALL BE WRAPPED WITH ENGINEERING FABRIC. C. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY FIELD TILE DAMAGED DURING CONSTRUCTION. THE TILE SHOULD BE

DIRECTED TO PUBLIC STORM SEWER IF POSSIBLE. THE CONTRACTOR SHALL RECORD THE ELEVATION AND LOCATION OF ALL TILES.

D. ALL SUMP SERVICE LINES SHALL HAVE TRACER WIRE E. ALL RIP-RAP SHALL BE UNDERLAIN WITH ENGINEERING FABRIC AS SPECIFIED IN THE URBAN SPECIFICATIONS.

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 - GEOID12A)

IARTN DERIVED - US SURVEY FEET

BM500 N=7459612.08 E=18554477.00 ELEV=792.66 NORTHWEST BURY BOLT ON HYDRANT AT THE NORTHWEST END OF NORGARD CIRCLE, NORTHWEST SIDE OF SITE.

BM501 N=7458752.82 E=18555180.74 ELEV=789.25 NORTHEAST BURY BOLT ON HYDRANT IN THE NORTHEAST QUADRANT OF IOWA HIGHWAY 5 & GATEWAY DRIVE, SOUTH SIDE OF SITE

#### CONTROL POINTS

IOWA REGIONAL COORDINATE SYSTEM ZONE 8 (AMES-DES MOINES)

NAD83(2011)(EPOCH 2010.00) IARTN DERIVED - US SURVEY FEET

N=7459589.92 E=18554629.38 Z=789.47

CUT "X" IN NORTH CURB OF NORGARD CIRCLE 35' NORTH OF LIGHT POLE NORTH SIDE OF SITE.

N=7459343.95 E=18554508.53 Z=790.06

CUT "X" IN CURB 3' WEST OF INTAKE AT THE WEST SIDE OF PARKING LOT, WEST SIDE OF SITE.

N=7459021.47 E=18554421.71 Z=790.82 CUT "X" IN CONCRETE AT THE NORTH SIDE OF IOWA HIGHWAY 5 120' NORTHWEST OF HIGHWAY

65 MASON CITY SIGN, SOUTHWEST CORNER OF SITE. N=7459018.62 E=18554878.52 Z=789.88

N=7458677.43 E=18555214.01 Z=787.76

CUT "X" IN CONCRETE AT THE SOUTH SIDE OF FRONTAGE ROAD 50' EAST OF GATEWAY DRIVE. SOUTHEAST CORNER OF SITE.

CUT "X" IN CURB AT THE NORTHWEST CORNER OF CASEY'S PARKING LOT, SOUTH SIDE OF SITE.

## UTILITY CONTACT INFORMATION

UTILITY CONTACT FOR MAPPING INFORMATION SHOWN AS RECEIVED FROM THE IOWA ONE CALL DESIGN REQUEST SYSTEM, TICKET NUMBERS 552005473 & 552005474.

OE1-OVERHEAD ELECTRIC UE1-UNDERGROUND ELECTRIC

NO RESPONSE

INFRASTRUCTURE

MIDAMERICAN ENERGY CRAIG RANFELD

515-252-6632 MECDSMDesignLocates@midamerican.com

**CENTURYLINK** CO1-COMMUNICATION

TOM STURMER 720-578-8090

thomas.sturmer@centurylink.com FO1-FIBER OPTIC IOWA COMMUNICATIONS NETWORK

SHANNON MARLOW

800-572-3940

icnoutsideplantiowaonecall@iowa.gov

**IOWA DOT** SCOTT SMYTH

515-250-5290 scott.smyth@iowadot.us

WATER AND SANITARY SEWER CITY OF CARLISLE

TOMMY THOMPSON 515-505-4299

CITY OF CARLISE TOMMY THOMPSON 515-505-4299 SEWER AND WATER



#### POLLUTION PREVENTION NOTES

#### A. POLLUTION PREVENTION AND EROSION PROTECTION

- CODE COMPLIANCE: THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL POTENTIAL POLLUTION AND SOIL EROSION CONTROL REQUIREMENTS OF THE IOWA CODE THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR) NPDES PERMIT, THE U.S. CLEAN WATER ACT AND ANY LOCAL ORDINANCES. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT AGAINST EROSION AND POLLUTION FROM THIS PROJECT SITE AND ALL OFF-SITE BORROW OR DEPOSIT AREAS DURING PERFORMANCE OR AS A RESULT OF PERFORMANCE.
- 2. DAMAGE CLAIMS: THE CONTRACTOR WILL HOLD THE OWNER AND ARCHITECT / ENGINEER HARMLESS FROM ANY AND ALL CLAIMS OF ANY TYPE WHATSOEVER RESULTING FROM DAMAGES TO ADJOINING PUBLIC OR PRIVATE PROPERTY, INCLUDING REASONABLE ATTORNEY FEES INCURRED TO OWNER, FURTHER, IF THE CONTRACTOR FAILS TO TAKE NECESSARY STEPS TO PROMPTLY REMOVE EARTH SEDIMENTATION OR DEBRIS WHICH COMES ONTO ADJOINING PUBLIC OR PRIVATE PROPERTY. THE OWNER MAY, BUT NEED NOT REMOVE SUCH ITEMS AND DEDUCT THE COST THEREOF FROM AMOUNTS DUE TO THE CONTRACTOR.

#### **B. STORM WATER DISCHARGE PERMIT**

- 1. THIS PROJECT REQUIRES COVERAGE UNDER THE NPDES GENERAL PERMIT NO. 2 FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDNR, AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS ARE RESPONSIBLE FOR COMPLIANCE WITH AND FULFILLMENT OF ALL REQUIREMENTS OF THE NPDES GENERAL PERMIT NO. 2 AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- 2. ALL DOCUMENTS RELATED TO THE STORM WATER DISCHARGE PERMIT, INCLUDING, BUT NOT LIMITED TO, THE NOTICE OF INTENT, PROOF OF PUBLICATIONS, DISCHARGE AUTHORIZATION LETTER, CURRENT SWPPP, SITE INSPECTION LOG, AND OTHER ITEMS, SHALL BE KEPT ON SITE AT ALL TIMES AND MUST BE PRESENTED TO ANY JURISDICTIONAL AGENCIES UPON REQUEST. FAILURE TO COMPLY WITH THE NPDES PERMIT REQUIREMENTS IS A VIOLATION OF THE CLEAN WATER ACT AND THE CODE OF IOWA.
- 3. A "NOTICE OF DISCONTINUATION" MUST BE FILED WITH THE IDNR UPON FINAL STABILIZATION OF THE DISTURBED SITE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES. ALL PLANS, INSPECTION REPORTS, AND OTHER DOCUMENTS MUST BE RETAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION. THE CONTRACTOR SHALL RETAIN A RECORD COPY AND PROVIDE THE ORIGINAL DOCUMENTS TO THE OWNER UPON PROJECT ACCEPTANCE AND/OR SUBMITTAL OF THE NOTICE OF DISCONTINUATION.

#### C. POLLUTION PREVENTION PLAN

- 1. THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS A SEPARATE DOCUMENT IN ADDITION TO THESE PLAN DRAWINGS. THE CONTRACTOR SHOULD REFER TO THE SWPPP FOR ADDITIONAL REQUIREMENTS AND MODIFICATIONS TO THE POLLUTION PREVENTION PLAN MADE DURING CONSTRUCTION.
- 2. THE SWPPP ILLUSTRATES GENERAL MEASURES AND BEST MANAGEMENT PRACTICES (BMP) FOR COMPLIANCE WITH THE PROJECT'S NPDES PERMIT COVERAGE. ALL BMP'S AND EROSION CONTROL MEASURES REQUIRED AS A RESULT OF CONSTRUCTION ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY, NOTE AND IMPLEMENT. ADDITIONAL BMP'S FROM THOSE SHOWN ON THE PLAN MAY BE REQUIRED.
- 3. THE SWPPP AND SITE MAP SHOULD BE EXPEDITIOUSLY REVISED TO REFLECT CONSTRUCTION PROGRESS AND CHANGES AT THE PROJECT SITE.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE GENERAL PERMIT AND SWPPP, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING BMP'S UNLESS INFEASIBLE OR NOT APPLICABLE:
- a. UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE WHEN DISCHARGING FROM BASINS, PROVIDE AND MAINTAIN NATURAL BUFFERS AROUND SURFACE WATERS, DIRECT STORM WATER TO VEGETATED AREAS TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORM WATER INFILTRATION, AND MINIMIZE SOIL COMPACTION.
- b. INSTALL PERIMETER AND FINAL SEDIMENT CONTROL MEASURES SUCH AS SILT BARRIERS, DITCH CHECKS, DIVERSION BERMS, OR SEDIMENTATION BASINS DOWNSTREAM OF SOIL DISTURBING ACTIVITIES PRIOR TO SITE CLEARING AND GRADING OPERATIONS.
- c. PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION AND LIMIT TO A MINIMUM THE TOTAL AREA DISTURBED BY CONSTRUCTION OPERATIONS AT ANY
- d. MAINTAIN ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IN WORKING ORDER, INCLUDING CLEANING, REPAIRING, REPLACEMENT, AND SEDIMENT REMOVAL THROUGHOUT THE PERMIT PERIOD. CLEAN OR REPLACE SILT CONTROL DEVICES WHEN THE MEASURES HAVE LOST 50% OF THEIR ORIGINAL CAPACITY.
- e. INSPECT THE PROJECT AREA AND CONTROL DEVICES (BY QUALIFIED PERSONNEL ASSIGNED BY THE CONTRACTOR) EVERY SEVEN CALENDAR DAYS. RECORD THE FINDINGS OF THESE INSPECTIONS AND ANY RESULTING ACTIONS IN THE SWPPP WITH A COPY SUBMITTED WEEKLY TO THE OWNER OR ENGINEER DURING CONSTRUCTION. REVISE THE SWPPP AND IMPLEMENT ANY RECOMMENDED MEASURES WITHIN 7 DAYS.
- f. PREVENT ACCUMULATION OF EARTH AND DEBRIS FROM CONSTRUCTION ACTIVITIES ON ADJOINING PUBLIC OR PRIVATE PROPERTIES, INCLUDING STREETS, DRIVEWAYS, SIDEWALKS, DRAINAGEWAYS, OR UNDERGROUND SEWERS. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR FUTURE PREVENTION.
- g. INSTALL NECESSARY CONTROL MEASURES SUCH AS SILT BARRIERS, EROSION CONTROL MATS, MULCH, DITCH CHECKS OR RIPRAP AS SOON AS AREAS REACH THEIR FINAL GRADES AND AS CONSTRUCTION OPERATIONS PROGRESS TO ENSURE CONTINUOUS RUNOFF CONTROL. PROVIDE INLET AND OUTLET CONTROL MEASURES AS SOON AS STORM SEWERS ARE INSTALLED.
- h. RESPREAD A MINIMUM OF 6 INCHES OF TOPSOIL (INCLUDING TOPSOIL FOUND IN SOD) ON ALL DISTURBED AREAS. EXCEPT WHERE PAVEMENT. BUILDINGS OR OTHER IMPROVEMENTS ARE LOCATED.
- i. STABILIZE UNDEVELOPED, DISTURBED AREAS WITH MULCH, TEMPORARY SEED MIX, PERMANENT SEED MIX, SOD, OR PAVEMENT IMMEDIATELY AS SOON AS POSSIBLE UPON COMPLETION OR DELAY OF GRADING OPERATIONS. INITIATE STABILIZATION MEASURES IMMEDIATELY AFTER CONSTRUCTION ACTIVITY IS FINALLY COMPLETED OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WHICH WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
- . COORDINATE LOCATIONS OF STAGING AREAS WITH THE OWNER AND RECORD IN THE SWPPP. UNLESS NOTED OTHERWISE, STAGING AREAS SHOULD CONTAIN THE FOLLOWING: JOB TRAILERS, FUELING / VEHICLE MAINTENANCE AREA, TEMPORARY SANITARY FACILITIES, MATERIALS STORAGE, AND CONCRETE WASHOUT FACILITY. CONTROL RUNOFF FROM STAGING AREAS WITH DIVERSION BERMS AND/OR SILT BARRIERS AND DIRECT TO A SEDIMENT BASIN OR OTHER CONTROL DEVICE WHERE POSSIBLE. CONCRETE WASHOUT MUST BE CONTAINED ONSITE.
- k. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND SITE WASTE PRIOR TO FILING OF THE "NOTICE OF DISCONTINUATION"

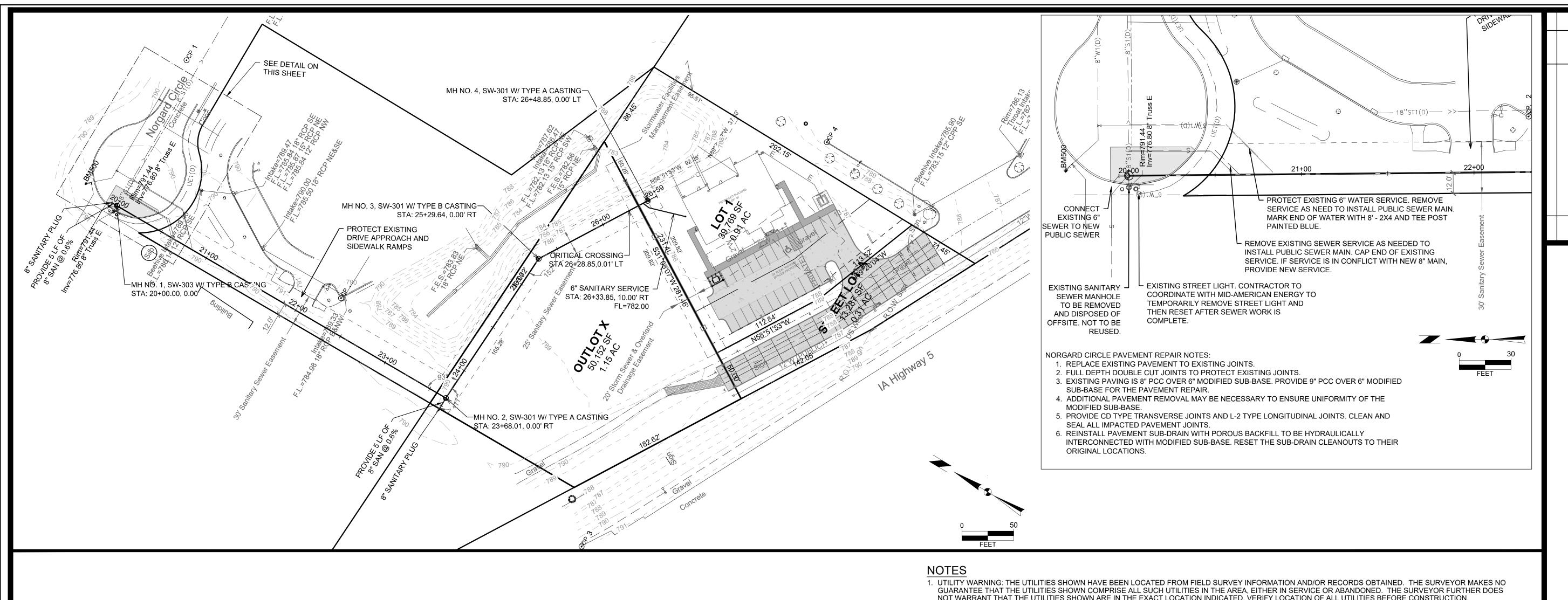
OR N

Z 0 RO

& ASSOCIATES

Project No: 120.0776

Sheet C101



- Existing Grade

162 LF OF 8" SAN @ 0.60%

NO. 2, SV 779.36 E 779.36 V 779.26 N 779.26 N

24+00

25+00

23+00

PROPOSED GRADE

CRITICAL CROSSING-

BP: 783.10 (ST)

119 LF OF 8" SAN @ 0.55%

TP: 781.84 (\$AN)

26+00

27+00

795 -

780 -

760 -

5 LF OF 8" SAN @ 0.6%

21+00

25 25 35 36 37

20+00

368 LF OF 8" SAN @ 0.60%

22+00

- NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. VERIFY LOCATION OF ALL UTILITIES BEFORE CONSTRUCTION.
- 1. CONSTRUCTION OF ALL STREET AND UTILITY IMPROVEMENTS SHALL CONFORM TO THE 2020 SUDAS STANDARDS SPECIFICATIONS FOR PUBLIC
- 2. ALL BACKFILL AND SUBGRADE SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR AND SHALL BE WITHIN A RANGE OF -1% TO +4% OF THE MATERIALS OPTIMUM MOISTURE CONTENT.
- 3. ROUTE WATER MAIN AS SHOWN USING PIPE JOINT DEFLECTION WHEN POSSIBLE. OTHERWISE USE 45° BENDS OR LESS BOTH HORIZONTAL AND VERTICAL.
- DEFECTIVE, REPAIR OR REPLACE PRIOR TO COMPLETING THE TEST. INSTALLATION OF A NEW VALVE MAY BE REQUIRED IN CIRCUMSTANCES WHERE NO EXISTING VALVE IS IN CLOSE PROXIMITY TO THE END OF THE EXISTING WATER MAIN AS PER THE CITY WATER DEPARTMENT REQUIREMENTS.
- 5. RIM ELEVATIONS ARE SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR TO ADJUST RIM AS NECESSARY TO MEET SPECIFIC CONSTRUCTION
- 6. ALL SANITARY SEWER MANHOLES TO BE INSTALLED WITH I/I BARRIER.
- 7. AT CRITICAL CROSSING WHERE THE WATER MAIN IS LOCATED BELOW THE STORM, PROVIDE GASKETED JOINTS FOR RCP LOCATED WITHIN 10 FEET OF THE
- 8. ALL TRIVIEWS FOR THE TRACER WIRE MUST BE PROPERLY INSTALLED PER THE ATTACHED DETAIL SHEET BEFORE THE WATER MAIN IS TURNED ON AND THE TAPS CAN BE MADE.
- 9. HYDRANT EXTENSIONS ARE NOT ALLOWED.
- 10. WHERE WATER MAIN PASSES UNDER EXISTING STORM SEWER, INSTALL THE WATER MAIN WITH DIP MATERIAL WITH NITRILE GASKETS. PLACE JOINTS TO MAXIMUM DISTANCE FROM THE STORM SEWER.

11.PROVIDE TYPE 1 SEED, FERTILIZER AND HYDROMULCH FOR ALL DISTURBED AREAS DISTURBED BY SANITARY SEWER AND WATERMAIN CONSTRUCTION.

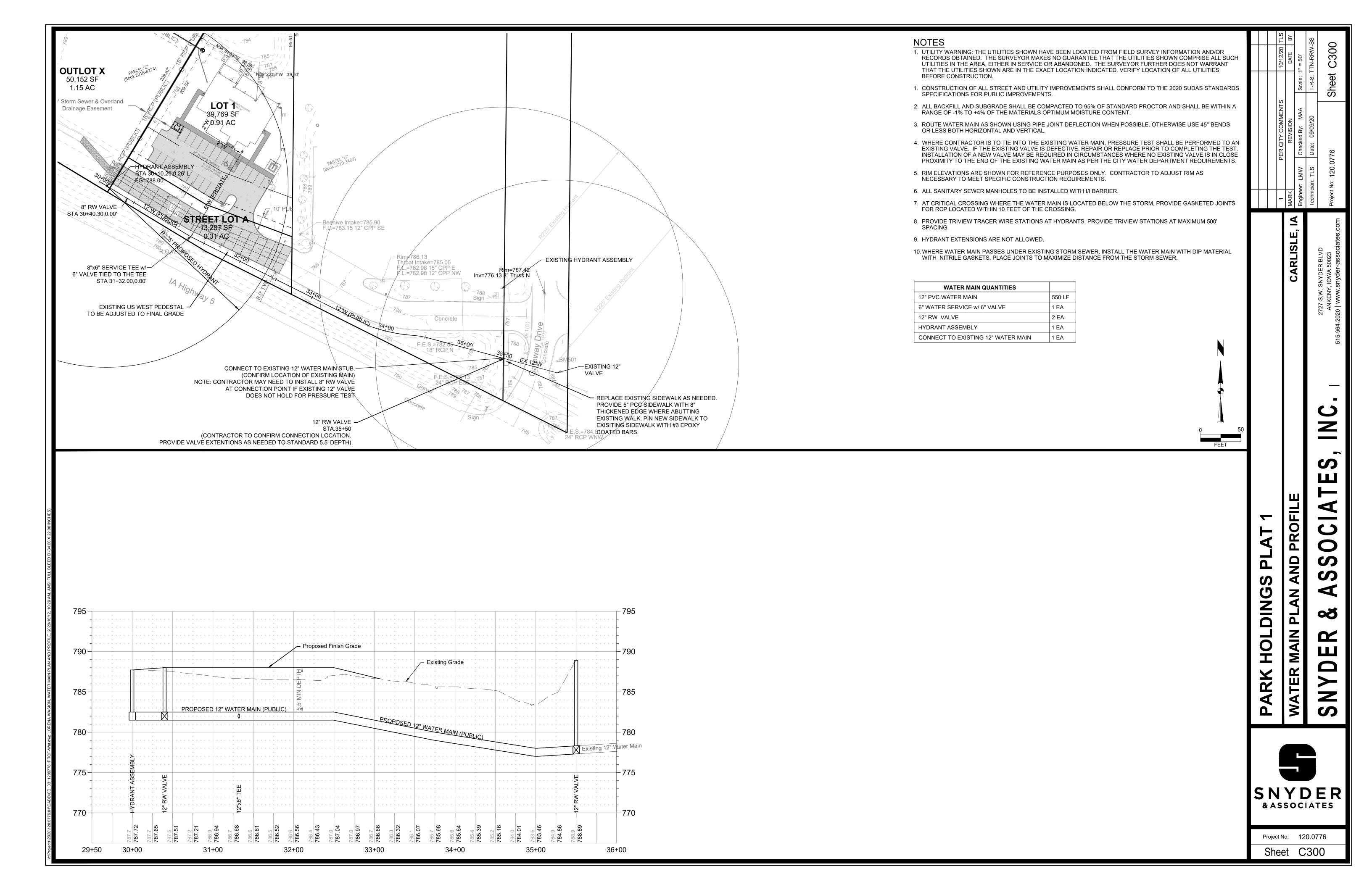
SANITARY SEWER QUANTITIES	
8" PVC MAIN	659 LF
MANHOLE, TYPE SW-301	3 EA
MANHOLE, TYPE SW-303	1 EA
6" SANITARY SERVICE	1 EA
VIDEO INSPECTION	659 LF
REMOVE AND REPLACE 8" PCC PAVING	95 SY



Sheet C200

N N 0 AR

ROFIL





# Carlisle Vet Clinic and Road Project Carlisle, Iowa

September 23, 2020 Terracon Project No. 08205220-01

#### **Prepared for:**

Downing Construction Inc Indianola, Iowa

#### Prepared by:

Terracon Consultants, Inc.
Des Moines, Iowa

Environmental Facilities Geotechnical Materials



Downing Construction Inc 509 East Scenic Valley Avenue Indianola, Iowa 50125

Attn: Mr. Josh Rabe

P: (515) 961 5386

E: joshr@downingconstruct.com

Re: Geotechnical Engineering Report

Carlisle Vet Clinic and Road Project

Carlisle, Iowa

Terracon Project No. 08205220-01

Dear Mr. Rabe:

We have performed geotechnical engineering services for the referenced project in general accordance with Terracon Proposal No. P08205220 dated August 26, 2020. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs, and pavements for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

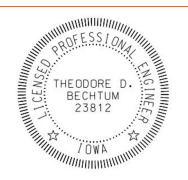
Sincerely,

Terracon Consultants, Inc.

Adam S. Maher, E.I. Staff Engineer

Theodore D. Bechtum, P.E. Project Engineer

Jeffrey L. Magner, P.E. Regional Manager



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

September 23, 2020

Theodore D. Bechtum, P.E.

Date

My license renewal date is December 31, 2020.

Terracon Consultants, Inc. 600 SW 7<sup>th</sup> Street, Suite M Des Moines, Iowa 50309 P (515) 244 3184 F (515) 244 5249 terracon.com

Environmental

**Facilities** 

Geotechnical

Materials

#### **REPORT TOPICS**

INTRODUCTION	1
SITE CONDITIONS	1
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GEOTECHNICAL CHARACTERIZATION	2
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**Note:** This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the **GeoReport** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

#### **ATTACHMENTS**

EXPLORATION AND TESTING PROCEDURES SITE LOCATION AND EXPLORATION PLAN EXPLORATION RESULTS
SUPPORTING INFORMATION

**Note:** Refer to each individual Attachment for a listing of contents.

# Carlisle Vet Clinic and Road Project Carlisle, Iowa

Terracon Project No. 08205220-01 September 23, 2020

#### INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed Carlisle Vet Clinic and Road Project located on the north side of IA Highway 5 about 500 feet northwest of Gateway Drive in Carlisle, Iowa. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Excavation considerations

- Foundation design and construction
- Floor slab design and construction
- Pavement design and construction

The geotechnical engineering Scope of Services for this project included the advancement of six test borings to depths ranging from approximately 10½ to 20½ feet below existing site grades.

Maps showing the site and boring locations are shown in the **Site Location and Exploration Plan** section. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs in **Exploration Results**.

#### SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description	
Parcel Information	<ul> <li>The project is located on the north side of IA Highway 5 about 500 feet northwest of Gateway Drive in Carlisle, Iowa.</li> <li>Latitude/Longitude: 41.5098°, -93.5167° (approximate)</li> <li>See Site Location</li> </ul>	
Existing Improvements	Existing public road to the southeast of the site	
Current Ground Cover	<ul> <li>Grass field over majority of project site</li> <li>Crushed rock at a portion of the proposed parking lot</li> </ul>	

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Item	Description
Existing Topography	<ul> <li>Relatively level across the area of the proposed building and parking lot with maximum elevation change of about one foot</li> <li>Generally sloping down from north to south in the area of the proposed public road with about 3 feet of elevation change</li> </ul>

#### PROJECT DESCRIPTION

Our final understanding of the project conditions is as follows:

Item	Description	
Project Description	The project involves the construction of a new vet clinic building, associated parking/drive areas, and the extension of a public road.	
Proposed Structure(s)	The building will be wood-framed, single-story, slab-on-grade, with a footprint of about 4,650 square feet.	
Finished Floor Elevation	Not provided at the time of this report, but we understand the design team is anticipating grades will be raised about 1 to 2 feet in the building area	
Maximum Loads (assumed by Terracon)	<ul> <li>Columns: 50 kips</li> <li>Walls: 2 to 4 kips per linear foot (klf)</li> <li>Slabs: 100 pounds per square foot (psf)</li> </ul>	
Grading/Slopes	A grading plan was not provided at the time of this proposal, but we anticipate cuts and fills on the order of about 2 feet will be required to achieve final grades	
Below Grade Structures	None	
Free-Standing Retaining Walls	None	
Pavements	<ul> <li>Traffic information was not provided at the time of this report</li> <li>We expect that traffic will consist of a relatively low volume of light passenger vehicles and an occasional garbage or trash removal truck.</li> <li>We anticipate that portland cement concrete (PCC) pavement sections will be considered</li> </ul>	

#### **GEOTECHNICAL CHARACTERIZATION**

We have developed a general characterization of the subsurface soil and groundwater conditions based upon our review of the data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical recommendations.

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Conditions encountered at each exploration point are indicated on the individual logs. The individual logs and GeoModel can be found in **Exploration Results**.

Stratification boundaries on the GeoModel and boring logs represent the approximate location of changes in soil types; in situ, the transition between materials may be gradual. As noted in **General Comments**, the characterizations are based on widely spaced exploration points across the site, and variations are likely.

As part of our review, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
Surface	Materials	Root zone of approximately 2 inches
1	Existing Fill	Lean clay and lean to fat clay, variable sand content, occasional gravel and rubble observed in Borings 4, 5, and 6 in the area of the proposed road extension
2	Loess Crust	Fat clay, trace sand, medium stiff to stiff consistency Only encountered in Boring 3 to a depth of about 5 feet bgs
3	3 Loess	Lean clay, relatively high moisture content, generally soft to medium stiff consistency
	Encountered to termination depths of Borings 1, and 3 through 6 at about 10½ to 15½ feet bgs	
4	Glacial Clay	Sandy lean clay, stiff to very stiff consistency, only encountered in Boring 2 to the termination depth of the boring at about 20½ feet bgs

The boreholes were observed while drilling and shortly after completion for the presence and level of groundwater. The water levels observed in the boreholes can be found on the boring logs in **Exploration Results**.

Groundwater was observed in Borings 1, 2 and 4 at depths of about 7½ feet to 13 feet bgs during our field exploration. Groundwater was not observed in the other borings while drilling, or for the short duration the borings could remain open. However, this does not necessarily mean the borings terminated above groundwater, or the water levels shown on the boring logs are stable groundwater levels. A relatively long period may be necessary for a groundwater level to develop and stabilize in a borehole. Long term observations in piezometers or observation wells sealed from the influence of surface water are often required to define groundwater levels in materials of this type.

The online USDA Web Soil Survey was reviewed for information relating to anticipated seasonally high groundwater levels across this site. The Web Soil Survey indicates the primary native soil unit on this site is Nevin silty clay loam soil unit (designated as 88 in the following figure), which

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is reported to be somewhat poorly drained and has a seasonal high groundwater level of about 12 to 42 inches below natural grades. The Bremer silty clay loam soil unit (designated as 43 in the following figure) is reported to be poorly drained and has a seasonal high groundwater level of about 0 to 12 inches below natural grades.



Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff, and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structures may be different than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

#### **GEOTECHNICAL OVERVIEW**

Existing fill materials (GeoModel Layer 1), primarily consisting of lean clay and lean to fat clay with variable sand and gravel content was observed to depths of about 3 to 6 feet (bgs) in the soil borings completed for this project. Rubble was observed in the existing fill in Borings 4, 5, and 6. The proportion or rubble or debris is often difficult to observe from the samples recovered from soil borings, and the proportion and distribution of rubble should be anticipated to vary with depth and across the site, with possible abrupt changes. Test pits could be considered to better evaluate the distribution of undesirable materials within the existing fill.

Support of foundations, floor slabs and pavements on or above existing fill soils is discussed in this report. However, even with the recommended construction procedures, there is an inherent

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risk for the Owner that compressible fill or unsuitable material (e.g., construction debris, old topsoil layers, etc.) within or buried by the fill will not be discovered. This risk of unforeseen conditions, potentially leading to excessive total or differential settlement, cannot be eliminated without completely removing the existing fill, but can be reduced by performing additional testing and evaluation.

The **General Comments** section provides an understanding of the report limitations.

#### **EARTHWORK**

Existing fill was encountered to depths of about 3 to 4 feet bgs in Borings 1 to 3 located across the buildings' footprint and to depths of about 5 to 6 feet bgs in Borings 4 to 6 located in the area of the proposed public road. The depth of existing fill should be anticipated to extend shallower or deeper at other locations on the project site. Documentation of testing during placement of existing fill materials was unavailable at the time this report was written. Based on the results of field and laboratory tests completed on samples of the existing fill, it appears portions of the existing fill materials were placed with some level of moisture, density, and constituent control; however, rubble and more significant water content fluctuation was observed in the area of the future public roadway, and undesirable zones within the existing fill should be anticipated. Therefore, there is risk for the Owner of excessive total/differential settlement when supporting structures on the existing fill materials, as low density zones or other unsuitable materials may present. Alternatives to address the risk of existing fill materials are listed below. The preferred alternative should be determined by the Owner based on an assessment of cost vs. risk, considering the Owner's risk tolerance.

Option 1: Complete removal of existing fill materials below the area of the planned construction during mass grading operations. We anticipate that removal of existing fill will require undercuts of about 3 to 6 feet. Option 1 should be considered if the Owner wishes to eliminate the risk of excessive total and/or differential settlement associated with undocumented existing fill soils.

Option 2: Considering the observed conditions in the building footprint, consideration could be given to supporting floor slabs on 12 inches of low plasticity structural fill (includes aggregate base) underlain by existing fill materials, provided the exposed existing fill is observed, tested, and evaluated for stability by Terracon. Although providing 12 inches of low plasticity structural fill will not completely remove the risk associated with unpredictable movement of existing fill, this partial removal will help provide a uniform surface for the floor slab support. Support of floor slabs on an aggregate base supported directly on observed and tested existing fill could be

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considered if the Owner is insensitive to the risk of unpredictable movement associated with existing fill.

Consideration could be given to supporting pavements on an aggregate base placed directly on the existing fill, provided the exposed existing fill is observed, tested, and evaluated for stability by Terracon.

Where soft, disturbed, or otherwise unsuitable soils are observed during recompaction and proofrolling of the exposed existing fill in floor slab or pavement areas, improvement will be required. Areas of improvement should be anticipated.

Option 2 requires the Owner to accept risk that compressible fill or unsuitable material within or buried by the existing fill will not be discovered or corrected below floor slabs and pavements, and these conditions could lead to settlement of the planned floor slabs and pavements. The risk would be greatest where the thickness of existing fill is greatest, or where any low-density or low strength zones exist. The risk of unforeseen conditions cannot be eliminated without completely removing the existing fill.

Considering the existing fill depths observed in the soil borings and the information provided to us at the time of the report, it is Terracon's recommendation existing fill is completely removed below foundations. If the Owner can tolerate risk associated with unpredictable movement of foundations, consideration could be given to supporting foundations over existing fill that has been observed and evaluated by Terracon. Considering easily disturbed native clay is anticipated below existing fill soils, a granular working surface is anticipated to be required at the base of the dewatered foundation excavation.

#### **Site Preparation**

Site preparation should commence with removal of all vegetation, topsoil, organic soils, and root systems. Unsuitable materials (e.g., debris, desiccated soil, frozen soil, etc.) encountered during this process should also be removed. Depending on the approach the Owner chooses to address existing fill materials and support of structures, different levels of earthwork will be required.

Option 1: Following stripping, existing fill materials should be completely removed below areas of new construction. Subgrade stabilization will likely be required in the saturated and/or low-strength clays anticipated to be exposed at the base of the undercut.

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# Option 2: Following stripping, existing fill materials should be removed to the minimum depths below floor slabs and pavements outlined in Earthwork and selected by the Owner. Existing fill should be completely removed below foundations unless the Owner can accept risk associated with unpredictable foundation movements. The exposed existing fill materials left in place below floor slabs and pavements should be further tested and evaluated by Terracon during initial mass grading operations and proofrolling. Additional undercuts should be anticipated where unsuitable materials are encountered. Removal and correction in rubble laden areas should be anticipated in the area of Borings 4, 5, and 6.

Where Option 2 is selected, we recommend the exposed subgrade be proofrolled to help delineate soft, disturbed, or low-density fill zones across the project site. Proofrolling should be accomplished using a fully loaded, tandem axle dump truck or other equipment providing an equivalent subgrade loading (minimum gross weight of 25 tons is recommended for the proofrolling equipment). Unstable areas identified by proofrolling should either be undercut to expose stable material and backfilled with structural fill or stabilized as described in this report. Where Option 1 is selected, proofrolling the relatively low strength native soils is not suggested, and subgrade stabilization is anticipated to be required prior to placement of new structural fill.

Following proofrolling, and prior to placement of structural fill in areas below design grade and after completion of rough grading in cut areas of the site, the exposed subgrade should be scarified to a depth of 9 inches, moisture conditioned, and compacted to the density and water content ranges recommended for structural fill.

#### **Subgrade Stabilization**

If unsuitable areas are observed, subgrade improvement will then be necessary to establish a suitable subgrade support condition. Terracon should be retained to discuss stabilization options. Potential methods of subgrade improvement are described below. The appropriate method of improvement, if required, would be dependent on factors such as schedule, weather, the size and depth of area to be stabilized, and the nature of the instability. More detailed recommendations can be provided during construction as the need for subgrade stabilization occurs.

- Scarification and Compaction Soils can be scarified, moisture condition (i.e., dried or wetted), and compacted. The success of this procedure depends primarily on favorable weather and sufficient time to manipulate the soils.
- n Undercut and Replacement with Crushed Stone/Aggregate The use of crushed stone, crushed concrete, and/or gravel could be considered to improve subgrade stability. To limit depths of undercuts, the use of a geogrid could be considered after underground work, such as utility construction, is completed.

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Chemical Treatment – Unstable or high water content soils can be chemically treated (dried) with lime, portland cement, or Class C fly ash. Chemical treatment should be performed by a pre-qualified contractor having experience with successfully drying/stabilizing subgrades on similar sized projects with similar soil conditions. With this option, the chemical agent can typically be incorporated into the soils to nominal depths of about 1 foot. If thicker zones require stabilization, then removal of the upper soils will be needed prior to initiating the chemical treatment.

Terracon should be notified prior to selection of a chemical stabilization agent to allow time for a review of the material's source and chemical constituents data sheet. The treatment rates and incorporation process should be evaluated in the laboratory prior to construction. For estimating purposes, the incorporation rates for chemical treatment (on a dry soil unit rate basis) is typically:

- 4 to 6 percent for lime or portland cement
- 10 to 12 percent for Class C fly ash

Chemical treatment of the subgrades should occur just prior to construction operations to limit disturbance from weather and construction activities, and treated subgrades will require protection. The use of chemical agents can impact the operation of adjacent facilities and/or the property of individuals (e.g., airborne dust), and this should be considered by the designer and contractor.

#### **Structural Fill Material Types**

Structural fill should meet the following material property requirements.

Soil Type <sup>1</sup>	Soil Type (USCS Classification)	Acceptable Location for Placement
On-site low plasticity fine-grained <sup>2, 3</sup>	CL	<ul> <li>General site grading fill</li> <li>Below aggregate base of floor slabs and pavements</li> <li>Below foundation bearing elevations if placed during mass grading operations</li> </ul>
Imported coarse- grained (granular) <sup>4</sup>	GW, GP, GM, GC, SW, SP, SM, SC	<ul><li>Below floor slabs and pavements</li><li>Below foundations in overexcavations</li></ul>
On-site moderate to high plasticity fine-grained <sup>5</sup>	CL/CH, CH  General site grading fill placed more than 1½ feet below grade-supported slabs and one foot below pavements	

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Soil Type <sup>1</sup>	Soil Type (USCS Classification)	Acceptable Location for Placement
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- 1. Structural fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to Terracon for evaluation prior to use on this site.
- 2. Fine grained material (e.g., clays) can be difficult to compact in relatively small areas (e.g., excavations for foundations).
- 3. By our definition, low plasticity materials should have a liquid limit of 45 or less and a plasticity index of 23 or less (ASTM D4318).
- 4. Specific material requirements will need to be satisfied based on intended use.
- 5. Recommendations for moderate to high plasticity fine-grained soil apply to on-site materials only. Import of moderate to high plasticity fine-grained soil is not recommended.

#### **Structural Fill Compaction Requirements**

Structural fill should meet the following compaction requirements.

Item	Description	
Maximum individual lift thickness	<ul> <li>9 inches or less in loose thickness when heavy, self-propelled compaction equipment is used</li> <li>4 inches or less in loose thickness when hand-guided equipment (e.g., jumping jack or plate compactor) is used</li> </ul>	
Minimum compostion	Fine-grained soils:  95% of maximum density 98% of maximum within 1 foot of finished pavement subgrade  Coarse-grained soils:	
Minimum compaction requirements <sup>1</sup>	<ul> <li>98% of maximum density</li> <li>If the material is a coarse sand or gravel, or of a uniform size, or has a low fines content, compaction comparison to relative density may be more appropriate. In this case, coarse-grained soils should be compacted to at least 70% relative density (ASTM D4253 and D4254)</li> </ul>	
Water content range <sup>1</sup>	Fine-grained soils:  • 0 to +4% of optimum water content  • -2% to +3% of optimum within1 foot of finished pavement subgrade  Coarse-grained soils:  • Water content should be maintained at levels satisfactory for compaction to be achieved without the coarse-grained material bulking during placement or pumping when proofrolled	
Maximum density as	nd optimum water content as determined using standard effort (ASTM D698).	

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#### **Utility Trench Backfill**

All trench excavations should be made with sufficient working space to permit construction, including backfill placement and compaction. If utility trenches are backfilled with relatively clean coarse-grained material, they should be capped with at least 18 inches of fine-grained structural fill to reduce the infiltration and conveyance of surface water through the trench backfill.

Utility trenches are a common source of water infiltration and migration. Utility trenches constructed in fine-grained soils that penetrate beneath the buildings should be effectively sealed to restrict water intrusion and flow through the trenches, which could migrate below the buildings. We recommend constructing an effective clay "trench plug" that consists of low permeability soils or flowable fill that extends at least 5 feet out from the face of the building exterior. The trench plug material should be placed to completely surround the utility line and any coarse-grained (granular) envelope, and be placed and compacted as recommended in this report. Care should be taken to not damage the in-place utilities.

#### **Grading and Drainage**

During earthwork, the site should be graded to prevent ponding of surface water on the prepared subgrade or in excavations. Surface water should be promptly removed. Water seepage could occur in foundation and utility excavations during construction. Dewatering of excavations during construction should be anticipated. Dewatering excavations in predominately cohesive finegrained soils could involve a series of sump pits and pumps; however, more extensive dewatering systems would likely be required were excavations extend below seasonal groundwater levels.

Final surrounding grades should be sloped away from the planned building on all sides to prevent ponding of water next to the structures. Gutters and downspouts should be designed to drain water a minimum of 10 feet beyond the footprint of the proposed buildings. This can be accomplished through the use of downspout extensions or flexible pipes that are designed to attach to the end of the downspout. Flexible pipe should only be used if it is daylighted in such a manner that it gravity-drains collected water.

Planting trees, large shrubs or other vegetation adjacent to structures supported on shallow foundations and/or with grade-supported slabs is not recommended. Trees and large shrubs can develop extensive root systems that can draw moisture from the subgrade soils, causing them to shrink during dry periods of the year. Drying or desiccation of clay soils below shallow foundations and grade-supported floor slabs can result in settlement of the foundations and slabs. Irrigation should be avoided adjacent to the building.

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#### **Earthwork Construction Considerations**

The site soils are anticipated to be susceptible to disturbance on initial exposure. Unstable subgrade conditions could also develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive construction traffic. Heavy equipment traffic directly on bearing surfaces should be avoided. The use of track-mounted or remotely operated equipment, such as a backhoe or dozer, would be beneficial to perform excavations and reduce subgrade disturbance. If unstable subgrade conditions develop, stabilization measures will need to be employed to improve subgrade support.

As a minimum, all temporary excavations should be sloped or braced as required by Occupational Safety and Health Administration (OSHA) regulations to provide stability and safe working conditions. Temporary excavations will be required during grading operations and/or installation of utilities. Contractors, by their contract, are usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required, to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state and federal safety regulations, including the current OSHA Excavation and Trench Safety Standards.

Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to construction of grade-supported slabs. Construction traffic over the completed subgrade should be avoided to the extent practical. If the subgrade should become frozen, desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and compacted prior to grade-supported slab construction.

#### **Construction Observation and Testing**

Terracon's involvement during the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer, and should include documentation of adequate removal of vegetation and topsoil, adequate removal of existing fill materials below foundations, delineation of areas requiring subgrade stabilization, assessment of existing fill materials left in place below grade-supported slabs, and proofrolling.

Each lift of structural fill should be tested, evaluated, and reworked as necessary until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of structural fill should be tested for density and water content at a frequency:

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- Subgrade Soils one test for every 2,500 square feet per lift in building areas, and one test for every 5,000 square feet per lift in pavement areas.
- Utility Trench Backfill one test for every 50 linear feet of utility trench length per lift

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. In the event that unanticipated conditions are encountered, the Geotechnical Engineer should be contacted to prescribe mitigation options.

#### **SHALLOW FOUNDATIONS**

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

As discussed in **Earthwork**, foundations supported above existing fill have risk of excessive total and differential settlement due to potentially undiscovered weak zones. If the Owner, can tolerate this risk, existing fill could be left in beneath foundations. However, existing fill should be observed and tested by Terracon and assumes unsuitable materials are removed.

#### **Spread Footing Foundation Design Recommendations**

Item	Description	
Required bearing materials <sup>1</sup>	<ul> <li>Medium stiff to stiff, native clay soils</li> <li>New structural fill extending to suitable native clay soils</li> <li>Existing fill that has been tested and approved by Terracon</li> </ul>	
Maximum net allowable bearing pressure 2, 3	1,500 psf	
Minimum foundation dimensions	<ul><li>Column footings: 30 inches</li><li>Continuous footings: 18 inches</li></ul>	
Minimum Embedment below finished grade 4	<ul><li>Exterior footings: 42 inches</li><li>Interior footings in heated areas: 18 inches</li></ul>	
Estimated total settlement <sup>3, 5</sup>	1 inch or less for maximum column footing width/length of 5½ feet and maximum continuous footing width of 2½ feet	
Ultimate passive pressure 6, 7 (equivalent fluid density)	For materials placed adjacent to foundation:  Fine-grained: 285 pcf Coarse- grained: 360 pcf	
Ultimate coefficient of sliding friction 7	On suitable bearing material: 0.35	

1. Unsuitable or soft soils should be undercut and replaced according to the recommendations presented in the Earthwork section.

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Item Description

- 2. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation.
- 3. Values provided are for maximum loads noted in the **Project Description** section.
- 4. Embedment necessary to minimize the effects of frost and/or seasonal water content variations.
- 5. Foundation settlement will depend on the variations within the subsurface soil profile, the structural loading conditions, the embedment depth of the footings, the thickness of structural fill, and the quality of the earthwork operations. Footings supported on existing fill may experience higher settlements if the existing fill contains undiscovered weaker zones or unsuitable materials.
- 6. Use of passive earth pressures require the sides of the excavation for the spread footing foundation to be nearly vertical and the concrete placed neat against these vertical faces or that the footing forms be removed and compacted structural fill be placed against the vertical footing face. Passive resistance in the upper 3½ feet of the soil profile in exterior locations should be neglected due to frost effects.
- 7. Some horizontal movement of the foundation must occur to mobilize passive and sliding resistance.

#### **Spread Footing Foundation Construction Considerations**

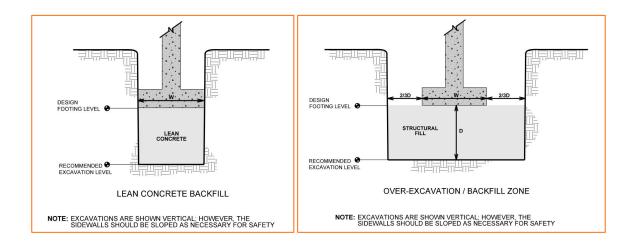
As noted in **Earthwork**, the footing excavations should be evaluated under the direction of the Geotechnical Engineer. The use of earth formed "trench" footings generally appears feasible in the on-site clay soils, and if the existing fill materials are removed and replaced with approved cohesive soils during mass grading. However, forming of footings would be required in areas where existing fill materials are removed by performing isolated over-excavations below footings and replacing with approved structural fill consisting of coarse-grained materials. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

A granular working surface is anticipated to be required at the base of the dewatered excavation due to the presence of easily disturbed native soils.

If unsuitable bearing soils (i.e., existing fill or low strength native soils) are encountered at the base of the planned footing excavation, corrective measures will be required. The footing excavations could be extended deeper to suitable soils and the footings could bear directly on these soils at the lower level, on lean concrete backfill placed in the excavations to the design footing level, or undercut and widened to allow for structural fill placement below the footings, as shown on the following sketches. The over-excavation should be backfilled up to the footing base elevation with coarse-grained structural fill placed as recommended in the **Earthwork** section.

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#### **FLOOR SLABS**

Design parameters for floor slabs expect the requirements for **Earthwork** have been followed. Specific attention should be given to positive drainage away from the structures and positive drainage of the aggregate base beneath floor slabs.

#### Floor Slab Design Parameters

Item	Description
Floor slab support <sup>1, 2, 3</sup>	Prepared according to Earthwork and the Owner's understanding and acceptance of risk associated with existing fill
Floor slab aggregate base layer	Minimum 4 inches of free-draining granular material <sup>2</sup> .

- 1. Existing fill soils should be removed where Owner cannot tolerate the risks associated with existing fill
- Floor slabs and foundations support substantially different loads so foundations and floors often settle differently.The design should consider the potential for differential settlement of walls and floors
- 3. We recommend subgrades comprised of fine-grained (clay) soils be maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become desiccated prior to construction of floor slabs the affected material should be removed or the materials scarified, moisture conditioned, and recompacted. Upon completion of grading operations in the building area, care should be taken to maintain the recommended subgrade moisture content and density prior to construction of the building floor slab.
- 4. IaDOT 4121 placed directly below the floor slab. Other design considerations such as cold temperatures and condensation development could warrant more extensive design provisions.

Saw-cut contraction joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual.

The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder,

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the slab designer and slab contractor should refer to applicable ACI publications for procedures and cautions regarding the use and placement of a vapor retarder.

#### **Exterior Slabs and Frost Considerations**

The soils on this site are frost susceptible, and small amounts of water can affect the performance of pavements and doorways. Exterior slabs should be anticipated to heave during winter months. If frost action needs to be eliminated in critical areas, we recommend the use of low-frost susceptible fill or structural slabs (e.g., structural stoops in front of building doors). Low-frost susceptible materials should consist of a well-graded, clean granular material with less than 6% passing the No. 200 sieve. Placement of low-frost susceptible material in large areas may not be feasible; however, the following recommendations are provided to help reduce potential frost heave:

- Providing surface drainage away from the buildings and slabs and toward the site storm drainage system
- Installing drain tiles around the perimeter of the pavements, and connect them to the storm drainage system
- Grading clayey subgrades such that groundwater potentially perched in overlying more permeable subgrades, such as sand or aggregate base layers, slope toward the site drainage system
- Placing low-frost susceptible fill as backfill beneath slabs and pavements that are critical to the project
- Placing low-frost susceptible materials in critical sidewalk areas

#### Floor Slab Construction Considerations

Grading for floor slab subgrades is typically accomplished relatively early in the construction phase. Fills are placed and compacted and the initial surface is prepared in a relatively uniform manner. However, as construction proceeds, utility excavations, rainfall, and heavy construction traffic can disturb the subgrade. Surface irregularities are often filled with loose materials to temporarily improve trafficability. As a result, the floor slab subgrade, prepared earlier during initial site grading operations should be carefully evaluated as the time for slab construction approaches. Particular attention should be given to high traffic areas that become rutted and disturbed, and to areas where backfilled trenches are located.

Areas where unstable conditions exist should be repaired by removing and replacing the materials with low plasticity structural fill. All floor slab subgrade areas should be moisture conditioned and compacted to the recommendations in **Earthwork** immediately prior to placement of the aggregate base materials and concrete.

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Care will be necessary to avoid contaminating the aggregate base layer located directly below the floor slabs with soil prior to floor slab placement. We recommend the aggregate base layer be placed only immediately prior to slab concrete placement.

#### **PAVEMENTS**

We anticipate the pavement subgrade will consist of newly placed structural fill (**Option 1**) or reworked existing fill materials (**Option 2**), depending on the approach the Owner chooses to address existing fill materials and support of structures. In either case, we expect the pavement subgrade materials will be placed/reworked following the recommendations in the **Earthwork** section.

Pavement design methods are intended to provide structural sections with adequate thickness over a particular subgrade such that wheel loads are reduced to a level the subgrade can support. The support characteristics of the subgrade for pavement design do not account for movements due to frost heave or shrink/swell. Thus, the pavement may be adequate from a structural standpoint, yet still experience cracking and deformation due to temperature or water content related movements of the subgrade.

#### Opinions of Minimum Pavement Thickness – Vet Clinic Lot and Drives

The following resources were utilized to formulate recommended pavement sections for the Vet Clinic lot and drives:

n American Concrete Institute (ACI) ACI 330R-08 – Guide for the Design and Construction of Concrete Parking Lots

Specific traffic information was not available at the time of this report. We anticipate that traffic loads for the Vet Clinic lot and drives will be produced primarily by automobile traffic, occasional delivery trucks, and weekly garbage trucks. We recommend that a concrete curb and gutter system be used to provide lateral restraint along the pavement edges.

The traffic considerations for *Moderate Duty* pavement sections are in accordance with ACI Traffic Category B.

The traffic considerations for *Light Duty* pavement sections are based on light passenger vehicle (gross weight less than 4 tons) traffic only, and only occasional truck traffic such as snow removal trucks (ACI Traffic Category A).

Carlisle Vet Clinic and Road Project ■ Carlisle, Iowa September 23, 2020 ■ Terracon Project No. 08205220-01



Opinions of pavement thicknesses are based on the subsurface conditions encountered at the borings, general characterization of the subgrade, and our experience on similar projects, and consider that the subgrade is proofrolled, tested and evaluated as recommended in this report. The thickness of pavements for these scenarios should be in accordance with local city or county ordinances.

The following table summarizes the recommended minimum thicknesses for portland cement concrete (PCC) pavement sections.

Pavement Area	PCC over Granular Base 1, 2, 3 (inches)	Aggregate Base Course <sup>4</sup> (inches)
Moderate duty: recommended for dumpster pads	7	
recommended for driveways, areas subject to truck traffic, entrance aprons	6	See Note 4
Light duty:  recommended for parking stalls and areas with primarily personal vehicle traffic	5	

- 1. Pavement materials, mix design, and construction should conform to the Iowa Department of Transportation (IDOT) Standard Specifications.
- 2. PCC pavement concrete should have a 28 day compressive strength of at least 4,000 psi.
- 3. Trash container pads should be large enough to support the container and the tipping axle of the collection truck
- 4. See recommendations in Pavement Subsurface Drainage.

Construction traffic on the pavements was not considered in developing the recommended minimum pavement thicknesses. If the pavements will be subject to traffic by construction equipment/vehicles, the pavement thicknesses should be revised to consider the effects of the additional traffic loading.

Thicker pavement sections could be used to reduce maintenance and extend the expected service life of the pavements. Periodic maintenance will also extend the service life of the pavements and should include patching and repair of deteriorated areas, crack sealing, and surface sealing. Even with periodic maintenance, some movements and related cracking may still occur and repairs will be required.

PCC pavements require properly designed and constructed longitudinal joints (parallel to traffic) and transverse joints (perpendicular to traffic) to provide satisfactory performance.

Carlisle Vet Clinic and Road Project ■ Carlisle, Iowa
September 23, 2020 ■ Terracon Project No. 08205220-01



Pavements should be sloped to provide rapid drainage of surface water. Water should not be allowed to pond on or adjacent to the pavements. Ponding of water adjacent to the pavements could contribute to significant moisture increases in the subgrade soils and subsequent loss of strength and/or possible heaving leading to premature pavement deterioration.

#### **Opinions of Minimum Pavement Thickness – Public Road Extension**

We understand that a minimum PCC thickness of 8 inches is required for the public street associated with the project, and we understand that this minimum thickness general generally satisfies the minimum thickness specified for Collector Streets in the area; however, once, traffic information becomes available, Terracon can provide an evaluation of the pavement section and associated recommendations related to pavement thickness and associated criteria.

The subgrade in the area of the public street should is prepared in accordance with the recommendations in this report and the approach for addressing existing fill will need to be addressed with the Owner. Subsurface drainage is recommended to help prolong the life of the pavement.

#### **Pavement Subsurface Drainage**

Terracon recommends consideration be given to subsurface drainage systems (i.e., a permeable base and subdrains) below pavement areas which generally prolong the life of a pavement and help to prevent saturation of the pavement subgrade that can result in a reduction of subgrade strength (rutting) and/or possible heaving. The use of a drainable granular base will also reduce the potential for frost action. Depending on design considerations (i.e. traffic estimates, no irrigation, etc.), the design team can evaluate if pavement subsurface drainage can be omitted for portions of the project pavements.

If deemed necessary by the design team, we recommend installing a subdrain system along the shoulders or back of curb of new pavement areas, including all openings in the pavements such as decorative landscaped islands, and a minimum of every 50 feet on center below open pavement areas, to improve long-term pavement performance. The pavement subgrade should be crowned at least 2 percent to promote the flow of water towards the subdrains. Design recommendations for the subdrains are provided in the following table:

Item	Description	
Pavement aggregate base	A minimum of 4 inches of material meeting the specifications for IaDOT Section 4121)	
Subdrain pipe	Minimum 4-inch pipe diameter	

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Item	Description		
Subdrain lines	<ul> <li>Pipe invert should be at least 42 inches below proposed grade</li> <li>Subdrain lines should be sloped to provide positive gravity drainage to a reliable discharge point</li> <li>Subdrain lines should be embedded in at least 4 inches of subdrain trench backfill material</li> </ul>		
Subdrain trench backfill <sup>1</sup>	<ul> <li>IaDOT porous backfill (Section 4131) <sup>2</sup>, or</li> <li>Free-draining granular material encapsulated with non-woven geotextile filter fabric</li> </ul>		

- 1. The subdrain trench backfill should extend up to and be hydraulically connected to the recommended aggregate base layer below the pavements.
- 2. Pipe perforations should be appropriately sized to prevent free-draining granular material from entering the subdrain pipe.

#### **Pavement Subgrade Construction Considerations**

Fine-grained soils generally provide relatively poor pavement support and are susceptible to rutting and pumping under repeated heavy vehicle traffic (both during construction and under inadequate pavement sections). The pavement subgrade should be prepared as described in **Earthwork**.

Construction scheduling often involves grading and paving by separate contractors and can involve a time lapse between the end of grading operations and the commencement of paving. Disturbance, desiccation or wetting of the subgrade soils between grading and paving can result in deterioration of the previously completed subgrade. A non-uniform subgrade can result in poor pavement performance and local failures relatively soon after pavements are constructed.

The pavement subgrade should be proofrolled prior to paving operations to help delineate soft or disturbed areas.

#### **Pavement Maintenance**

Periodic maintenance of the pavements will be required. All cracks should be sealed, and areas exhibiting distress should be repaired promptly to help prevent further deterioration. Even with periodic maintenance, some movements and related cracking may still occur and repairs will be required.

#### **GENERAL COMMENTS**

Our analysis and opinions are based on our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather.

Carlisle Vet Clinic and Road Project ■ Carlisle, Iowa September 23, 2020 ■ Terracon Project No. 08205220-01



The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Terracon should be retained to provide observation and testing services during grading, excavation, foundation construction, and other earth-related construction phases of the project. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Support of foundations, floor slabs and pavements on or above existing fill soils that might remain in place below overexcavation levels is discussed in this report. However, even with construction testing services, there is an inherent risk for the client that compressible fill or unsuitable material within or buried by the fill will not be discovered. This risk of unforeseen conditions cannot be eliminated without completely removing the existing fill but can be reduced by performing additional testing and evaluation.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third party beneficiaries intended. Any third party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance on the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.



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#### **EXPLORATION AND TESTING PROCEDURES**

#### **Field Exploration**

Boring Numbers	Boring Depths (feet)	Location
1 and 2	15½ to 20½	Building area
3	10½	Parking area
4, 5, and 6	10½ to 15½	Public road

**Boring Layout and Elevations:** Terracon personnel staked the boring locations using handheld GPS equipment with respect to planned building and pavement areas indicated on concept plans provided to us and coordinates determined from a "best fit" overlay of the plans on a GIS system. The boring locations are shown on the **Exploration Plan**. The coordinates of the borings are indicated on the boring logs.

Approximate ground surface elevations were obtained by Terracon personnel using a surveyor's level and rod referencing the rim of a nearby manhole cover north of the site. An elevation of 787.62 feet was prescribed to this benchmark on the *Concept Layout* (drawing dated August 21, 2020) provided by Snyder & Associates, Inc. Boring elevations on the boring logs are rounded to the nearest ½ foot. The locations and elevations of the borings are considered accurate only to the degree implied by the means and methods used to define them.

**Subsurface Exploration Procedures:** The borings were drilled with an ATV-mounted drilling rig using continuous flight solid-stem augers. Soil sampling was performed using thin-walled tube and split-barrel sampling procedures. In the thin-walled tube sampling procedure, a thin-walled, seamless steel tube with a sharp cutting edge is pushed hydraulically into the soil to obtain a relatively undisturbed sample. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon is driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. The samples were placed in appropriate containers and taken to our laboratory for testing. We observed and recorded groundwater levels during and shortly after drilling and sampling. The borings were backfilled with auger cuttings after drilling.

The drill crew prepared a field log of each boring to record field data including visual descriptions of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. The boring logs included with this report represent an interpretation of the subsurface conditions at each boring location based on field and laboratory data, and observation of the samples.

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#### **Laboratory Testing**

In the laboratory, water content tests were performed on portions of the recovered samples. The dry unit weight of intact, thin-walled tube samples was determined. Unconfined compressive strength and hand penetrometer tests were performed to estimate the consistency of select samples of fine-grained soils. The results of the laboratory tests are shown on the boring logs at their corresponding sample depths in **Exploration Results**.

The samples were described in the laboratory based on visual observation, texture and plasticity, and the laboratory testing described above. The descriptions of the soils indicated on the boring logs are in general accordance with the General Notes and Unified Soil Classification System (USCS) summarized and included in Supporting Information.

#### SITE LOCATION AND EXPLORATION PLAN

#### **Contents:**

Site Location Plan Exploration Plan

Note: All attachments are one page unless noted above.

#### SITE LOCATION

Carlisle Vet Clinic and Road Project • Carlisle, Iowa September 23, 2020 • Terracon Project No. 08205220-01

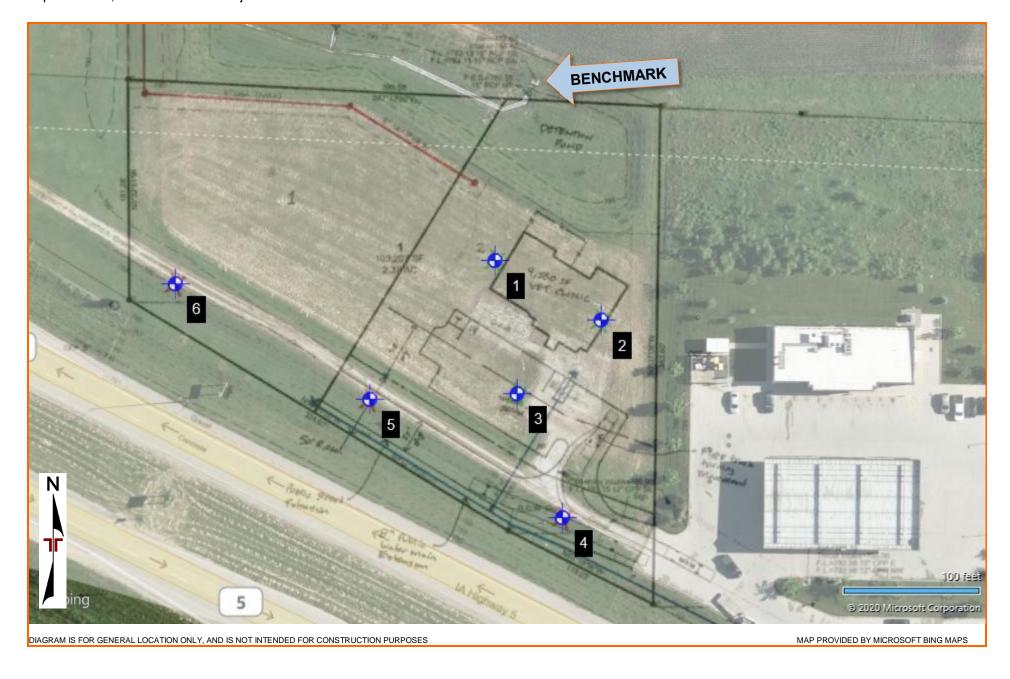




#### **EXPLORATION PLAN**

Carlisle Vet Clinic and Road Project • Carlisle, Iowa September 23, 2020 • Terracon Project No. 08205220-01





#### **EXPLORATION RESULTS**

**Contents:** 

GeoModel

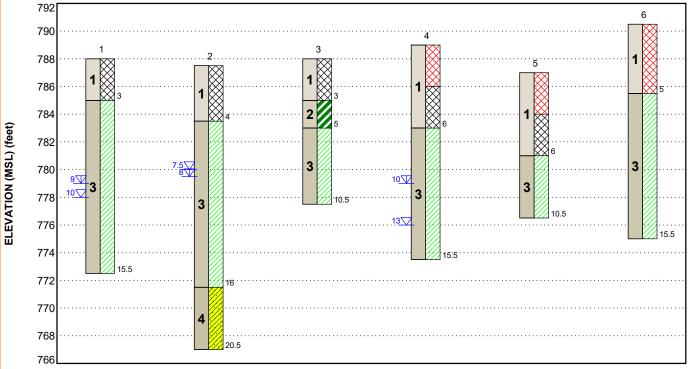
Boring Logs (B-1 through B-6)

**Note:** All attachments are one page unless noted above.

#### **GEOMODEL**

Carlisle Vet Clinic and Road Project ■ Carlisle, Iowa Terracon Project No. 08205220





This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Existing Fill	Lean clay and lean to fat clay, variable sand content, occasional gravel and rubble observed
2	Loess Crust	Fat clay, trace sand, medium stiff to stiff consistency, only encountered in Boring 3
3	Loess	Lean clay, relatively high moisture content, generally soft to medium stiff consistency
4	Glacial Clay	Sandy lean clay, stiff to very stiff consistency, only encountered in Boring 2

#### **LEGEND**

Fill

Fat Clay

Lean Clay

Fill

Sandy Lean Clay

▼ First Water Observation

▼ Second Water Observation

#### NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

#### **SUPPORTING INFORMATION**

#### **Contents:**

General Notes Unified Soil Classification System

**Note:** All attachments are one page unless noted above.

#### **GENERAL NOTES**

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS
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SAMPLING	WATER LEVEL	FIELD TESTS		
	Water Initially Encountered	N Standard Penetration Test Resistance (Blows/Ft.)		
Shelby Standard Penetration Test	Water Level After a Specified Period of Time	(HP) Hand Penetrometer		
<u></u>	Water Level After a Specified Period of Time	(T) Torvane		
	Cave In Encountered	(DCP) Dynamic Cone Penetrometer		
	Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur	UC Unconfined Compressive Strength		
	over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level	(PID) Photo-Ionization Detector		
	observations.	(OVA) Organic Vapor Analyzer		

#### **DESCRIPTIVE SOIL CLASSIFICATION**

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

#### **LOCATION AND ELEVATION NOTES**

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

	S	TRENGTH TE	RMS							
RELATIVE DENSITY	RELATIVE DENSITY OF COARSE-GRAINED SOILS CONSISTENCY OF FINE-GRAINED SOILS									
	retained on No. 200 sieve.) Standard Penetration Resistance	Consistency de	(50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, fie procedures or standard penetration resistance							
Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength Qu, (psf)	Standard Penetration or N-Value Blows/Ft.						
Very Loose	0 - 3	Very Soft	less than 500	0 - 1						
Loose	4 - 9	Soft	500 to 1,000	2 - 4						
Medium Dense	10 - 29	Medium Stiff	1,000 to 2,000	4 - 8						
Dense	30 - 50	Stiff	2,000 to 4,000	8 - 15						
Very Dense	> 50	Very Stiff	4,000 to 8,000	15 - 30						
		Hard	> 8,000	> 30						

#### **RELEVANCE OF SOIL BORING LOG**

The soil boring logs contained within this document are intended for application to the project as described in this document. Use of these soil boring logs for any other purpose may not be appropriate.



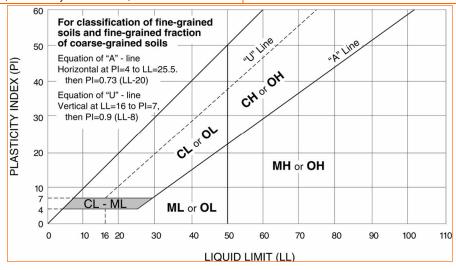
Criteria for Assigni	ria for Assigning Group Symbols and Group Names Using Laboratory Tests A s						
		Clean Gravels:	Cu <sup>3</sup> 4 and 1 £ Cc £ 3 <sup>E</sup>		GW	Well-graded gravel F	
	Gravels: More than 50% of	Less than 5% fines <sup>C</sup>	Cu < 4 and/or [Cc<1 or C	Cc>3.0] E	GP	Poorly graded gravel <sup>F</sup>	
	coarse fraction retained on No. 4 sieve	Gravels with Fines:	Fines classify as ML or N	ИΗ	GM	Silty gravel F, G, H	
Coarse-Grained Soils:	retained on No. 4 sieve	More than 12% fines <sup>C</sup>	Fines classify as CL or C	H	GC	Clayey gravel <sup>F, G, H</sup>	
More than 50% retained on No. 200 sieve	Clean Sands:		Cu <sup>3</sup> 6 and 1 £ Cc £ 3 E	6 and 1 £ Cc £ 3 E SW			
	Sands: 50% or more of coarse	Less than 5% fines D	Cu < 6 and/or [Cc<1 or C	c>3.0] E	SP	Poorly graded sand	
	fraction passes No. 4	Sands with Fines:	Fines classify as ML or N	ИΗ	SM	Silty sand G, H, I	
	sieve	More than 12% fines D	Fines classify as CL or C	Н	sc	Clayey sand <sup>G, H, I</sup>	
		Ingrapia	PI > 7 and plots on or ab	plots on or above "A" CL		Lean clay <sup>K</sup> , <sup>L, M</sup>	
	Silts and Clays:	Inorganic:	PI < 4 or plots below "A"	line <sup>J</sup>	ML	Silt K, L, M	
	Liquid limit less than 50	Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay K, L, M, N	
Fine-Grained Soils: 50% or more passes the		Organic.	Liquid limit - not dried	< 0.75	OL	Organic silt <sup>K</sup> , <sup>L</sup> , <sup>M</sup> , <sup>O</sup>	
No. 200 sieve		Inorganic:	PI plots on or above "A"	PI plots on or above "A" line CH		Fat clay <sup>K</sup> , <sup>L, M</sup>	
	Silts and Clays:	morganic.	PI plots below "A" line		MH	Elastic Silt K, L, M	
	Liquid limit 50 or more	Organic:	Liquid limit - oven dried	< 0.75	ОН	Organic clay K, L, M, P	
		Organio.	Liquid limit - not dried	\ U.13	011	Organic silt <sup>K</sup> , <sup>L</sup> , <sup>M</sup> , <sup>Q</sup>	
Highly organic soils:	Primarily	organic matter, dark in co	olor, and organic odor		PT	Peat	

- A Based on the material passing the 3-inch (75-mm) sieve.
- B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
- <sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.
- D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

E 
$$Cu = D_{60}/D_{10}$$
  $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ 

- F If soil contains 3 15% sand, add "with sand" to group name.
- <sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

- $\ensuremath{^{\textbf{H}}}$  If fines are organic, add "with organic fines" to group name.
- If soil contains 3 15% gravel, add "with gravel" to group name.
- J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
- K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.
- Left soil contains 3 30% plus No. 200 predominantly sand, add "sandy" to group name.
- MIf soil contains <sup>3</sup> 30% plus No. 200, predominantly gravel, add "gravelly" to group name.
- NPI <sup>3</sup> 4 and plots on or above "A" line.
- OPI < 4 or plots below "A" line.
- P PI plots on or above "A" line.
- <sup>Q</sup>PI plots below "A" line.



Aspen Business Park 414 South 17th Street, Suite 107 Ames, Iowa 50010

October 15, 2020

#### **Monte Appelgate, PLS**

Snyder & Associates 2727 SW Snyder Blvd PO Box 1159 Ankeny, IA 50023

#### Park Holdings Plat 1 - Final Plat Review

Carlisle, Iowa FOX Ref No: 8666-08E.234

Thank you for submitting your project for review. The City is committed to assisting you with the completion of this project. FOX Engineering and the City Staff has completed the second review for the Park Holdings Plat 1 Final Plat, as sent to FOX Engineering via email on October 12, 2020 and offers the following comments:

- 1. Approval of this Final Plat is subject to review/approval of the Preliminary Plat (if necessary) and Construction Drawings for Park Holdings Plat 1, as they are being submitted for approval concurrently.
- 2. Please provide easement documents and a vacation plat (with resolution) for the 50-ft ingress/egress easement to be recorded for this development.
  - a. In addition to the sanitary sewer easement being obtained from Scotch Ridge Plat 2, Lot 1, please provide the following off-site easements:
    - i. 30'x98' detention easement in the SW corner of said Lot 1 (an extension of the existing detention easement).
    - ii. 30'X20' Storm Sewer Easement in-line with the existing storm sewer easement in said Lot 1.
- 3. 180.09.03.A, please provide a warranty deed to the City properly executed for all street intended as public streets and any other property intended for public use.
- 4. 180.09.03.B, please submit any covenants or restrictions to be imposed upon the plat. These should be the Final Development Plan Documents that have already been approved that defines the by-laws of the common areas that are NOT dedicated to the City. These documents need to be recorded in the office of the County Recorder.
- 5. 180.09.03.D, Please provide performance bonds for all incomplete construction.
- 6. 180.09.04, please provide a certificate by the Owner that the subdivision is free of consent and is in accordance with the desires of the owner.
- 7. Please provide an Easement Dedication document which states the restrictions on the easements (PUE's, Sanitary Sewer Easements, Storm Sewer & Overland Drainage Easement, etc.) as shown on the Final Plat. Previously sent. Additional forms as needed for the easements provided on the plat may be adapted from the provided forms.
- 8. As-built record drawings shall be submitted within 30 days after the completion of construction. The Engineer shall field verify all structures (valves, hydrants) and flowlines.

9. Please provide maintenance bonds for all pavement and utilities to be dedicated to the city of Carlisle. The bond period shall begin once all infrastructure is installed and accepted. City Engineer shall review the bond amounts prior to submission of for bond documents.

Please provide a letter addressing all comments on this comment letter and/or state what was modified on the site plan to address said comments.

#### FINAL PLAT SCHEDULE:

**PLANNING & ZONING:** October 19, 2020 at 7:00pm at the Carlisle City Hall

**COUNCIL MEETING:** October 26, 2020 at 6:30pm at the Carlisle City Hall

If you have any questions or concerns, please contact Mitch Holtz at 515-231-6005. The City reserves the right to modify or add to these comments.

R. Rely Sth

FOX ENGINEERING ASSOCIATES, INC.

Mitch Holtz, P.E.

Copy to:

Deven Markley, City Administrator, Carlisle



## PARK HOLDINGS PLAT 1

FINAL PLAT

### AREA ABOVE RESERVED FOR RECORDER'S STAMP

INDEX LEGEND SURVEYOR'S NAME:

SNYDER & ASSOCIATES, INC. 2727 SW SNYDER BOULEVARD ANKENY, IOWA 50023 515-964-2020 EGRIFFIN@SNYDER-ASSOCIATES. COM SERVICE PROVIDED BY: SNYDER & ASSOCIATES, INC. SURVEY LOCÁTED: PARCEL "Z' SEC. 04-77-23 **REQUESTED BY:** PARK HOLDINGS, LC **RETURN TO:** 

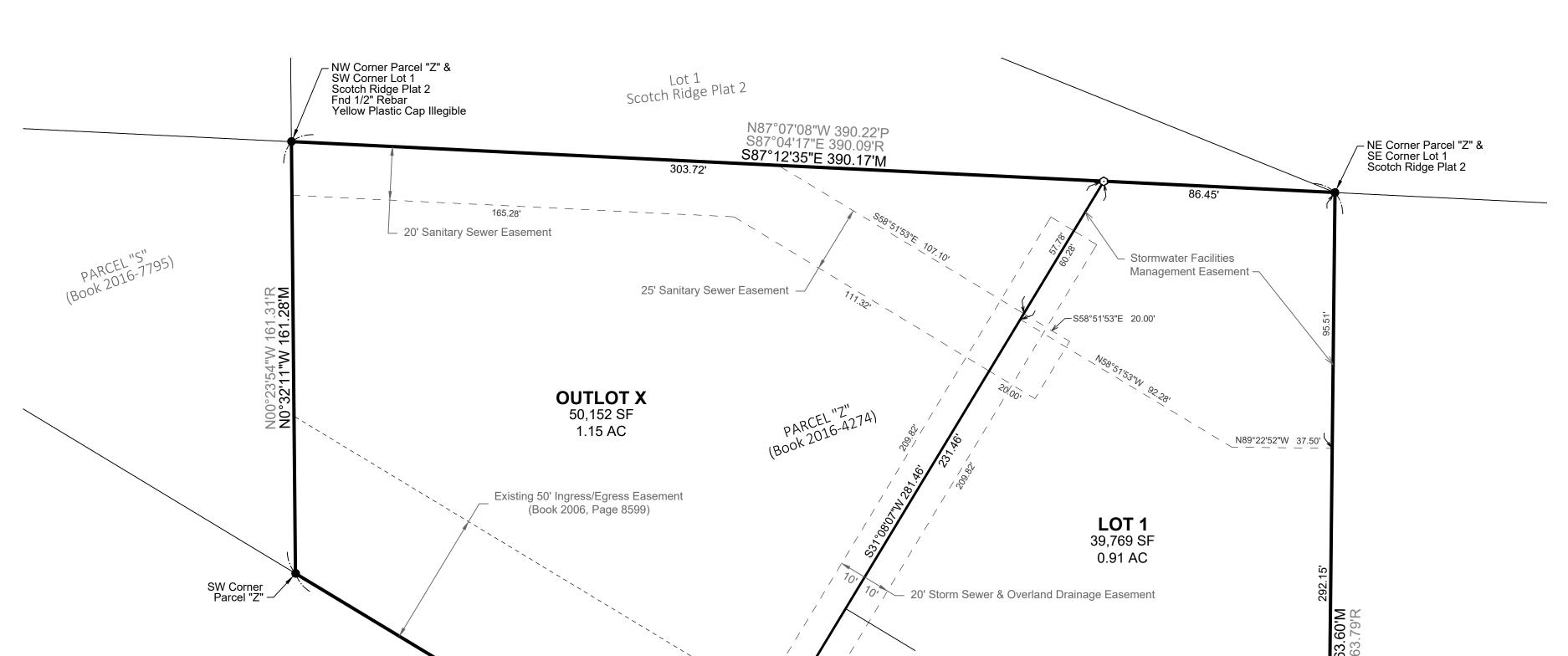
SNYDER & ASSOCIATES, INC.

ANKENY, IOWA 50023

2727 SW SNYDER BOULEVARD

ERIN D. GRIFFIN

ERIN D. GRIFFIN



Existing 50' Ingress/Egress Easement (Book 2006, Page 8599)

Fnd 1-1/2" IDOT -Aluminum Cap

## PLAT DESCRIPTION

PARCEL "Z" AS FILED IN FEE BOOK 2016-4274 OF THE WARREN COUNTY RECORDER'S OFFICE, BEING A PART OF THE NORTHWEST 1/4 OF SECTION 4, TOWNSHIP 77 NORTH, RANGE 23 WEST OF THE 5TH P.M., CITY OF CARLISLE, WARREN COUNTY, IOWA.

## OWNER/DEVELOPER

PARK HOLDINGS, LC P.O. BOX 150 CARLISLE, IA 50047

## ZONING

C2 - HIGHWAY COMMERCIAL

### **ACRES** 2.38 ACRES (103,208 S.F.)

#### **BULK REGULATIONS** FRONT YARD SETBACK = 45'

REAR YARD SETBACK = 0' SIDE YARD SETBACK = 0'

## BASIS OF BEARING

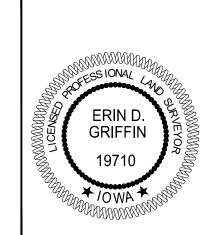
THE SOUTH LINE OF LOT 1 SCOTCH RIDGE PLAT 2 IS ASSUMED TO BEAR S87°12'35"E.

STREET LOT A SHALL BE DEDICATED TO THE CITY OF CARLISLE.

1/4 1/4 Section Line Easement Line

<u>LEGEND</u>	
Survey	<u>Found</u>
Section Corner 1/2" Rebar, Yellow Plastic Cap #15982 1/2" Rebar, Yellow Plastic Cap #19710 (Unless Otherwise Noted) ROW Marker	•
ROW Rail	= T
Control Point	<b>-</b> ⊙ CP
Bench Mark	<b>3</b>
Platted Distance	Р
Measured Bearing & Distance	M
Recorded As	R
Deed Distance	D
Calculated Distance	С
Centerline	
Section Line	
1/4 Section Line	





– SE Corner Parcel "Z"

I hereby certify that this land surveying document was prepared and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Professional Land Surveyor under the laws of the State of Iowa.

Erin D. Griffin, PLS

License Number 19710

My License Renewal Date is December 31, 2021 Pages or sheets covered by this seal: Sheet 1 of 1

Project No: 120.0776.01

& ASSOCIATES

Sheet 1 of 1

DING

HOL

ARK

CARLISLE,

Aspen Business Park 414 South 17th Street, Suite 107 Ames, Iowa 50010

October 15, 2020

#### Monte Appelgate, PLA

**Snyder & Associates** 2727 SW Snyder Blvd PO Box 1159 Ankeny, IA 50023

#### Carlisle Vet Clinic - Site Plan

Lot 1 of Park Holdings Plat 1 FOX Ref No: 8666-08E.243

FOX Engineering and City Staff have completed the second review for the Carlisle Vet Clinic Site Plan with date of October 12, 2020. Please address the following comments:

#### **General Comments**

- 1. This site plan is contingent upon Carlisle approval and Developer filing of the Final Plat for Park Holdings
- 2. This site plan is contingent upon Carlisle approval of the Preliminary Plat (if applicable) and Construction Drawings for Park Holdings Plat 1.
- 3. Staff will review the address provided: 2757 Frontline Road.
- 4. City Observation of the public roadway and storm sewer be necessary during construction. It will be the responsibility of the Developer to coordinate a preconstruction conference with City and FOX Staff prior to construction of public infrastructure.
- 5. SWPPP comments will be sent under separate cover.

#### **Sheet C300 – Dimension Plan**

6. It appears that the public roadway dead-end is longer than 150-ft without a turnaround which is not allowed per the International Fire Code (Appendix D, D103.4). Please provide a proper turnaround at the end of the public street as per IFC Table D103.4 and Figure D103.1. The turnaround may be gravel. Please provide a cross section of the surfacing of the turnaround.

#### Sheet C400 – Grading, Storm Sewer and Erosion Control Plan

7. Please provide erosion protection from structure ST-3 to the parking lot.

#### Sheet C600 - Landscape Plan

Discussion with franchise utilities may be necessary regarding how to achieve the landscaping standards while the front yard is in the Public Utility easement. Typically, landscaping in the PUE is not allowed, however in this case, it does not look possible to develop without placing landscaping in the PUE.

#### Sheet C700 – Public Street Improvements

- 9. Please show the existing pavement joint lines to verify that the third-point joints line up with existing pavement joints. Typically, subdivisions are jointed with quarter point joints where possible, however existing joints should match.
- 10. Please provide 30" boxout joints in the pavement for the proposed intakes.

- 11. After reviewing the geotechnical report, I have the following comments:
  - a. It appears that existing fill in the area of the proposed roadway will create risk for differential settlement. The City desires to mitigate the risk to the public roadway per Option 1 in the Earthwork portion of the report. Please provide information in the plans to confirm that complete removal of the existing fill materials will be done beneath the proposed roadway as recommended by the Geotechnical Report.
  - b. It is not clear what pavement thickness is recommended by the Geotechnical Report. 8-inch pavement is mentioned, but not tied to any estimated traffic volumes. Please provide justification for the proposed pavement cross section.
  - c. The Geotechnical Report recommends subbase and subdrains for this roadway. Please provide.

#### **Architectural Plan**

- 12. Please clarify the percentage of brick, stone or other similar substantial material for each face of the building, exclusive of glazed surfaces. C-2 Zoning requires a minimum of 60% of these materials for all exterior surfaces.
- 13. It is highly recommended that you bring detailed building materials and color schemes with you to P & Z.

#### **Lighting Plan**

No further comments.

#### **Stormwater Management Plan**

No Further comments.

Please provide a letter addressing all comments on this comment letter and/or state what was modified on the site plan to address said comments.

#### **SITE PLAN REVIEW SCHEDULE:**

PLANNING & ZONING: October 19, 2020 at 7:00pm at the Carlisle City Hall

**COUNCIL MEETING:** October 26, 2020 at 6:30pm at the Carlisle City Hall

If you have any questions or concerns, please contact Mitch Holtz at (515) 231-6005. The City reserves the right to add or modify these comments.

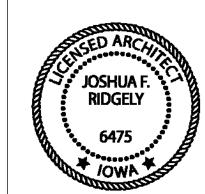
FOX ENGINEERING ASSOCIATES, INC.

Mitch Holtz, P.E.

CC: Deven Markley, City Administrator



# Carlisle Vet Clinic



I HEARBY CERTIFY THAT THE PORTION OF THIS TECHNICAL UNDER MY DIRECT SUPERVISION AND RESPONSIBLE CHARGE. I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE

LICENSE NO. 6475

PAGES OR SHEETS COVERED BY THIS SEAL

LICENSE RENEWAL DATE: 06/30/2021

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CARLISLE VETERINARY CLINIC

550 S 2ND STREET CARLISLE, IOWA 50047

CONTACT: N/A

CIVIL:

PHONE: 515.989.4075

SNYDER & ASSOCIATES INC

CONTACT: MONTE APPELGATI

10501 BUENA VISTA COURT

URBANDALE, IOWA50322

CONTACT: BRANT BRISTOV

INDIANOLA, IOWA 50125

CONTACT: JOSHUA RIDGELY

**OTHER/ SPECIALTY:** 

PHONE: 515.961.5386

ADDRESS LINE 1

**ADDRESS LINE 2** 

PHONE:

EMAIL: CONTACT:

509 EAST SCENIC VALLEY AVENUE

EMAIL: MAPPELGATE@SNYDER-ASSOCIATES.COM

EMAIL: BJB@TOMETICHENGINEERING.COM

EMAIL: JRIDGELY@DOWNINGCONSTRUCT.COM

DRAWING SET or T.B.D.

PLANS ARE UNDER

SEPERATE REVIEW

2727 SW SYNDER BLVD.

ANKENY, IA 50023

PHONE: 515.964.2020

**STRUCTURAL:** 

PHONE: 515.280.8022

**ARCHITECT:** 

## PROJECT DATA

G-SERIES AND A-SERIES

## **PROJECT DESIGN INFORMATION:**

**GOVERNING CODES:** SEE CODE ANALYSIS SHEET G-102 **BUILDING CONSTRUCTION: NEW TYPE OF CONSTRUCTION:** TYPE VB

OCCUPANCY CLASSIFICATION: BUSINESS GROUP B (SINGLE OCCUPANCY) **BUILDING SUMMARY: PROFESSIONAL SERVICES - VET CLINIC SQUARE FOOTAGES:** 

Area Schedule (Gross E	Building)
Name	Area
BUILDING AREA	4,687 SF

## **SHEET INDEX**

**GENERAL** SHEET SUB-TOTAL = 6 CONTACT LIST, SHEET INDEX, & ARTWORK GENERAL INFORMATION TYPICAL NOTES & SYMBOL LEGEND GROSS AREA PLAN(S) CODE ANALYSIS PLANS & REVIEW TYPICAL CODE/ ACCESSIBILITY DRAWINGS - RESTROOMS TYPICAL CODE/ ACCESSIBILITY DRAWINGS

NO. SHEET NAME PROJECT INFORMATION DEMOLITION PLAN DIMENSION PLAN GRADING STORM AND EROSION CONTROL PLAN

**STRUCTURAL** FOOTING AND FOUNDATION PLAN ROOF FRAMING PLAN

**SHEET SUB-TOTAL = 20 NO. SHEET NAME** MAIN LEVEL PLAN WALL TYPES LEGEND EXTERIOR ELEVATION BUILDING SECTIONS **BUILDING SECTIONS BUILDING SECTIONS** TYPICAL WALL SECTION(S) DOOR SCHEDULE & DOOR TAG PLAN

DRIFT & SHEAR WALL PLAN & BUILDING SECTIONS

INTERIOR ELEVATIONS INTERIOR ELEVATIONS INTERIOR ELEVATIONS MAIN LEVEL REFLECTED CEILING PLAN

BUILDING SECTIONS

TRASH ENCLOSURE

SHEET NO. SHEET NAME

MAIN LEVEL FINISH PLAN

MAIN LEVEL FLOORING PLAN

MAIN LEVEL FURNITURE PLAN

INTERIOR DESIGN SCHEDULES

## DRAWN BY: Precon. Team

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## **REVISIONS**

08/31/2020 - DD Concept 09/03/2020 - DD Revision 09/08/2020 - DD Revisions 09/15/2020 - Bid Set Update 09/21/2020 - Bid Set Update 10/02/2020 - CD/ Permit Set

PLAN NO. = **20-012** 

## DWG. LIST

CONTACT LIST, SHEET INDEX, &

**ARTWORK** SHEET SUB-TOTAL =

SHEET NO.

PROJECT TEAM

509 EAST SCENIC VALLEY AVENUE

CONTACT: P.M. or SUPERINTENDENT

\_@DOWNINGCONSTRUCT.COM

DOES NOT APPLY TO THIS

DRAWING SET or T.B.D.

PLANS ARE UNDER

SEPERATE REVIEW

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DRAWING SET or T.B.D.

PLANS ARE UNDER

SEPERATE REVIEW

INDIANOLA, IOWA 50125

PHONE: 515.961.5386

**PLUMBING:** 

**ADDRESS LINE 1** 

**ADDRESS LINE 2** 

**ADDRESS LINE 1** 

PHONE:

EMAIL:

**ADDRESS LINE 2** 

ELECTRICAL:

**ADDRESS LINE 1** 

ADDRESS LINE 1

ADDRESS LINE 2

PHONE:

**MECHANICAL**:

PROJECT LOCATION VICINITY MAP

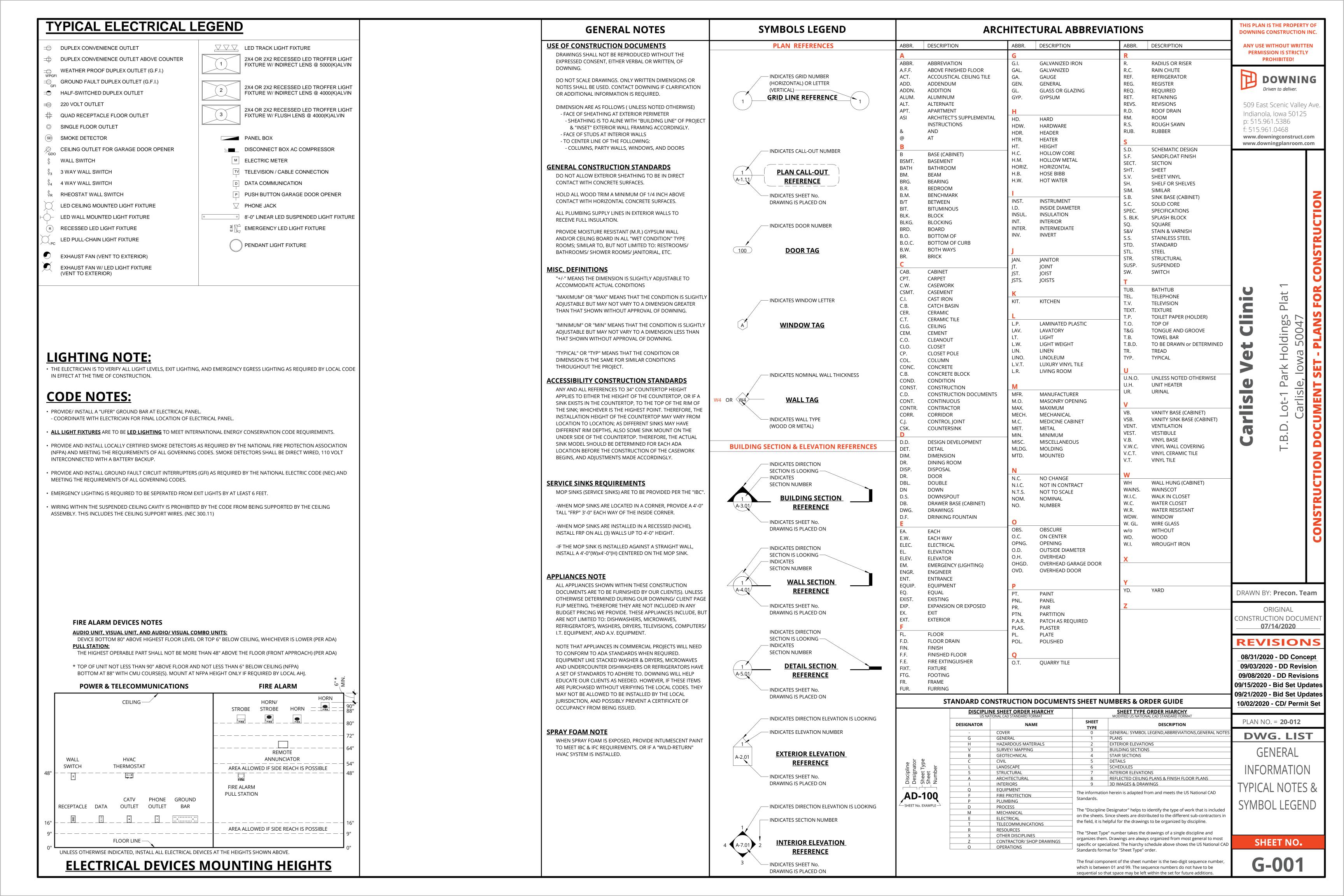
Christopher G. Lyon

**TOTAL SHEETS IN SET =** 

OTHER IMAGES OR PROJECT DATA

SHEET SUB-TOTAL =

**COVER** 



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Holdings |

T.B.D.

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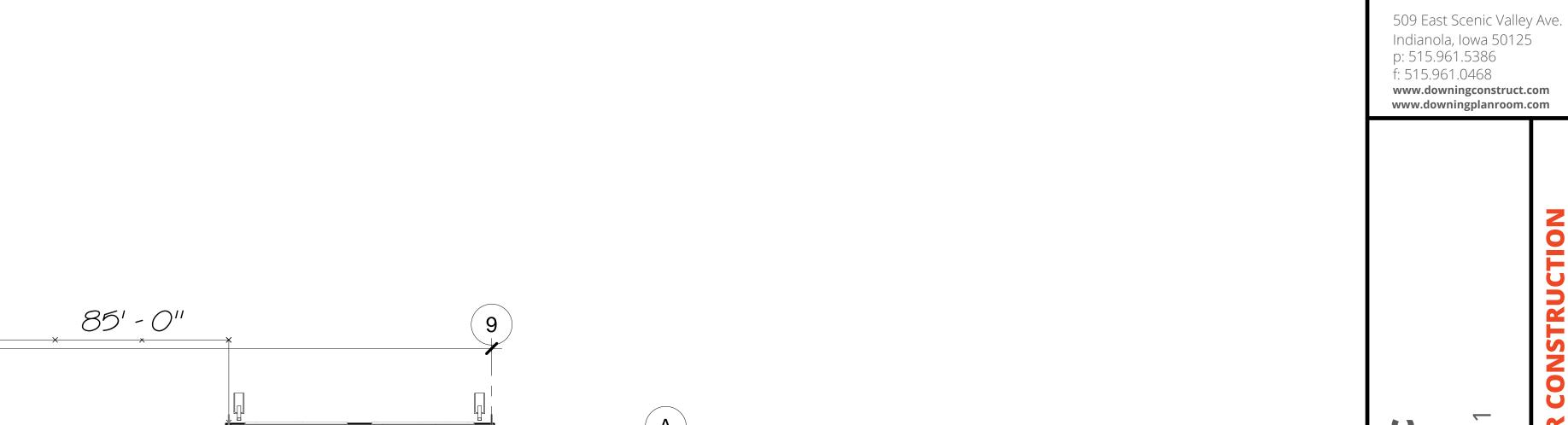
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**GROSS AREA** 

PLAN(S)

SHEET NO.

G-101



BUILDING AREA 4,687 SF **G** G

MAIN LEVEL GROSS AREA PLAN

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

Area Schedule (Gross Building) Area Name 4,687 SF **BUILDING AREA** 

			CODE REVIEW	ROOM SCHEE	DULE					
ROOM #	ROOM NAME	OCCUPANCY CLASSIFICATION	ACCESSORY USE	INCIDENTAL USE	PANIC DEVICE	EXITS REQUIRED	EXITS PROVIDED	AREA IN S.F.	OCCUPANCY LOAD FACTOR	CALCULATED OCCUPANT LOAD
100	VESTIBULE	N.A.	Х		Yes	1	1	59 SF	0	
101	WAITING AREA	BUSINESS*	Х			1	1	720 SF	90	8 -
102	PUBLIC RESTROOM	N.A.	Х			1	1	58 SF	0	
103	RECEPTION	BUSINESS				1	1	171 SF	100	1.71
104	EXAM ROOM	BUSINESS				1	2	122 SF	100	1.22
105	EXAM ROOM	BUSINESS				1	2	122 SF	100	1.22
106	EXAM ROOM	BUSINESS				1	2	122 SF	100	1.22
107	EXAM ROOM	BUSINESS			Yes	1	3	124 SF	100	1.24
108	PHARMACY	BUSINESS				1	2	310 SF	100	3.1
109	TREATMENT	BUSINESS				1	2	292 SF	100	2.92
110	LAB	BUSINESS				1	2	167 SF	100	1.67
111	SURGERY	BUSINESS				1	1	143 SF	100	1.43
112	DENTAL	BUSINESS				1	1	141 SF	100	1.41
113	XRAY	BUSINESS				1	1	74 SF	100	0.74
114	DOCTOR'S OFFICE	BUSINESS				1	1	73 SF	100	0.73
115	CORRIDOR	N.A.	Х		Yes	1	2	269 SF	0	
116	MECHANICAL/ STORAGE	MECHANICAL				1	1	76 SF	300	0.25
117	LAUNDRY	BUSINESS				1	1	18 SF	100	0.18
118	BOARDING	BUSINESS				1	2	555 SF	100	5.55
120	GROOMING	BUSINESS				1	1	119 SF	100	1.19
121	FREEZER	BUSINESS				1	1	21 SF	300	0.07
122	CORRIDOR	N.A.	Х		Yes	1	2	143 SF	0	
123	ISOLATION	BUSINESS				1	1	37 SF	100	0.37
124	STAFF RESTROOM	N.A.	X			1	1	58 SF	0	
125	STAFF AREA	BUSINESS*	Х			1	1	112 SF	100	1.12

ADDED TO OCCUPANT LOAD TO MATCH PLANNED SEATING

Area Schedule (Gross Building)									
Name Area									
BUILDING AREA 4,687 SF									

TOTAL BUILDING OCCUPANT LOAD = 37 PERSONS

150 SF 100

## **BUSINESS\* = SMALL ASSEMBLY SPACES NOTE/ EXCEPTION: (IBC SECTION 303.1.2**

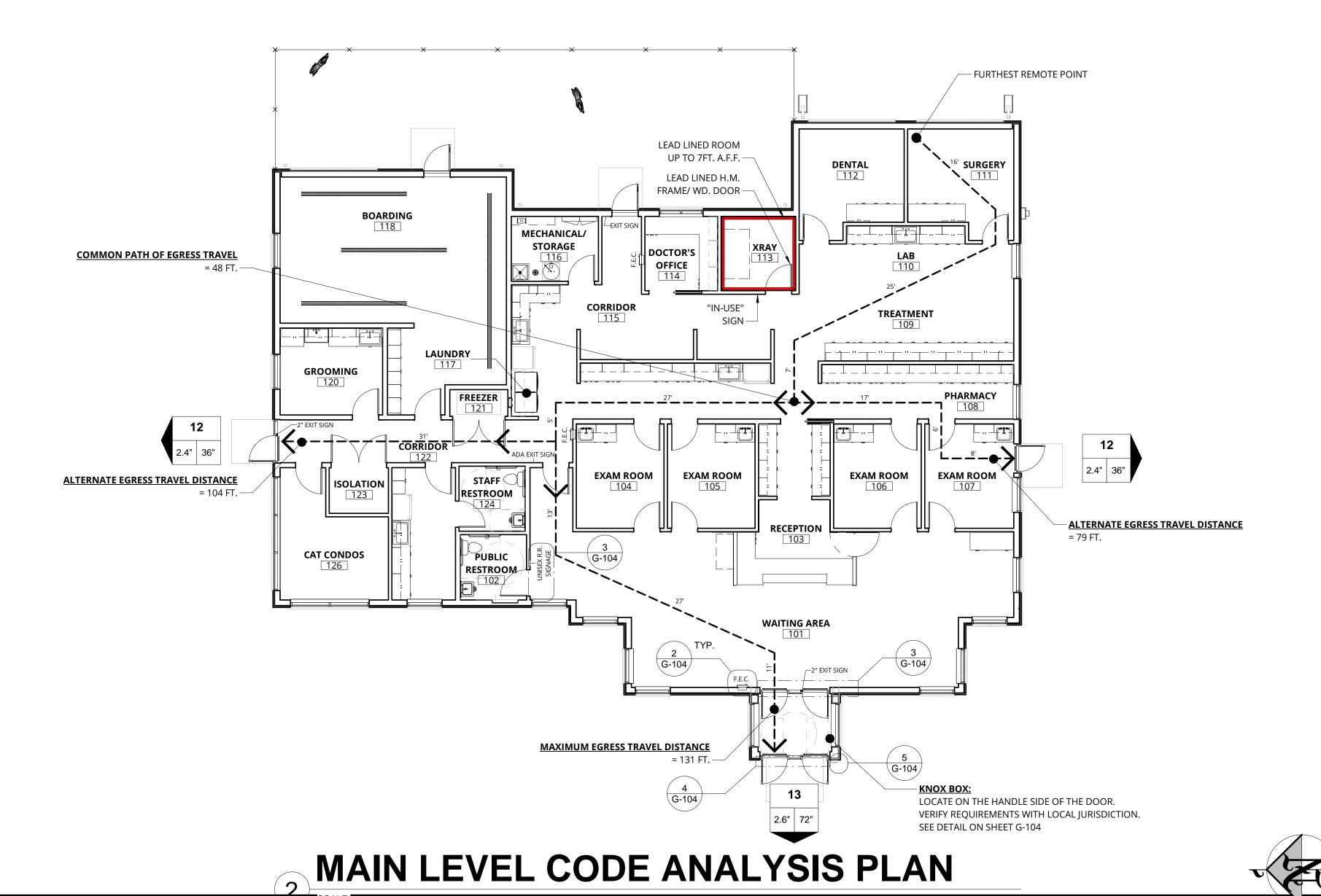
BUSINESS

126 CAT CONDOS

THE FOLLOWING ROOMS AND SPACES SHALL NOT BE CLASSIFIED AS ASSEMBLY OCCUPANCIES:

1) A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES WITH AN OCCUPANT LOAD OF LESS THAN 50 PERSONS, AND ACCESSORY TO ANOTHER OCCUPANCY SHALL BE CLASSIFIED AS A GROUP B OR AS PART OF THAT OCCUPANCY.

2) A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES THAT IS LESS THAN 750 SQ. FT. IN AREA, AND ACCESSORY TO ANOTHER OCCUPANCY SHALL BE CLASSIFIED AS A GROUP B OCCUPANCY OR AS PART OF THAT OCCUPANCY.



**CARLISLE** 2006 INTERNATIONAL BUILDING CODE 2008 NATIONAL ELECTRICAL CODE

2006 INTERNATIONAL PLUMBING CODE

2006 INTERNATIONAL MECHANICAL CODE

**LOCAL ORDIANCE GOVERNING CODES VERIFIED VIA WEB: 10/02/202 CARLISLE** 

2006 INTERNATIONAL PROPERTY MAINTENANCE CODE

2006 INTERNATIONAL FIRE CODE (INCLUDING LOCAL AMENDMENTS) 2012 INTERNATIONAL ENERGY CONSERVATION CODE (ADOPTED BY IOWA)

2006 INTERNATIONAL FUEL GAS CODE

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## **ARCHITECTURAL CODE REVIEW = "IBC" 2006**

DOCUMENTS INTENDED TO BE COVERED BY THIS CODE REVIEW ARE LIMITED TO: "GENERAL & ARCHITECTURAL" (ALL OTHER PLANS ARE INTENDED TO BE UNDER A SEPARATE REVIEW)

SEE COVER PAGE FOR PROJECT DATA **NOTE: NO AMBULATORY CAR** 

OCCUPANCY CLASSIFICATION(S) MIXED USE: GROUP-B (BUSINESS) ANIMAL HOSPITAL

**ALLOWABLE HEIGHTS & # OF STORIES** (32) STORY ALLOWABLE (ABOVE GRADE) = 40 FT TOTAL BUILDING HT.

(CHAPTER 5) - TABLE 503 (1) STORY ACTUAL (ABOVE GRADE) = 22' - 8" MAXIMUM

**ALLOWABLE AREA** 9,000 S.F. ALLOWED (CHAPTER 5) - TABLE 503 4,687 S.F. ACTUAL **AREA MODIFICATIONS** FRONTAGE INCREASE - N/A (506.3) SPRINKLER INCREASE - N/A MIXED USE & OCCUPANCY N/A - SINGLE OCCUPANCY BUILDING

**INCIDENTAL USES** NO INCIDENTAL USE AREAS WITHIN THIS CLINIC.

**FLOOR DRAFTSTOPPING** (SLAB ON GRADE) = N.A.

**TYPE OF CONSTRUCTION** TYPE - VB **EXTERIOR WALLS** FIRE SEPARATION DISTANCE = GREATER THAN 30 FEET = 0 HOUR RATING

**EXTERIOR WALL OPENINGS** FIRE SEPARATION DISTANCE = GREATER THAN 30 FEET = NO LIMIT

**ATTIC DRAFTSTOPPING** N/A - OPEN STRUCTURE, NO CONCEALED ATTIC SPACES

INTERIOR FINISHES NON-SPRINKLED (GROUP-B)

**TABLE (803.5)** EXIT ENCLOSURES & PASSAGEWAYS = CLASS-A CORRIDORS = CLASS-B ROOMS & ENCLOSURED SPACES = CLASS-C

**SPRINKLER SYSTEM** GROUP B (903) NO AMBULATORY CARE AN AUTOMATIC SPRINKLER SYSTEM **IS NOT PROVIDED**.

FIRE EXTINGUISHERS PORTABLE FIRE EXTINGUISHERS WILL BE PROVIDED PER THE IBC AND/ OR THE IFC AS DIRECTED BY (906) THE FIRE MARSHAL. VERIFY IF EXISTING CONDITIONS MEETS REQUIRED STANDARDS.

FIRE & SMOKE ALARMS GROUP-B (907) A EXISTING FIRE ALARM SYSTEM IS NOT PROVIDED A EXISTING SMOKE DETECTION SYSTEM **IS NOT PROVIDED** 

OCCUPANT LOAD SEE OCCUPANT LOAD SCHEDULES (1004) - TOTAL BUILDING = 37 PERSONS **NUMBER OF EXITS** (2) REQUIRED PER TABLE 1006.3.1 PER STORY (1005) (3) PROVIDED

**EGRESS LIGHTING** PROVIDE EMERGENCY MEANS OF EGRESS ILLUMINATION AT AISLES, CORRIDORS, AND EXIT ACCESS (1006) STAIRWAYS / RAMPS TO CONFORM TO THE "IBC" & IFC. **STAIRWAYS** N/A - NO STAIRS IN THIS PROJECT

**EXIT SIGNS** PROVIDE ILLUMINATED EXIT SIGNS ABOVE ALL EXTERIOR DOORS, IN PRIMARY COMMON PATHS OF (1011) EGRESS TRAVEL, AND ABOVE DOOR IN INTERVENING SPACES OF EGRESS.

**EXIT ACCESS** EACH TENANT SHALL BE PROVIDED WITH ACCESS TO THE REQUIRED EXITS WITHOUT PASSING (1014) THROUGH ADJACENT TENANT SPACES. - (CHECKS OK) **EXIT ACCESS DOORWAYS** GROUP B, (WITHOUT SPRINKLER)

(1014.3) COMMON PATH OF EGRESS TRAVEL (REQUIRED) = 75 FT. COMMON PATH OF EGRESS TRAVEL (ACTUAL) = 48 FT. **EXIT ACCESS TRAVEL DISTANCE** GROUP-B, (WITHOUT SPRINKLER) - 200 FT. ALLOWED

**TABLE (1016.1)** 131 FT. ACTUAL (MAXIMUM) **ACCESSIBILITY** BUILDING ELEMENTS ARE HANDICAP ACCESSIBLE AND PER THE GOVERNING ADA STANDARDS FOR (CHAPTER 11) ACCESSIBLE DESIGN. - CHECKS OK

PLUMBING SYSTEMS/ FIXTURES PER TABLE 2902.1 - REQUIREMENTS (CHAPTER 29) (2902.2) - SEPARATE FACILITIES REQUIRED FOR EACH SEX - UNLESS OCCUPANT LOAD = (15) OR LES (2902.3) - EMPLOYEE TOILET FACILITIES SHALL EITHER BE SEPARATE OR COMBINED EMPLOYEE

> **CALCULATIONS: (37) TOTAL OCCUPANTS** - MENS (HALF OF TOTAL OCCUPANT LOAD)/ WOMENS (HALF OF TOTAL OCCUPANT LOAD)

LAVATORIES = 2 FOUNTAINS = 0\* WATER CLOSETS = 2 UTILITY SINKS = 1

0\* = A BEVERAGE STATION WITH A FULL GLASS DOOR MINI REFRIGERATOR WITH BOTTLED WATER IS PLANNED FOR THIS PROJECT; AS AN ALTERNATIVE SOURCE FOR PROVIDING THE PUBLIC WITH DRINKING WATER IN LIEU OF A WATER FOUNTAIN. THE COUNTERTOP HEIGHT IS AT 34" ADA HEIGHT ABOVE FINISH FLOOR.

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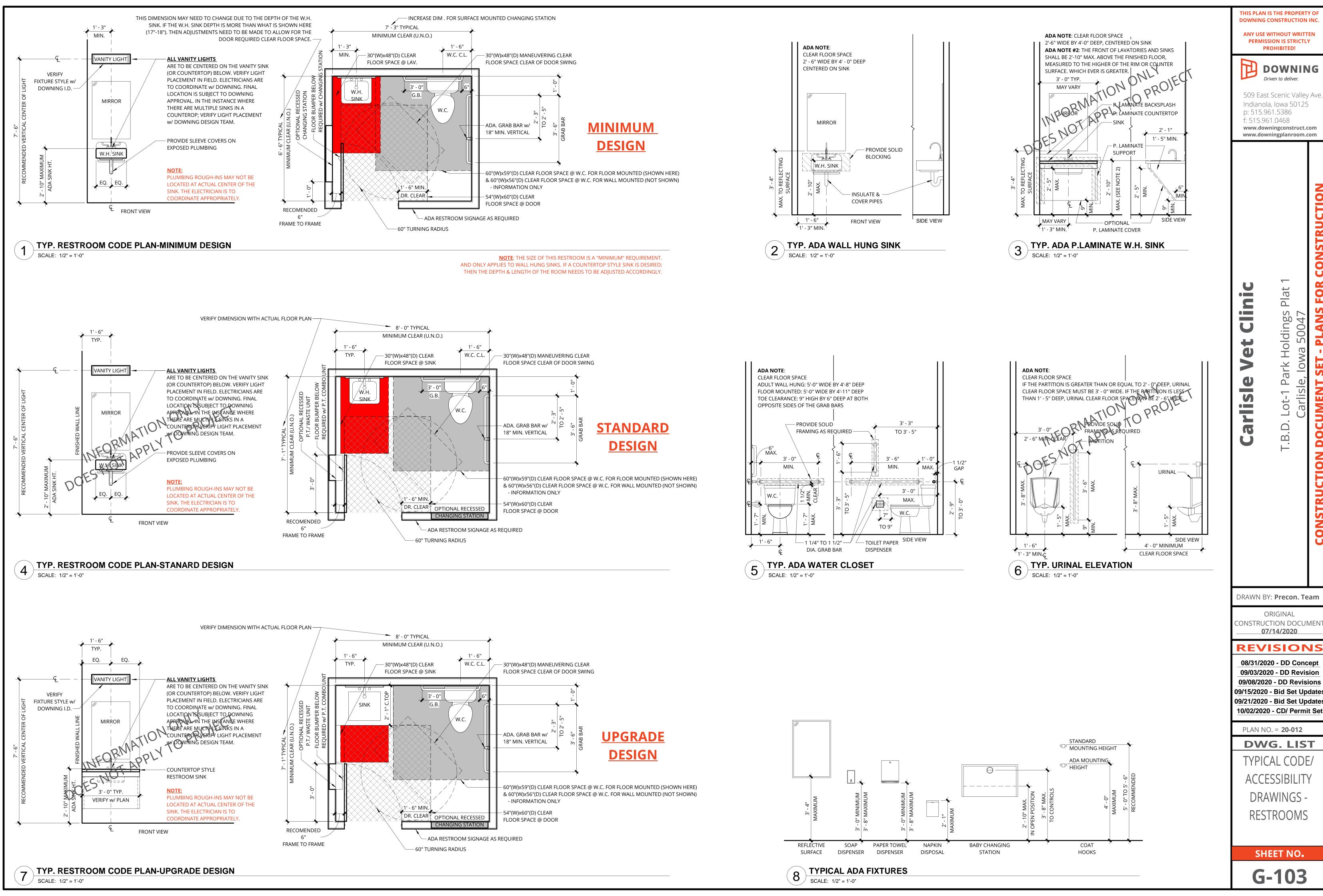
REVISIONS

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**CODE ANALYSIS** PLANS & REVIEW

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09/03/2020 - DD Revision

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TYPICAL CODE/

**ACCESSIBILITY** 

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RESTROOMS

SHEET NO.

G-103

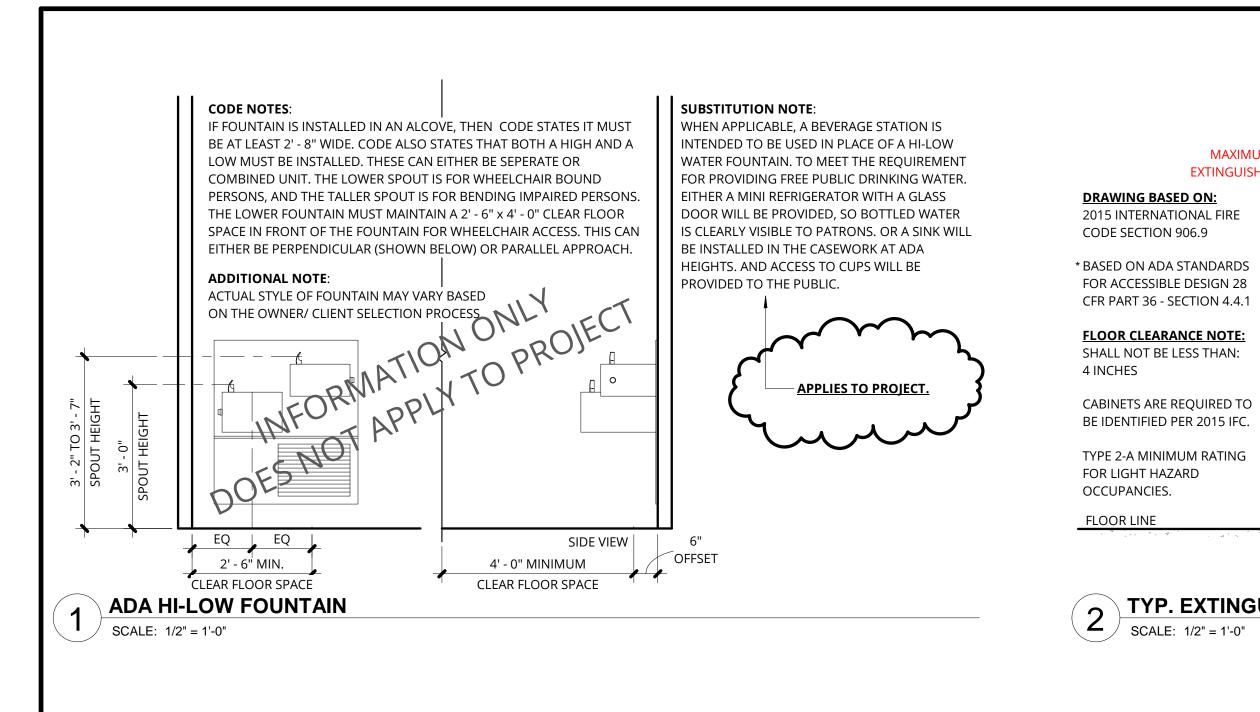
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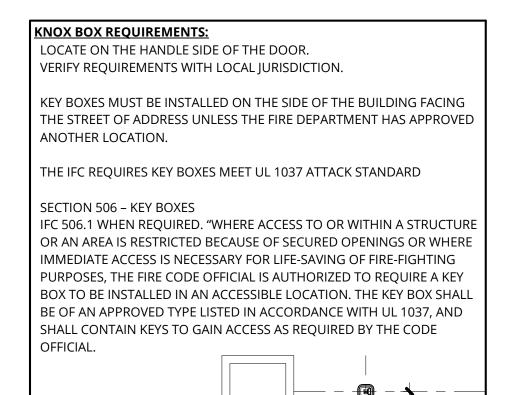
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MAXIMUM TRAVEL DISTANCE TO FIRE

EXTINGUISHER(S) SHALL NOT EXCEED **75 FT**.

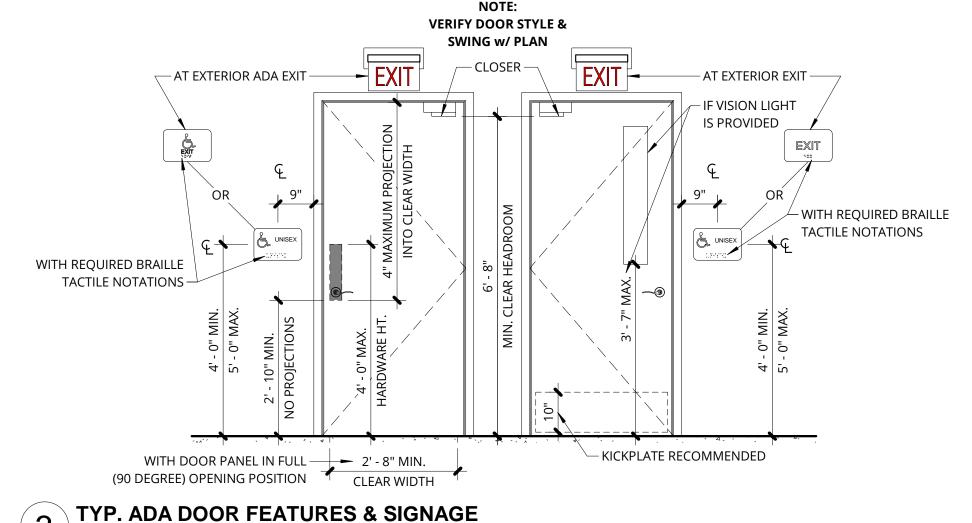
TYP. EXTINGUISHER



5 KNOX BOX DETAIL ELEVATION

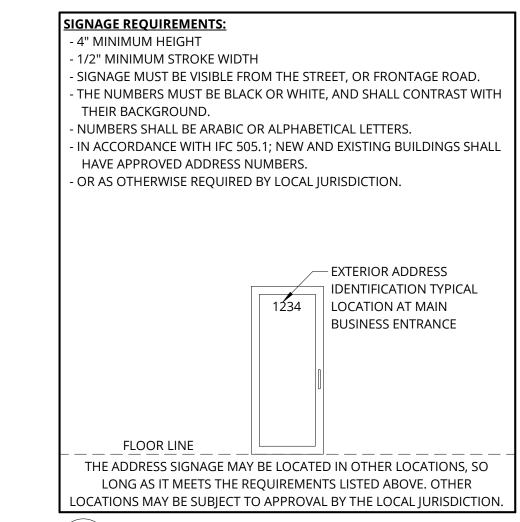
SCALE: 1/4" = 1'-0"

ENTRY/ EXIT DOOR



SCALE: 1/2" = 1'-0"

INSTALL PANIC HARDWARE WHERE REQUIRED.



**ADDRESS SIGNAGE** 

SCALE: 1/4" = 1'-0"

i.i. 

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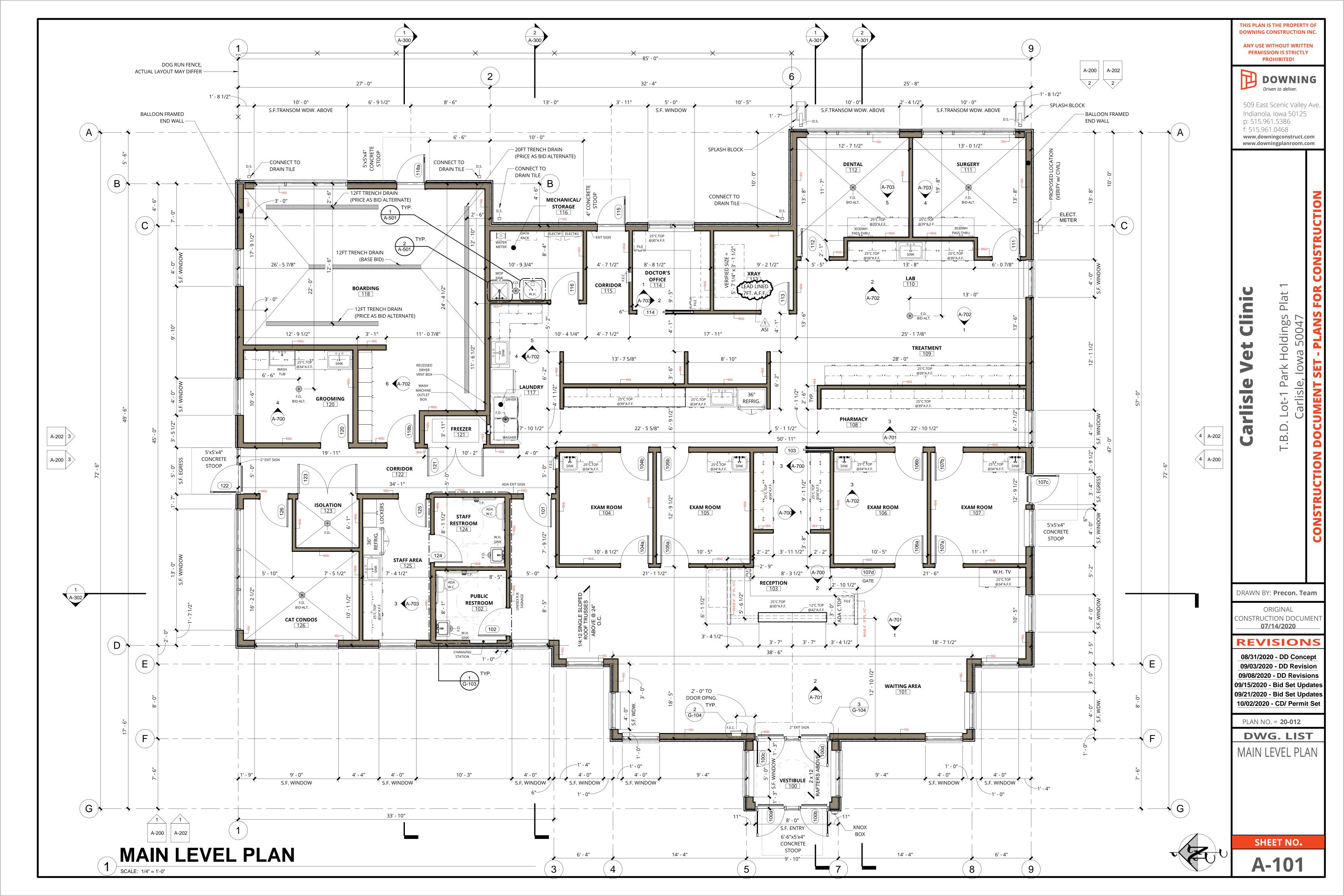
PLAN NO. = **20-012** 

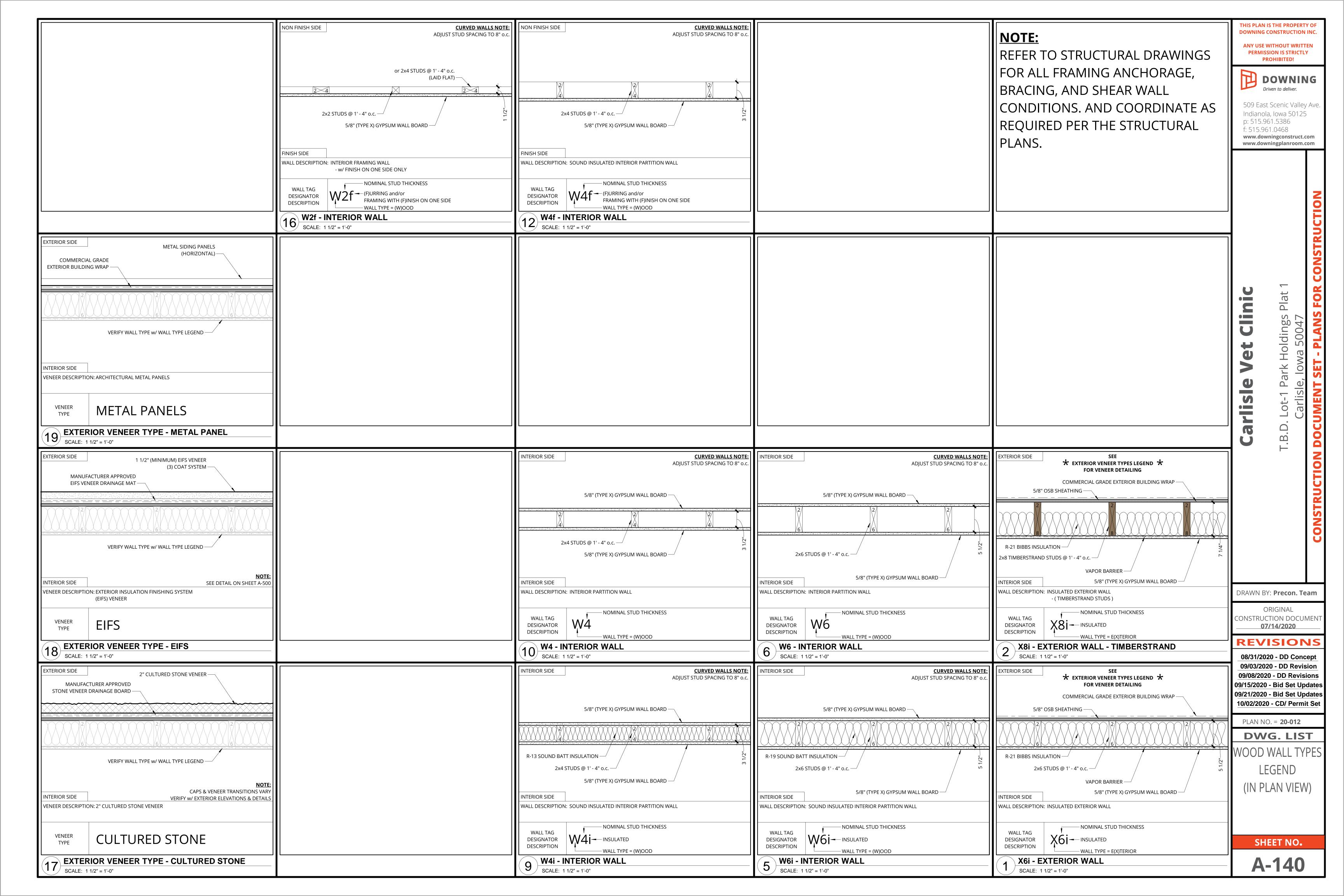
**DWG. LIST** TYPICAL CODE/ ACCESSIBILITY

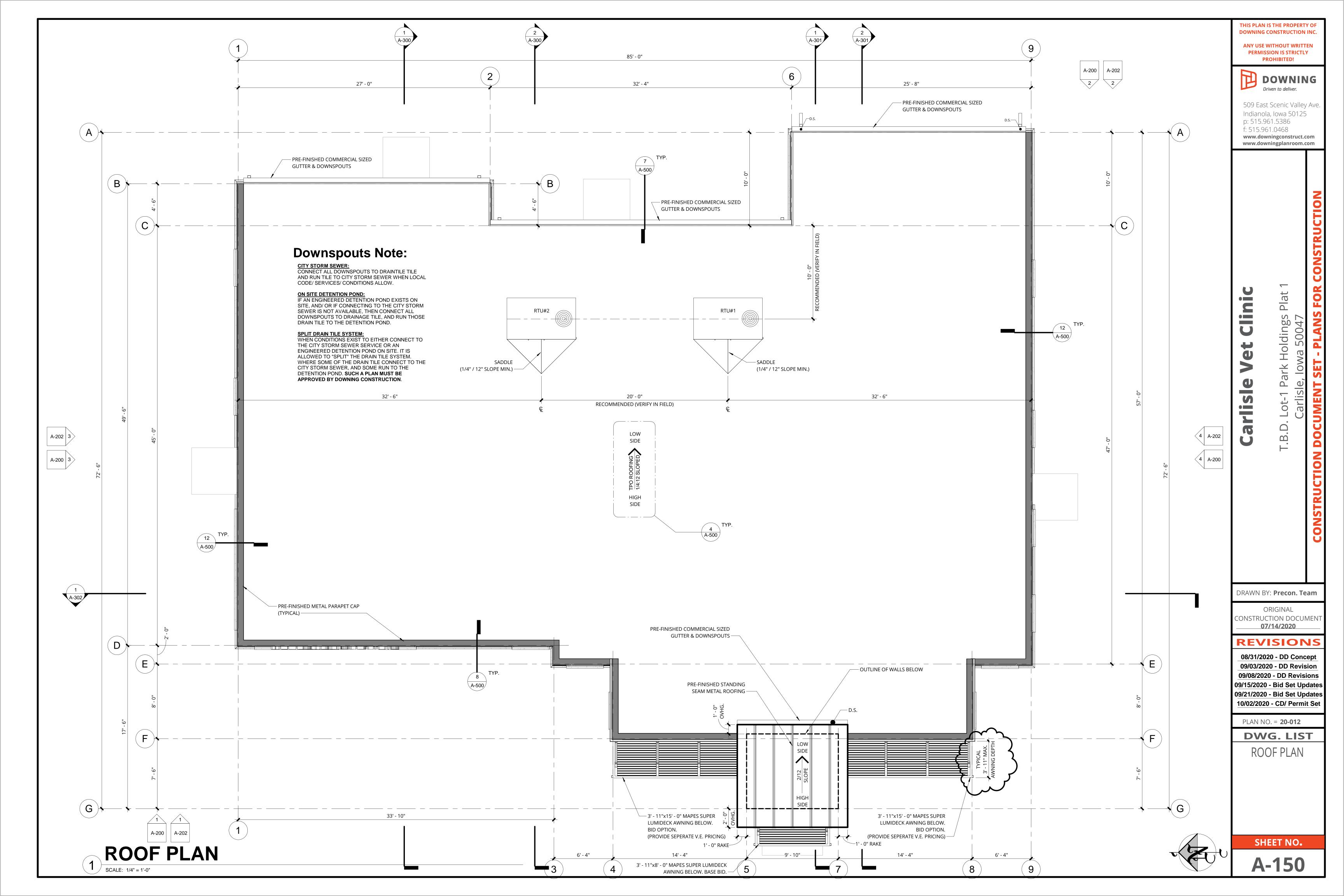
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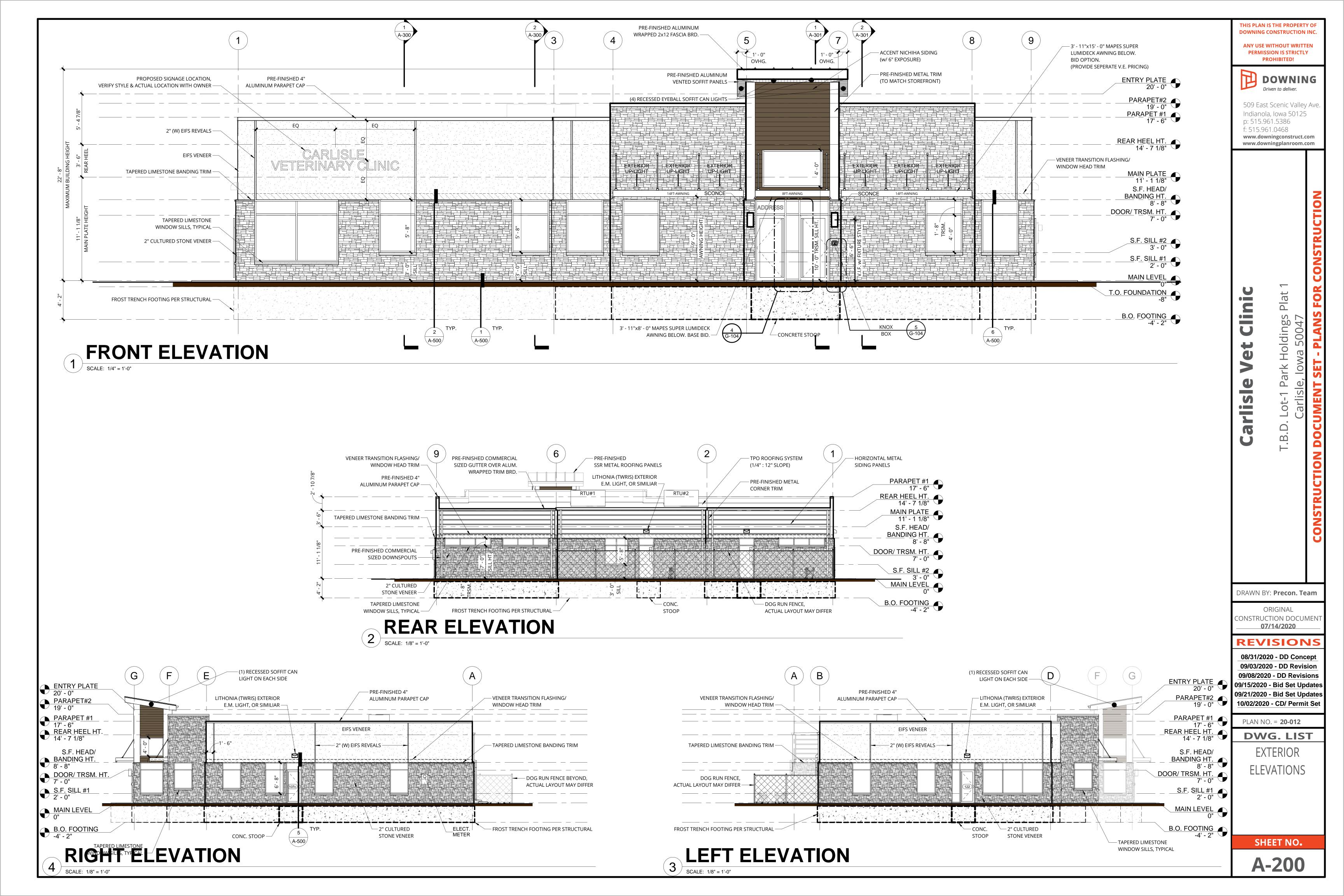
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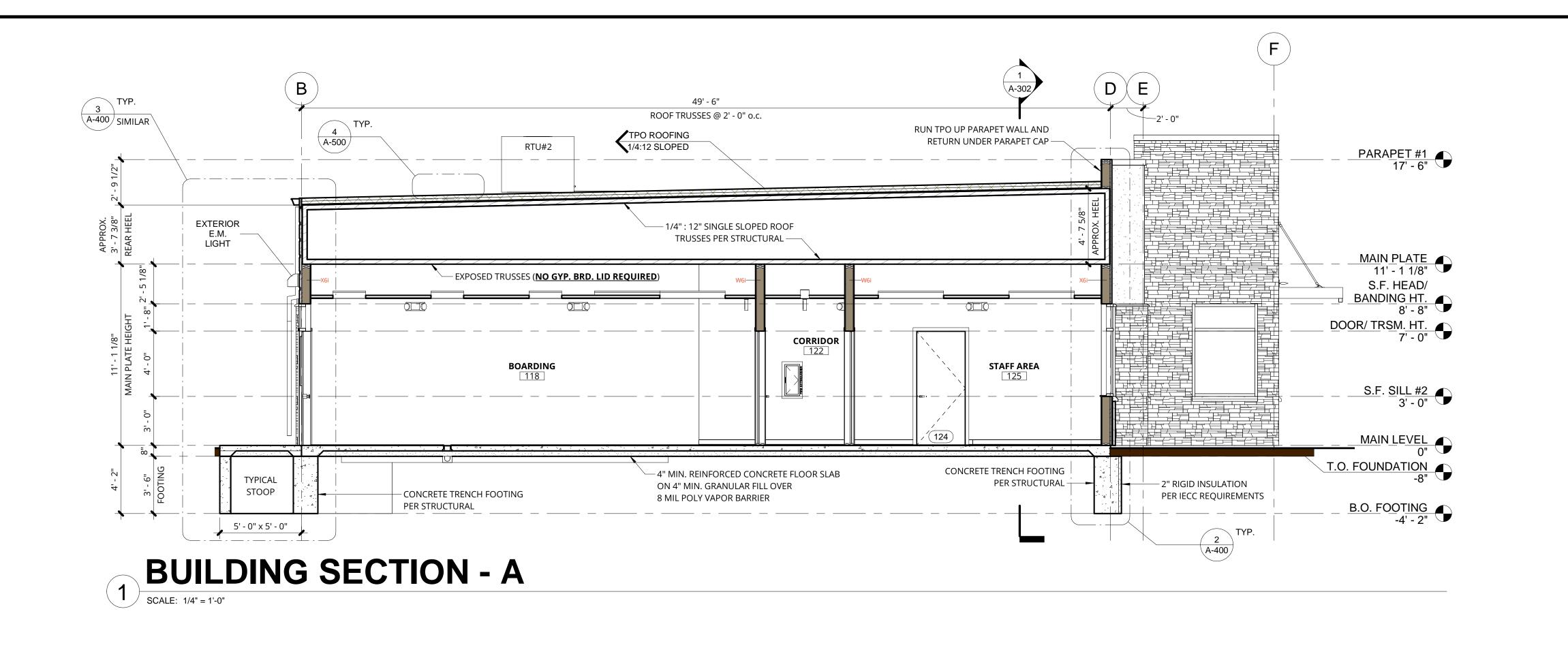
G-104

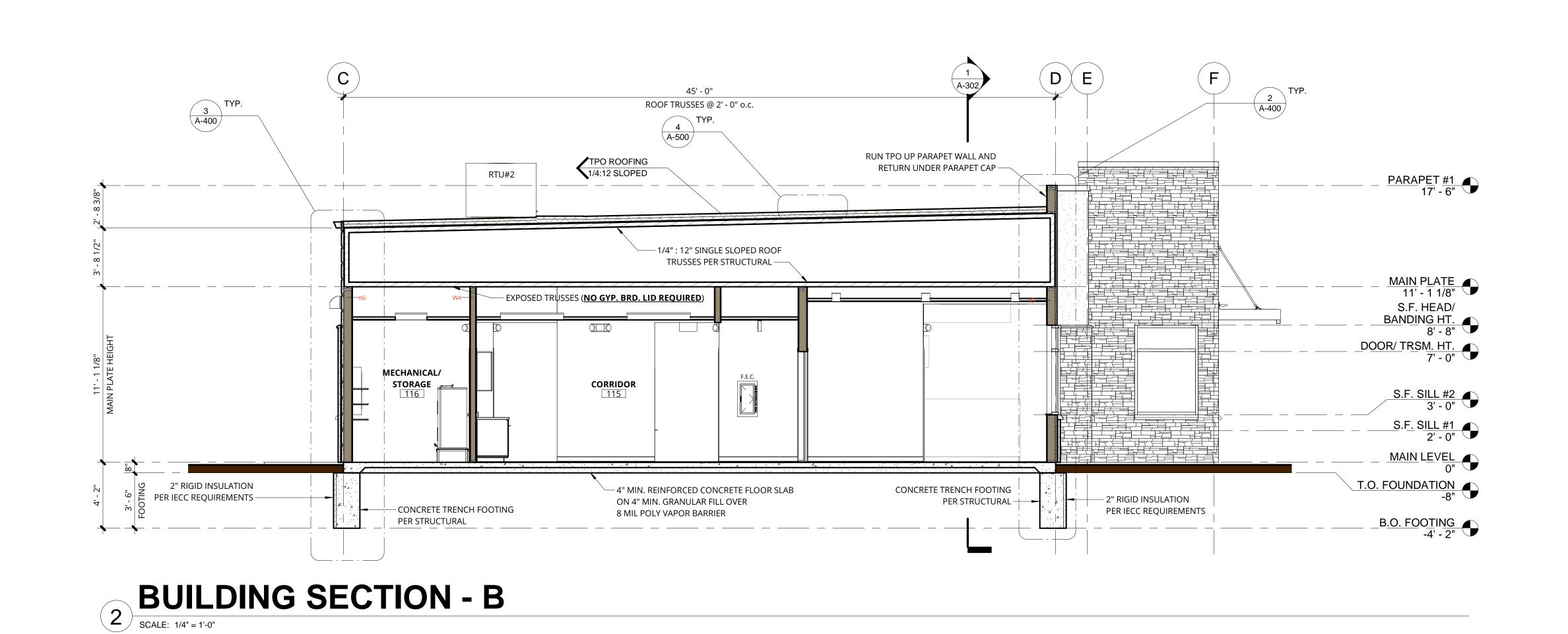












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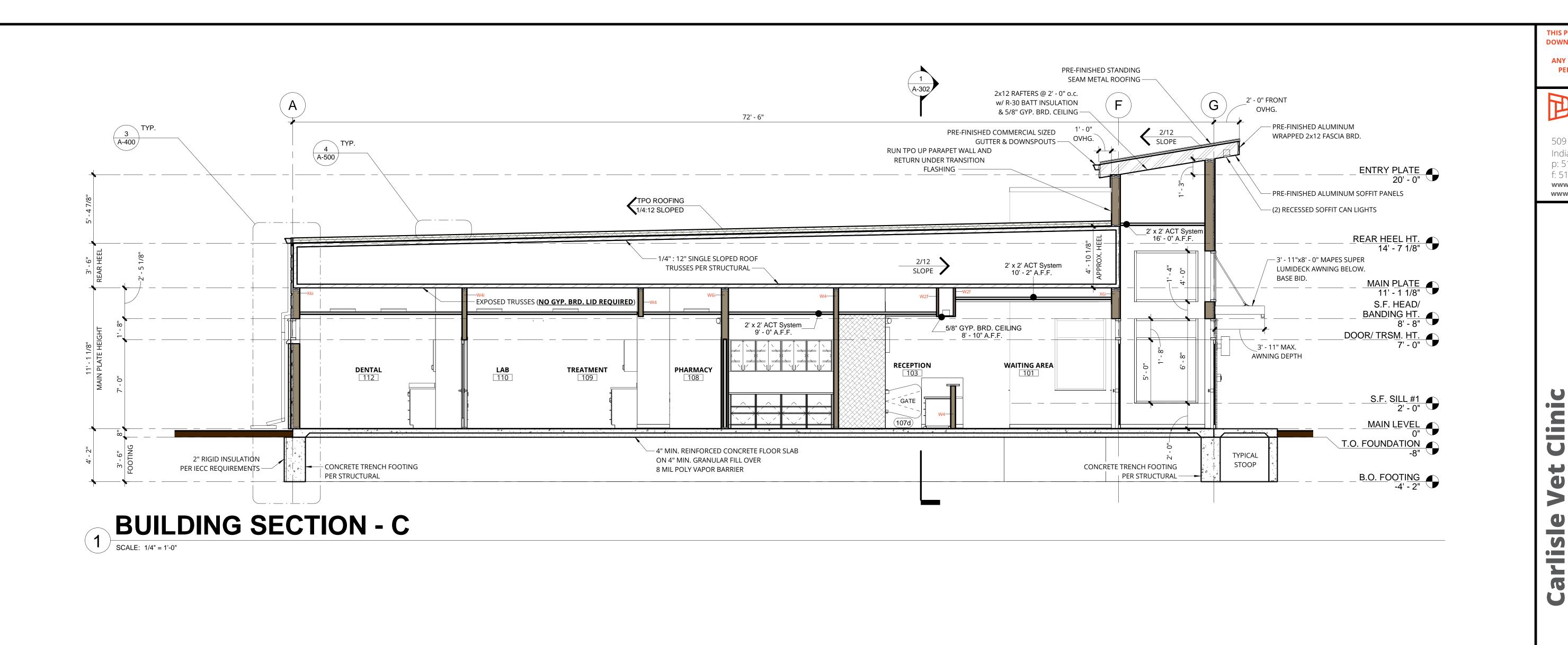
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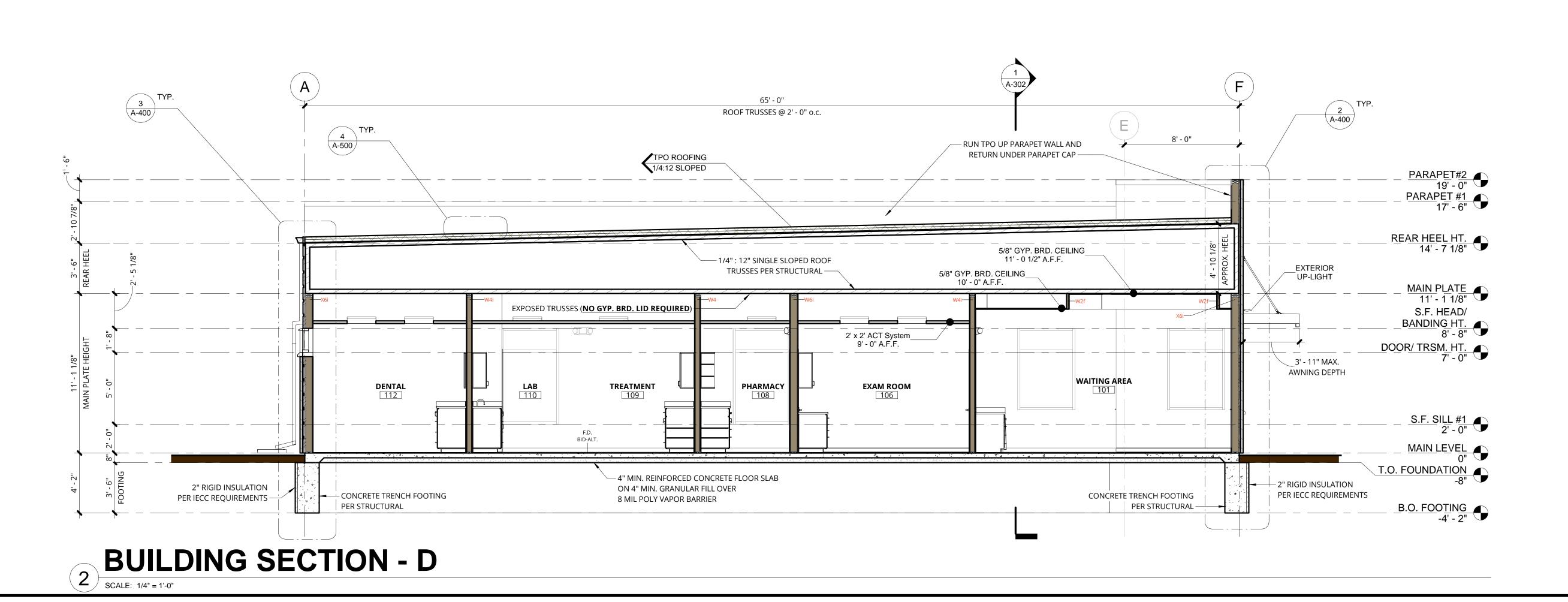
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BUILDING SECTIONS

SHEET NO.





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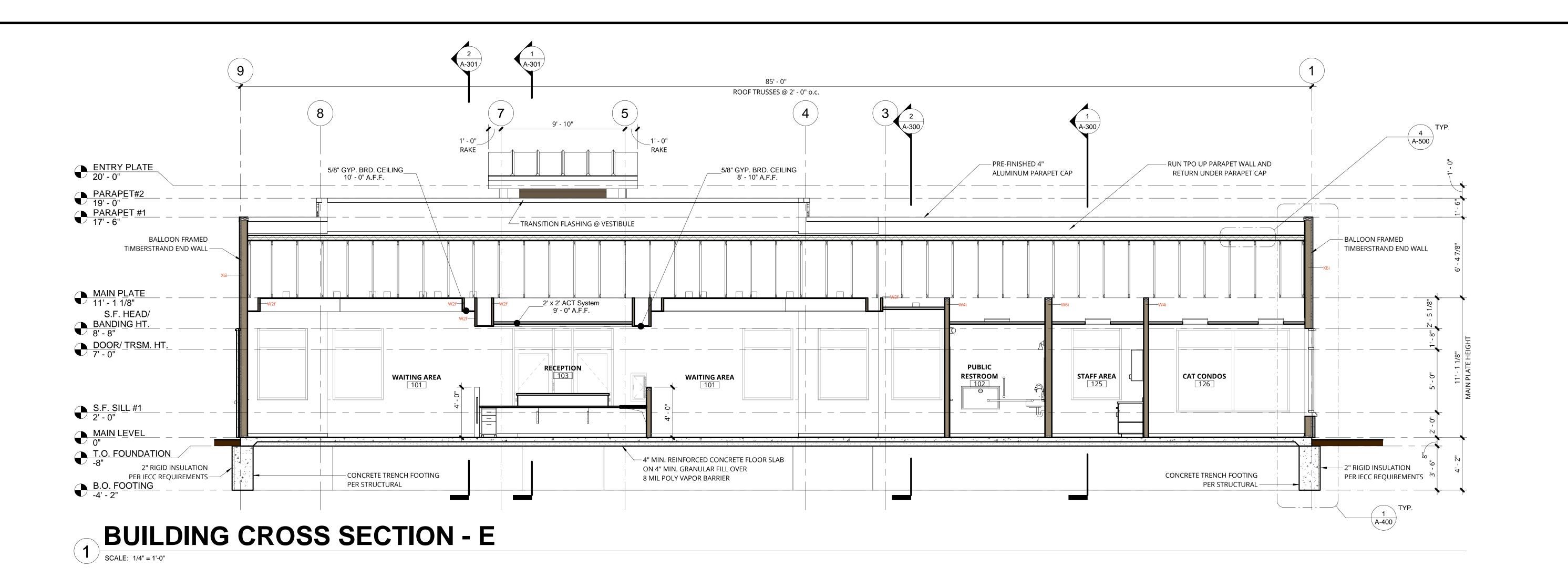
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BUILDING SECTIONS

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BUILDING SECTIONS

SHEET NO. A-302



WHEN SPRAY FOAM IS EXPOSED, PROVIDE INTUMESCENT PAINT TO MEET IBC & IFC REQUIREMENTS. OR IF A "WILD-RETURN" HVAC SYSTEM IS INSTALLED.

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## 07/14/2020 **REVISIONS**

CONSTRUCTION DOCUMEN

08/31/2020 - DD Concept 09/03/2020 - DD Revision 09/08/2020 - DD Revisions 09/15/2020 - Bid Set Update 09/21/2020 - Bid Set Update 10/02/2020 - CD/ Permit Set

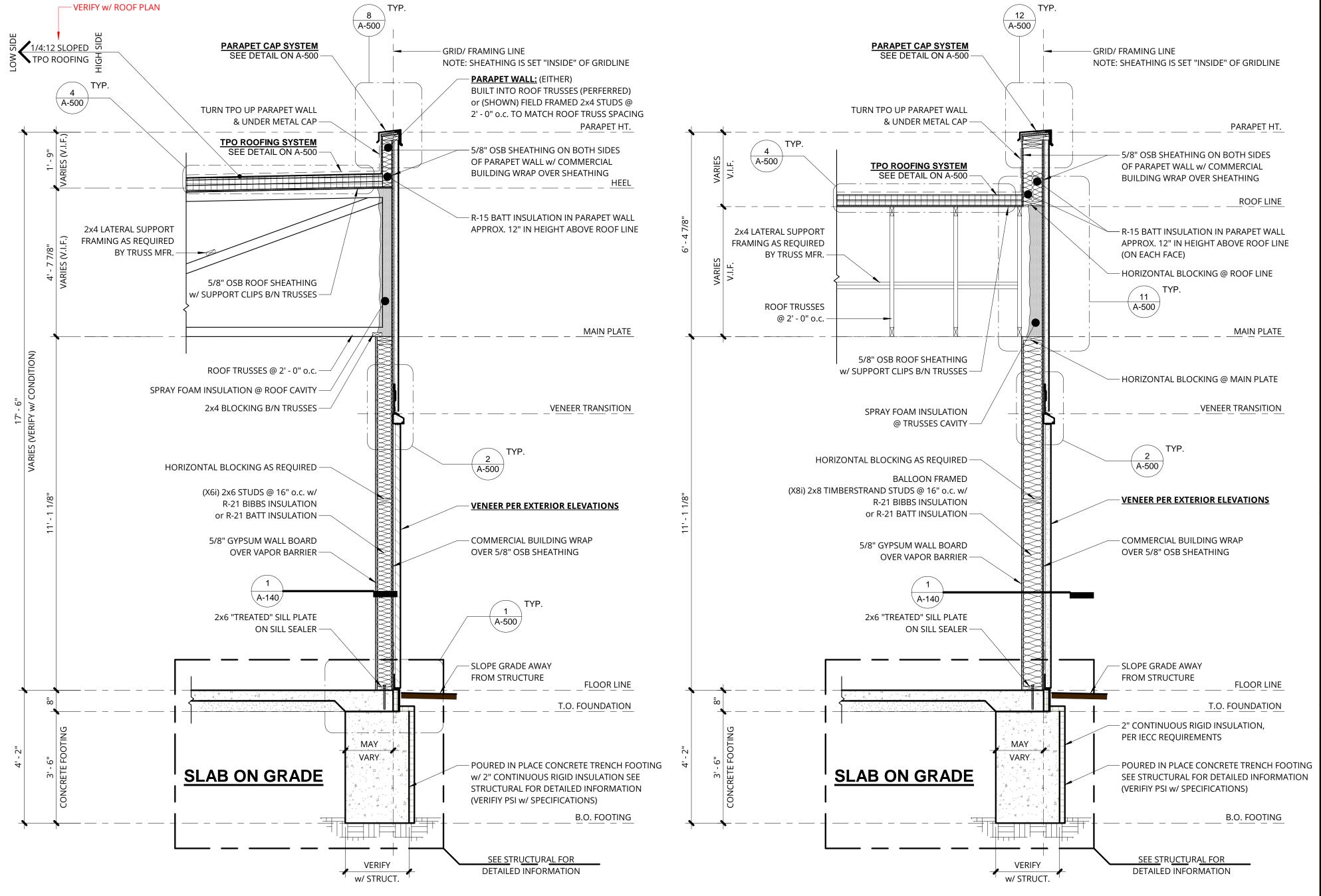
PLAN NO. = **20-012 DWG. LIST** 

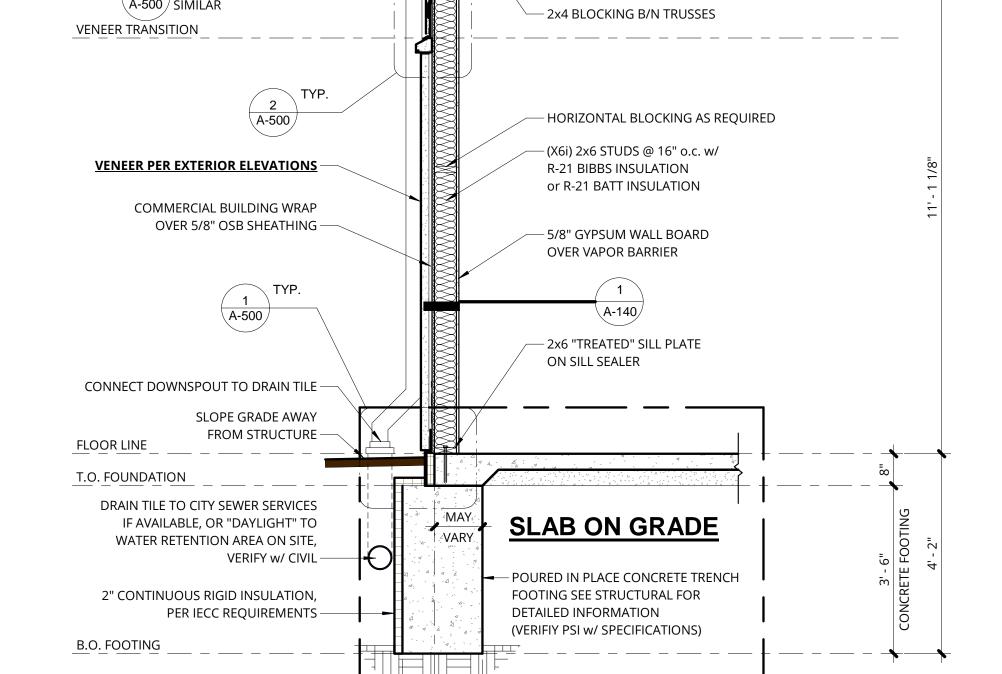
TYPICAL WALL

SECTIONS

SHEET NO.

A-400





- 5/8" OSB ROOF SHEATHING

w/ SUPPORT CLIPS B/N TRUSSES

GRID/ FRAMING LINE

NOTE: SHEATHING IS SET "OUTSIDE" OF GRIDLINE —

TYPICAL COMMERCIAL SIZED GUTTER —

PRE-FINISHED ALUMINUM WRAPPED

TYPICAL COMMERCIAL DOWNSPOUT —

SPRAY FOAM INSULATION

2x8 FASCIA BRD. —

VERIFY w/ ROOF PLAN —

1/4:12 SLOPED

2x4 LATERAL SUPPORT

FRAMING AS REQUIRED

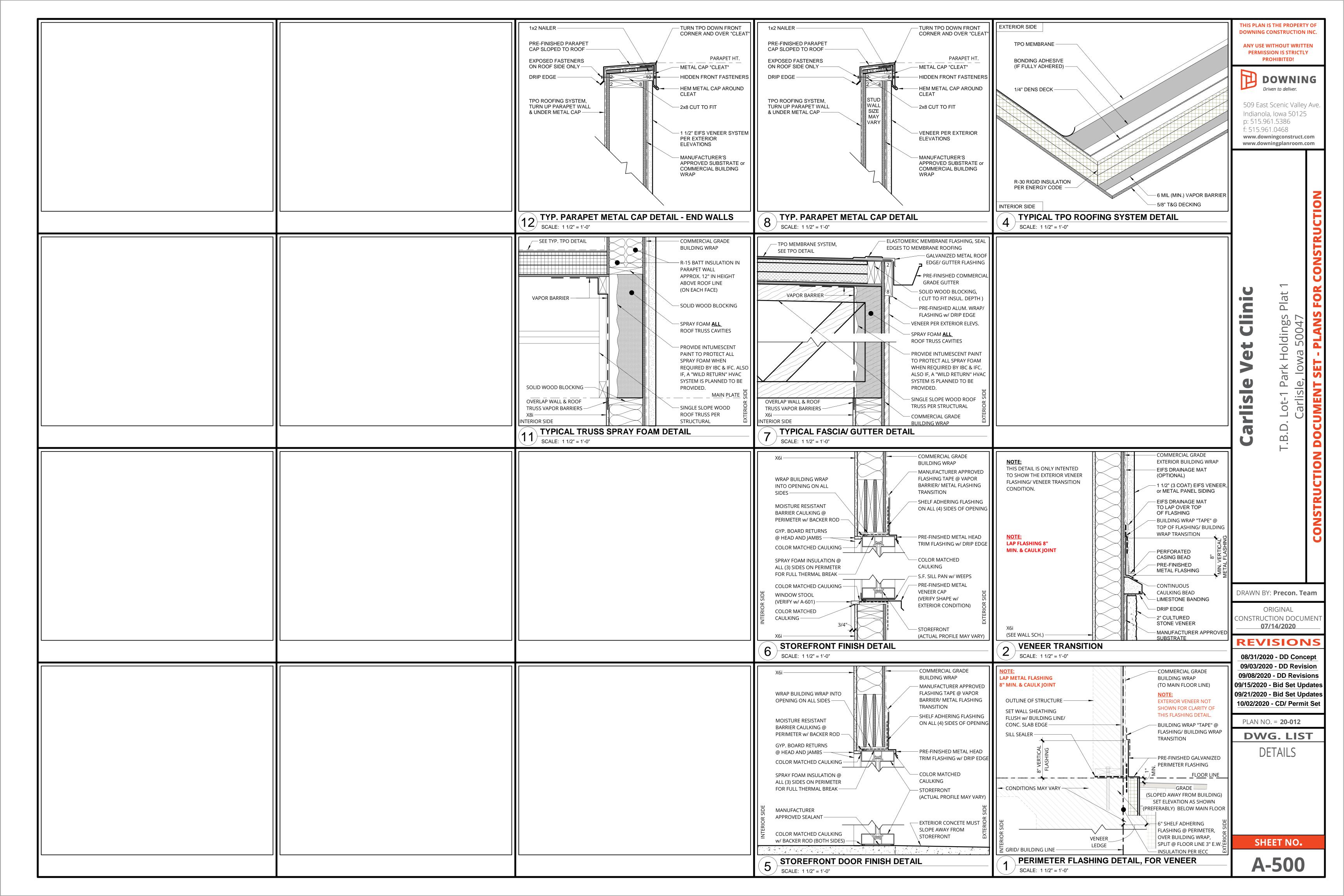
- ROOF TRUSSES @ 2' - 0" o.c.

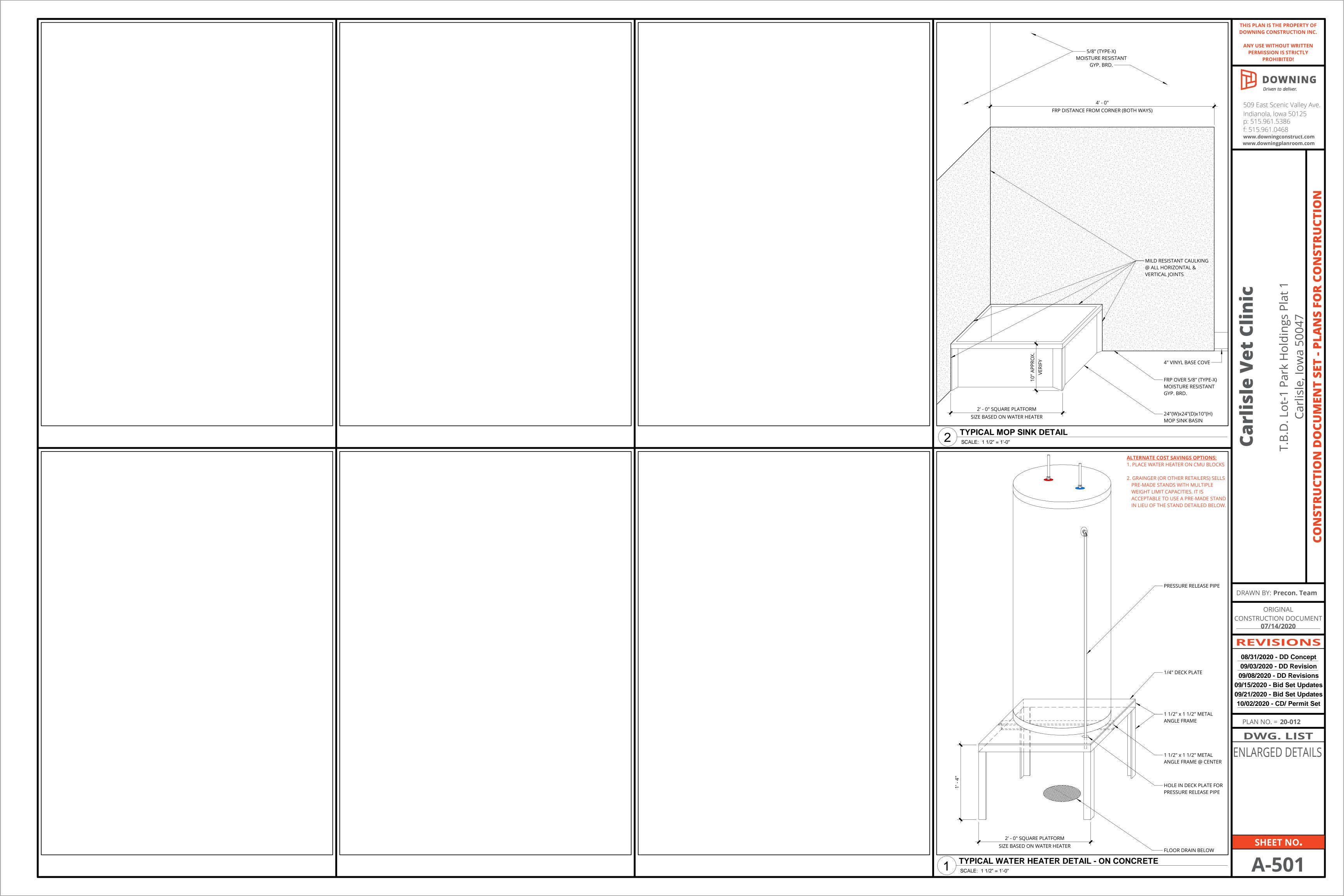
BY TRUSS MFR.

**\** TPO ROOFING ປັ

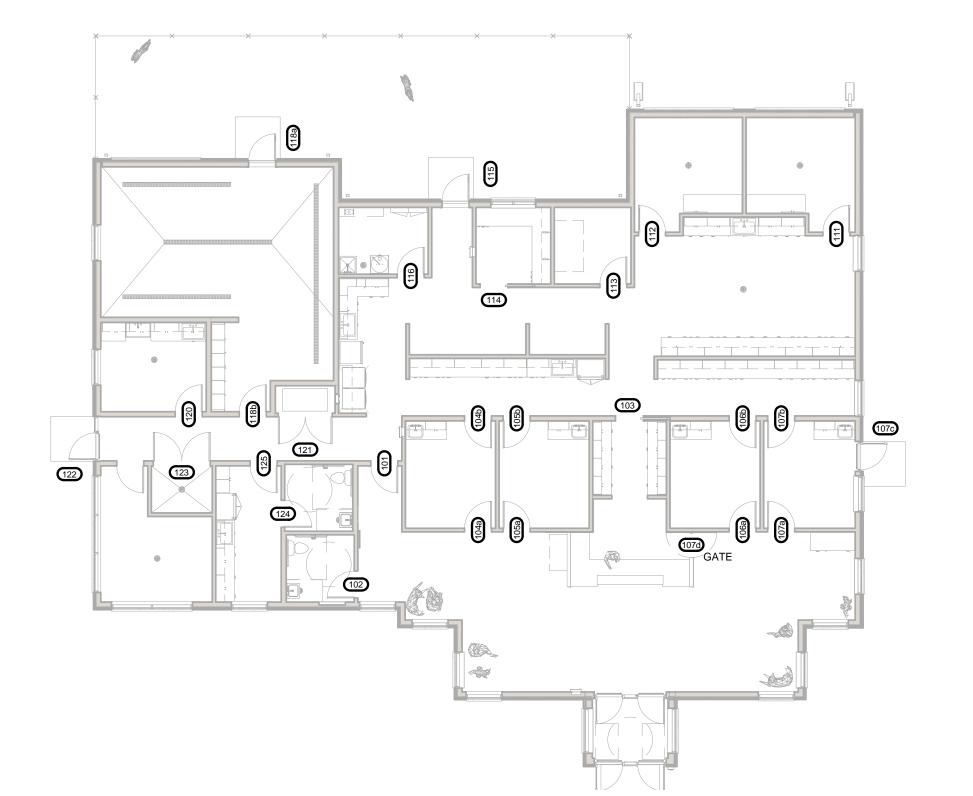
VERIFY

SEE STRUCTURAL FOR DETAILED INFORMATION





						Door So	chedule						
				Door Trim									
	Door Size	Door Panel	Door Frame	Style				Door Hardware				Sig	gnage
									eals & We	ather			
				Handle	e Types	Lo	ck Set Ty	oes	Protection	on			
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								ors)					
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Room: Name	Width Height	Material	Type Material	Tri Fla		T De Z	F E	Ste Ba		다 A A	ᆲᆝᇧᆝᇰᆝᆇᆝᅴᇤᆝᆥ	AD AD	Comments
STIBULE STIBULE	3' - 0" 7' - 0" 1 3/4" SF-1 3' - 0" 7' - 0" 1 3/4" SF-1	Anodized Alumimum/ Temp. Glass Anodized Alumimum/ Temp. Glass	SF-3 Anodized Aluminum SF-3 Anodized Aluminum	XXX		<del></del>	X		X X		X	X	
STIBULE	3 3 1 3 1 3 1	Anodized Alumimum/ Temp. Glass Anodized Alumimum/ Temp. Glass	SF-3 Anodized Aluminum SF-3 Anodized Aluminum	X X X		(	X		X X		X X X	X	
	3' - 0" 7' - 0" 1 3/4" SF-1	Anodized Alumimum/ Temp. Glass	SF-3 Anodized Aluminum	XXX					X X		X X	X	
DU LO DECEDORA	3' - 0" 7' - 0" 1 3/4" WD-1 3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate	PH-1 Solid Wood	XXX							XXX	X	
BLIC RESTROOM CEPTION	3' - 0" 7' - 0" 1 3/4" WD-1 3' - 0" 7' - 0" 1 3/4" PK-1	Solid Wood - P. Laminate Solid Wood - P. Laminate	PH-1 Solid Wood PK-1 Solid Wood	X X	X		,			-	X		X
AM ROOM	3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate	PH-1 Solid Wood	X X				X			X		X
AM ROOM	3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate	PH-1 Solid Wood	XXX				X			X		X
	3' - 0" 7' - 0" 1 3/4" WD-1 3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate Solid Wood - P. Laminate	PH-1 Solid Wood PH-1 Solid Wood	X X X				X			XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		X
AM ROOM	3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate	PH-1 Solid Wood	XXX				X			X		X
AM ROOM	3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate	PH-1 Solid Wood	X X				X			X		X
AM ROOM AM ROOM	3' - 0" 7' - 0" 1 3/4" WD-1 3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate Solid Wood - P. Laminate	PH-1 Solid Wood PH-1 Solid Wood	X X X				X		<del>                                     </del>	X		X X
AM ROOM	3' - 0" 7' - 0" 1 3/4" VVD-1	Anodized Alumimum/ Temp. Glass	SF-1 Anodized Aluminum	X X			X	^	X X		^ X		
CEPTION	2' - 10" 7' - 0" 1" GT-1	Wood Core Laminate	N/A Gypsum Board Opening	X							X		Hardware per manufacture specifications/ requirements, Equal or similiar to: Eliason "SCP Cafe"
JRGERY B	3' - 0" 7' - 0" 1 3/4" WD-3 3' - 0" 7' - 0" 1 3/4" WD-3	Solid Wood - P. Laminate/ Temp. Glass (Clear) Solid Wood - P. Laminate/ Temp. Glass (Clear)	PH-1 Solid Wood PH-1 Solid Wood	X				X			X X X X		X
RAY	3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate/ Temp. Glass (Clear)	PH-1 Solid Wood	X X							X		Provide illuminated "In-Use" signage & Lead Line this door
OCTOR'S OFFICE	3' - 0" 7' - 0" 1 3/4" PK-1	Solid Wood - P. Laminate	PK-1 Solid Wood	X	X								The state of the s
ORRIDOR ECHANICAL/ STORAGE	3' - 0" 7' - 0" 1 3/4" HM-1 = 3' - 0" 7' - 0" 1 3/4" WD-1	Hollow Metal/ Temp. Vision Glass Solid Wood - P. Laminate	HM-1 Hollow Metal PH-1 Solid Wood	X X X		(	X	Y	X X	<del>                                     </del>	X	K	x
ARDING	3' - 0" 7' - 0" 1 3/4" WD-1    3' - 0" 7' - 0" 1 3/4" HM-1	Hollow Metal/ Temp. Vision Glass	HM-1 Hollow Metal	X X		(	X	^	X X	<del>                                     </del>	X	Κ	
DARDING	3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate	PH-1 Solid Wood	X X				X			X		
ROOMING	3' - 0" 7' - 0" 1 3/4" WD-1 6' - 0" 7' - 0" 1 3/4" WD-2	Solid Wood - P. Laminate	PH-1 Solid Wood	X X				X			X		
REEZER ORRIDOR	6' - 0"   7' - 0"   1 3/4"   WD-2 3' - 0"   7' - 0"   1 3/4"   SF-1	Solid Wood - P. Laminate Anodized Alumimum/ Temp. Glass	PH-2 Solid Wood SF-2 Anodized Aluminum	X X X			X	, A	X X		X	X	
OLATION TAFF RESTROOM	6' - 4" 7' - 0" 1 3/4" WD-2	Solid Wood - P. Laminate	PH-2 Solid Wood	X			- `	X		<del>                                     </del>	X		
	3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate	PH-1 Solid Wood	X X			>	·			X		X
T ^ C C	3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate	PH-1 Solid Wood	X   X				X			X		
TAFF AREA CAT CONDOS	3' - 0" 7' - 0" 1 3/4" WD-1	Solid Wood - P. Laminate	PH-1 Solid Wood	X X				X			X		



# MAIN LEVEL DOOR TAG PLAN SCALE: 3/32" = 1'-0"

STOREFRONT FINISH NOTE:
PROVIDE PRICING FOR BOTH ANODIZED DARK BRONZE & ANODIZED BLACK.

**DOOR PANELS, FRAMES & TRIM FINISHES NOTE:** SEE FINISH SELECTION SHEET FOR ALL DOOR PANEL, DOOR FRAMES, AND DOOR TRIM FINISHES.

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509 East Scenic Valley Ave. Indianola, Iowa 50125 p: 515.961.5386 f: 515.961.0468 www.downingconstruct.com

www.downingplanroom.com

Holdings wa 50047 Lot-T.B.D.

Carlisle

DRAWN BY: **Precon. Team** 

ORIGINAL CONSTRUCTION DOCUMENT

07/14/2020

## **REVISIONS**

08/31/2020 - DD Concept 09/03/2020 - DD Revision 09/08/2020 - DD Revisions 0<u>9/15/2020 - Bid Set Updates</u> 0<u>9/21/2020 - Bid Set Updates</u> 10/02/2020 - CD/ Permit Set

PLAN NO. = **20-012** 

**DWG. LIST** DOOR SCHEDULE 8

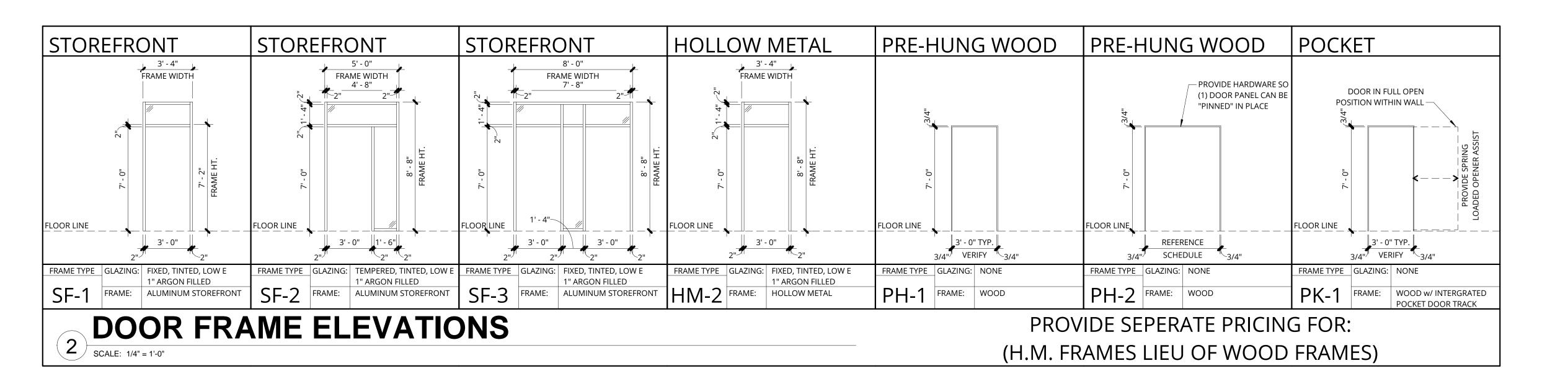
DOOR TAG PLAN

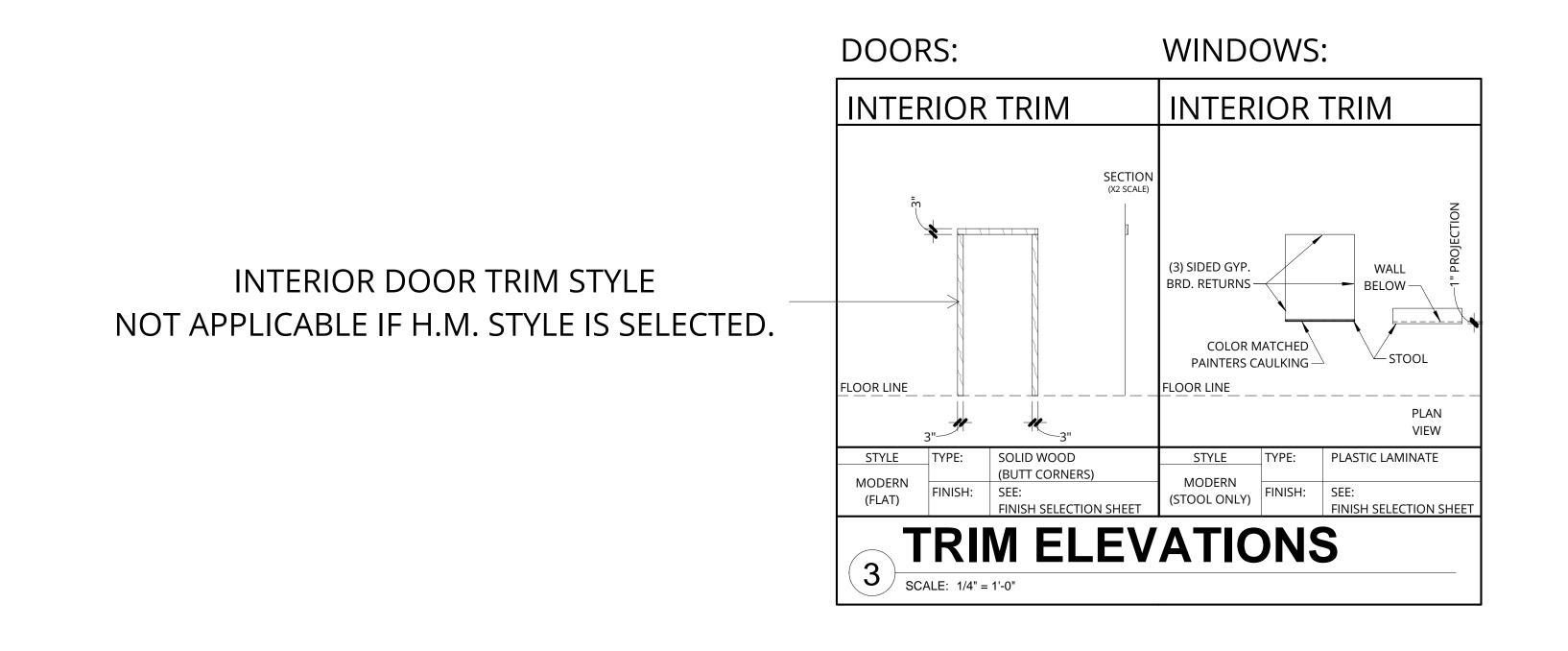
SHEET NO.

FOR WOOD DOOR PANELS, PROVIDE PRICING FOR:

1) SOLID WOOD PANELS w/ P. LAMINATE FINISH

2) SOLID WOOD PANELS w/ STAINED FINISH TO MATCH P.LAMINATE CASEWORK.





DOOR PANELS,

FRAMES & TRIM FINISHES NOTE:

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\_\_\_\_\_07/14/2020

## **REVISIONS**

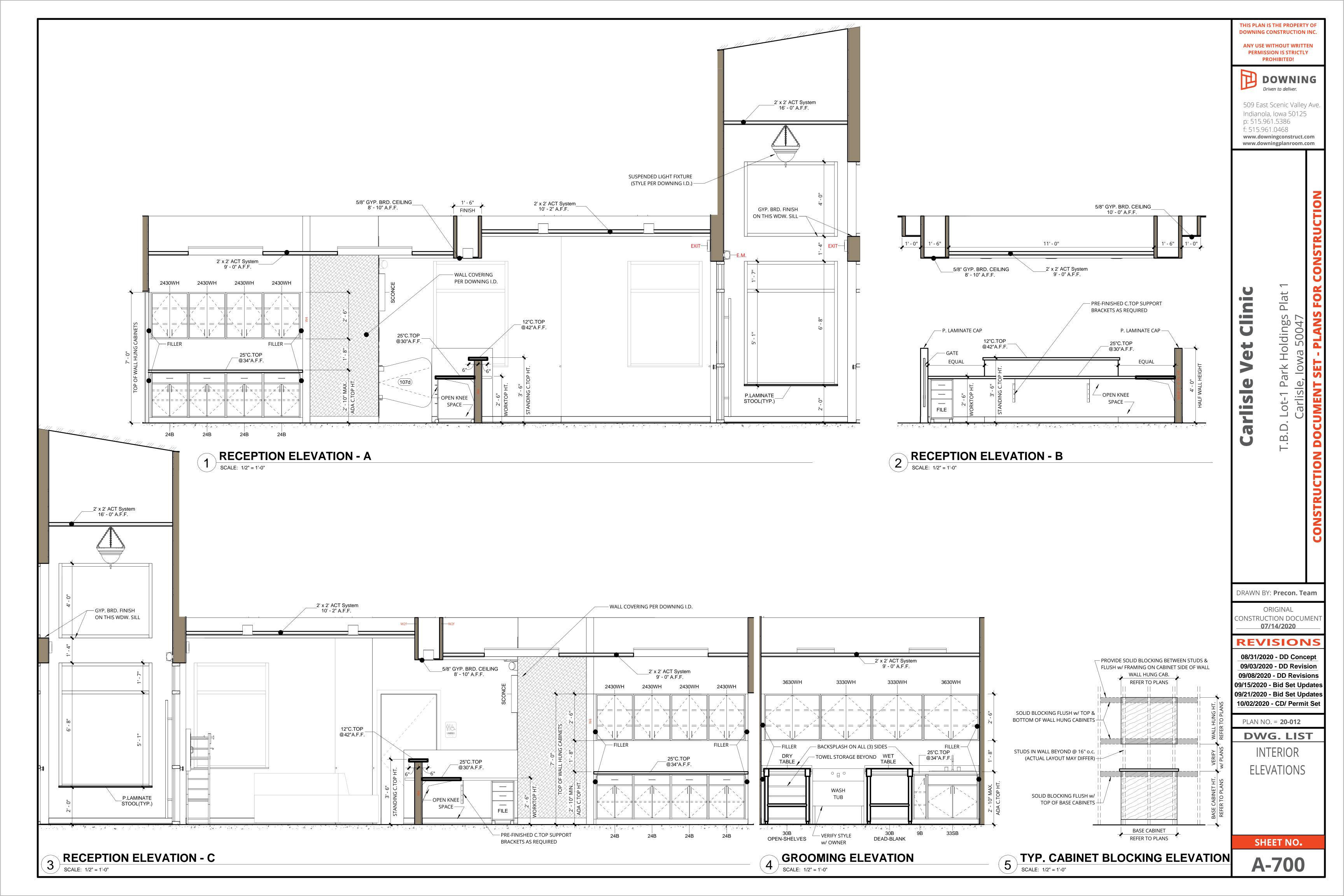
08/31/2020 - DD Concept 09/03/2020 - DD Revision 09/08/2020 - DD Revisions 09/15/2020 - Bid Set Updates 09/21/2020 - Bid Set Updates 10/02/2020 - CD/ Permit Set

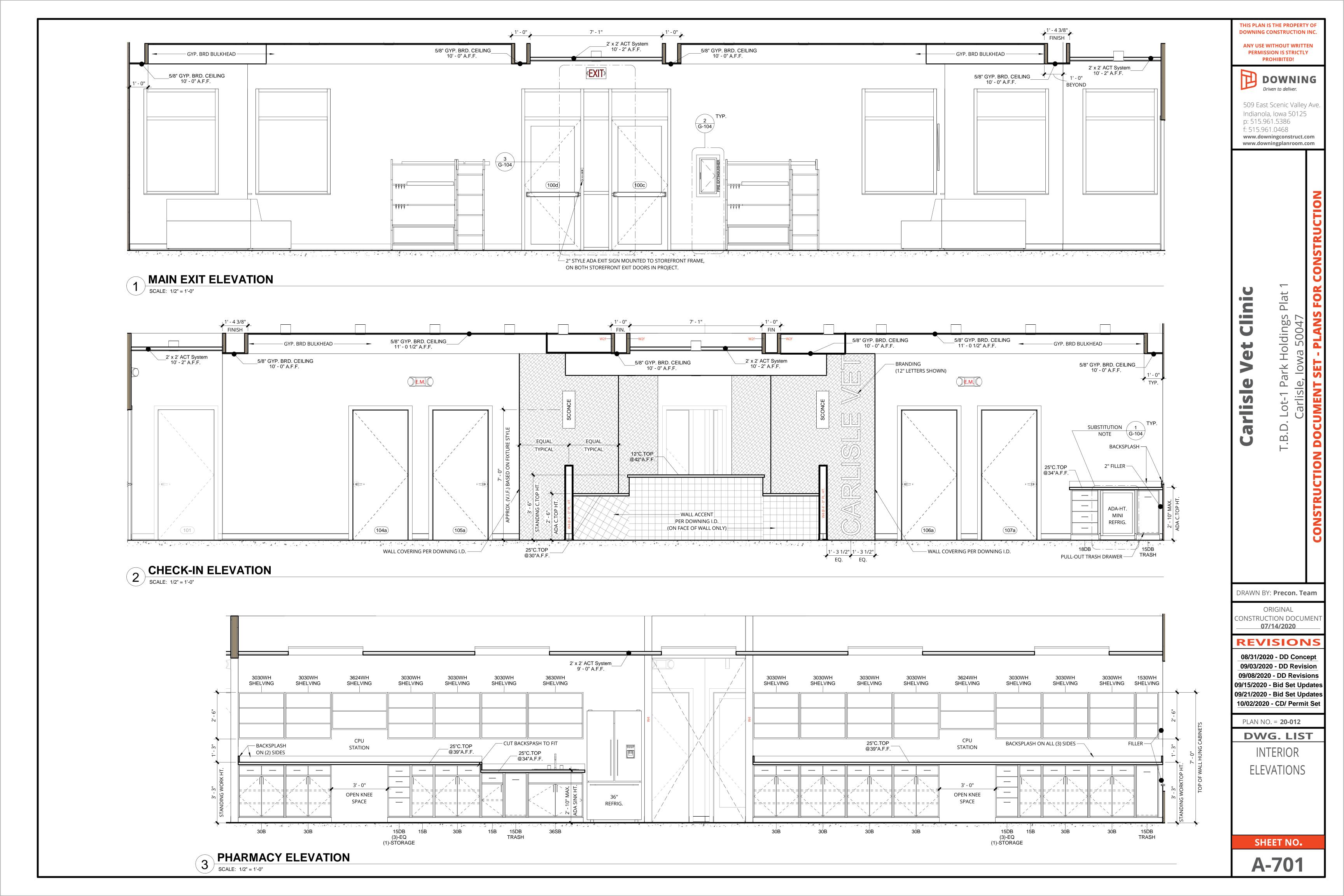
PLAN NO. = **20-012** 

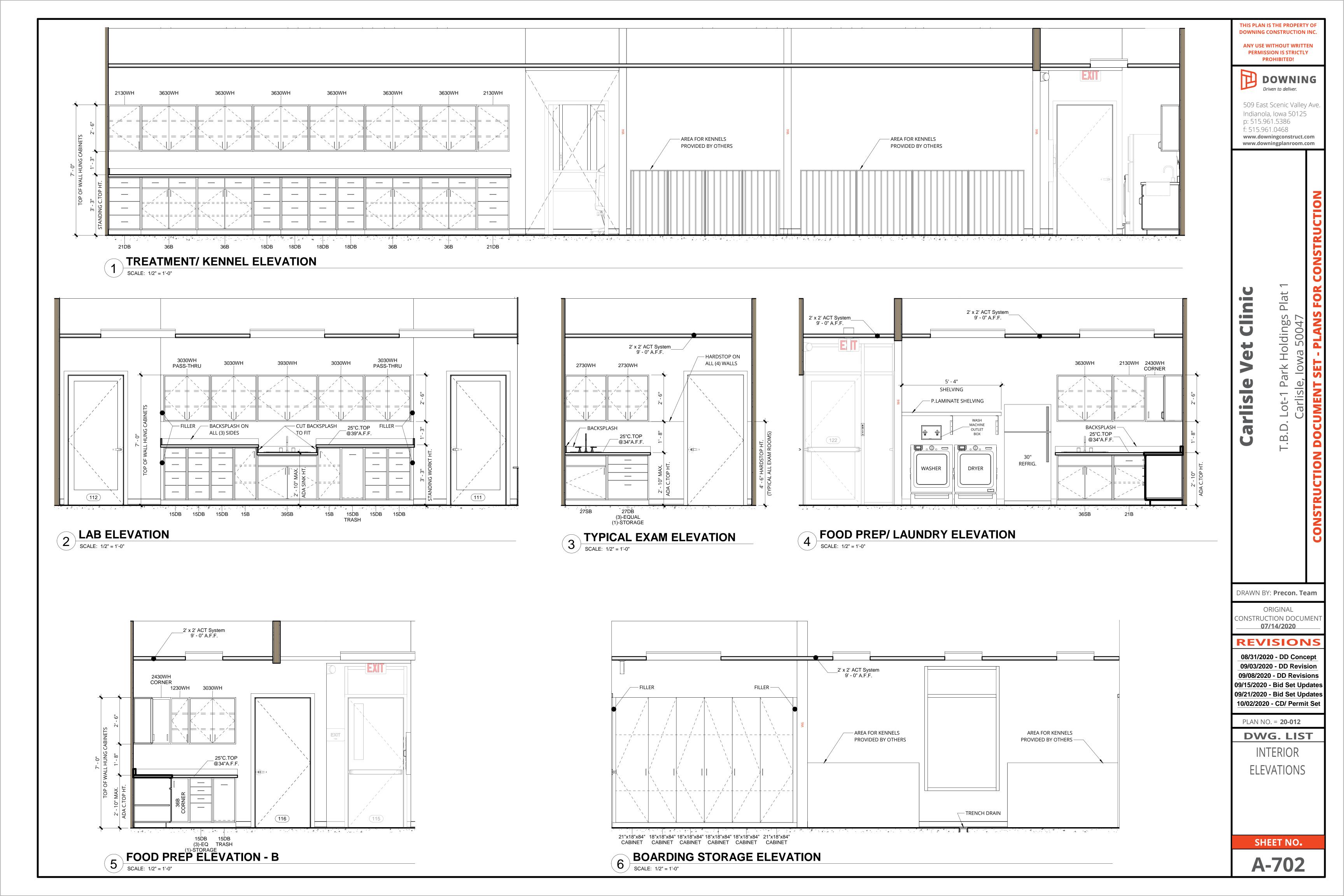
DWG. LIST
DOOR PANEL,
FRAME & TRIM

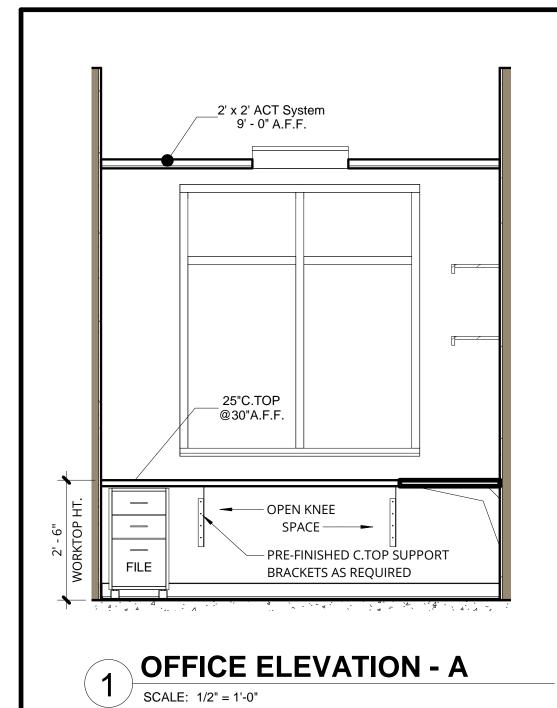
ELEVATIONS

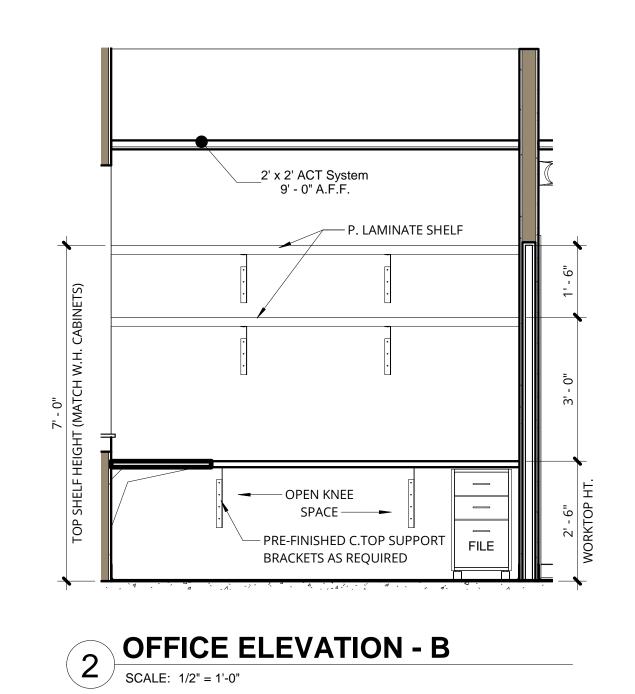
SHEET NO.

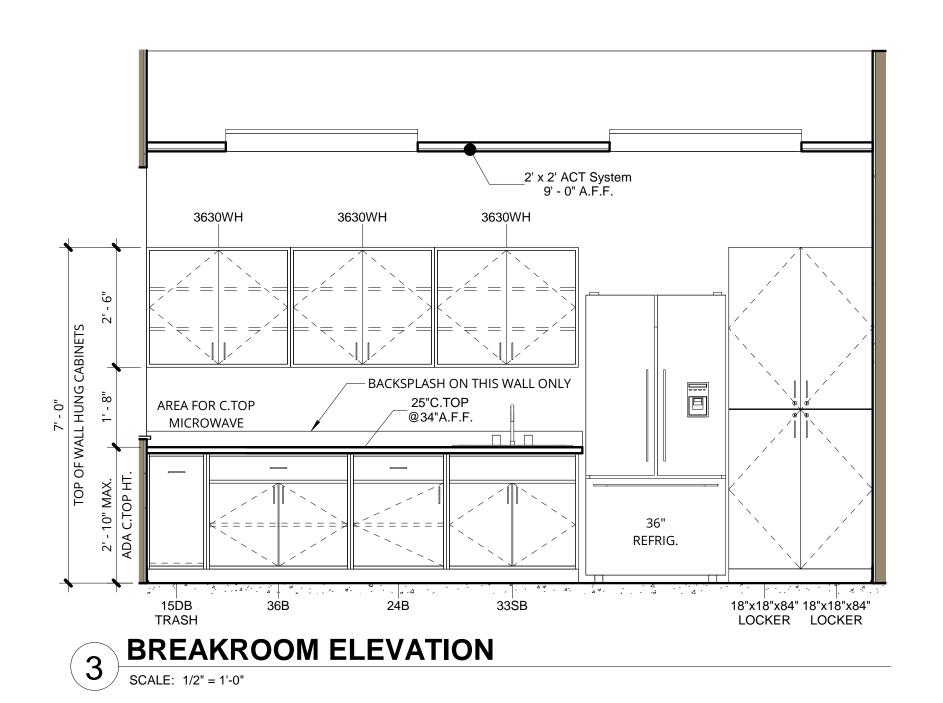


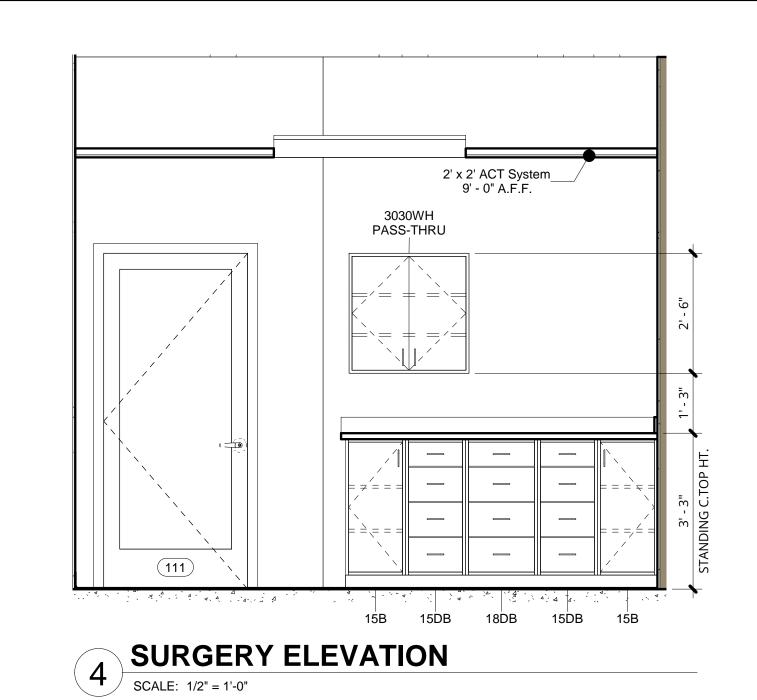


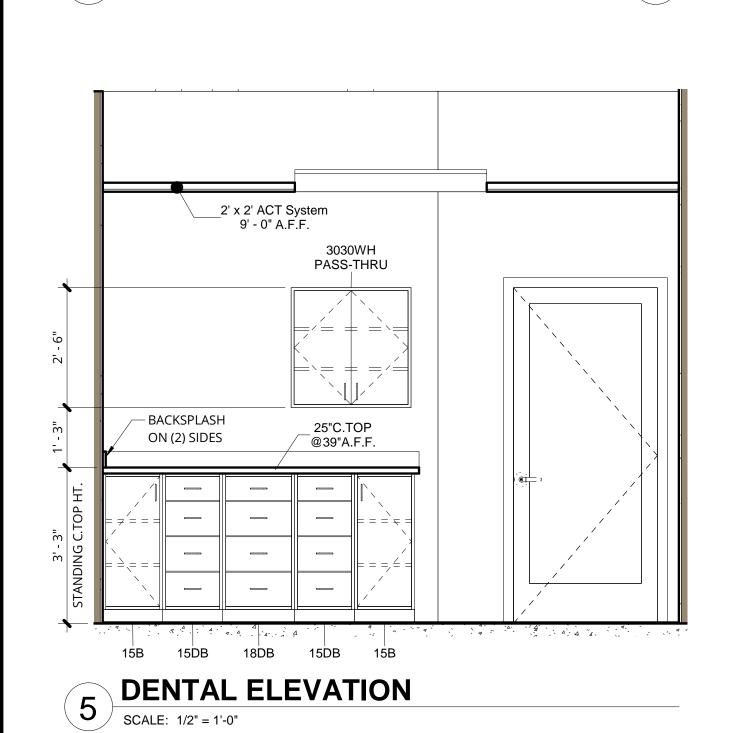












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Plat

Holdings |

Park

Lot-

T.B.D.

Indianola, Iowa 50125

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Clinic

Carlisle

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### **REVISIONS**

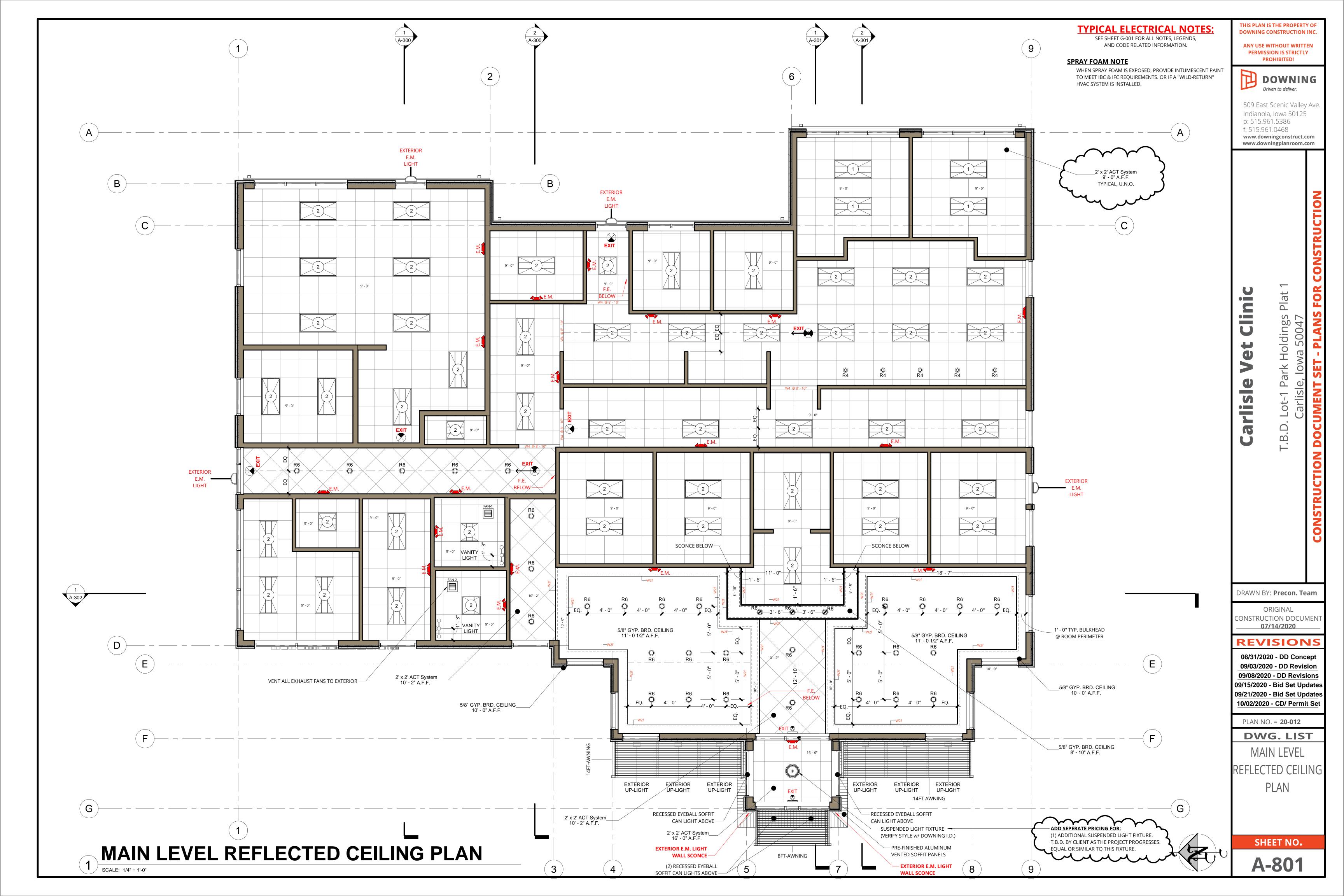
08/31/2020 - DD Concept 09/03/2020 - DD Revision 09/08/2020 - DD Revisions 09/15/2020 - Bid Set Updates 09/21/2020 - Bid Set Updates 10/02/2020 - CD/ Permit Set

PLAN NO. = **20-012** 

DWG. LIST

INTERIOR ELEVATIONS

SHEET NO. **A-703** 



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Lot-

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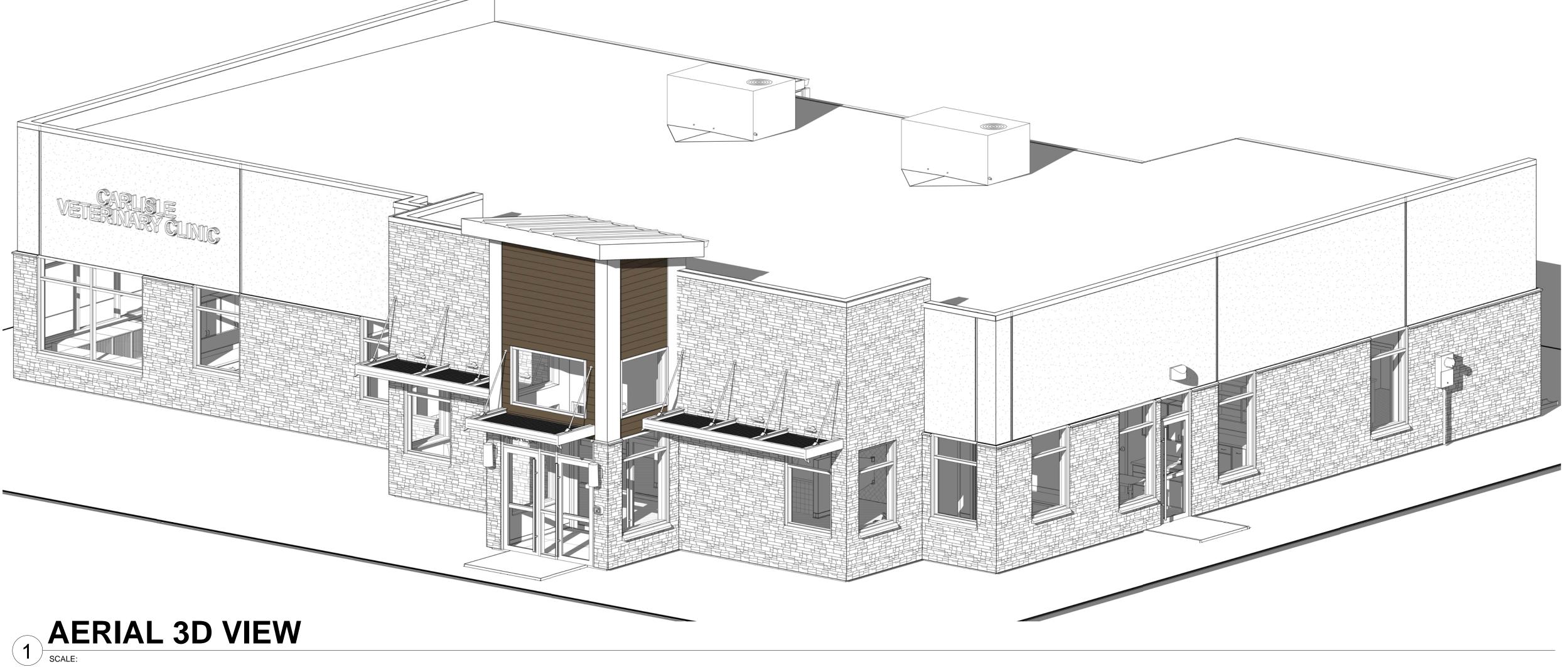
3D IMAGES

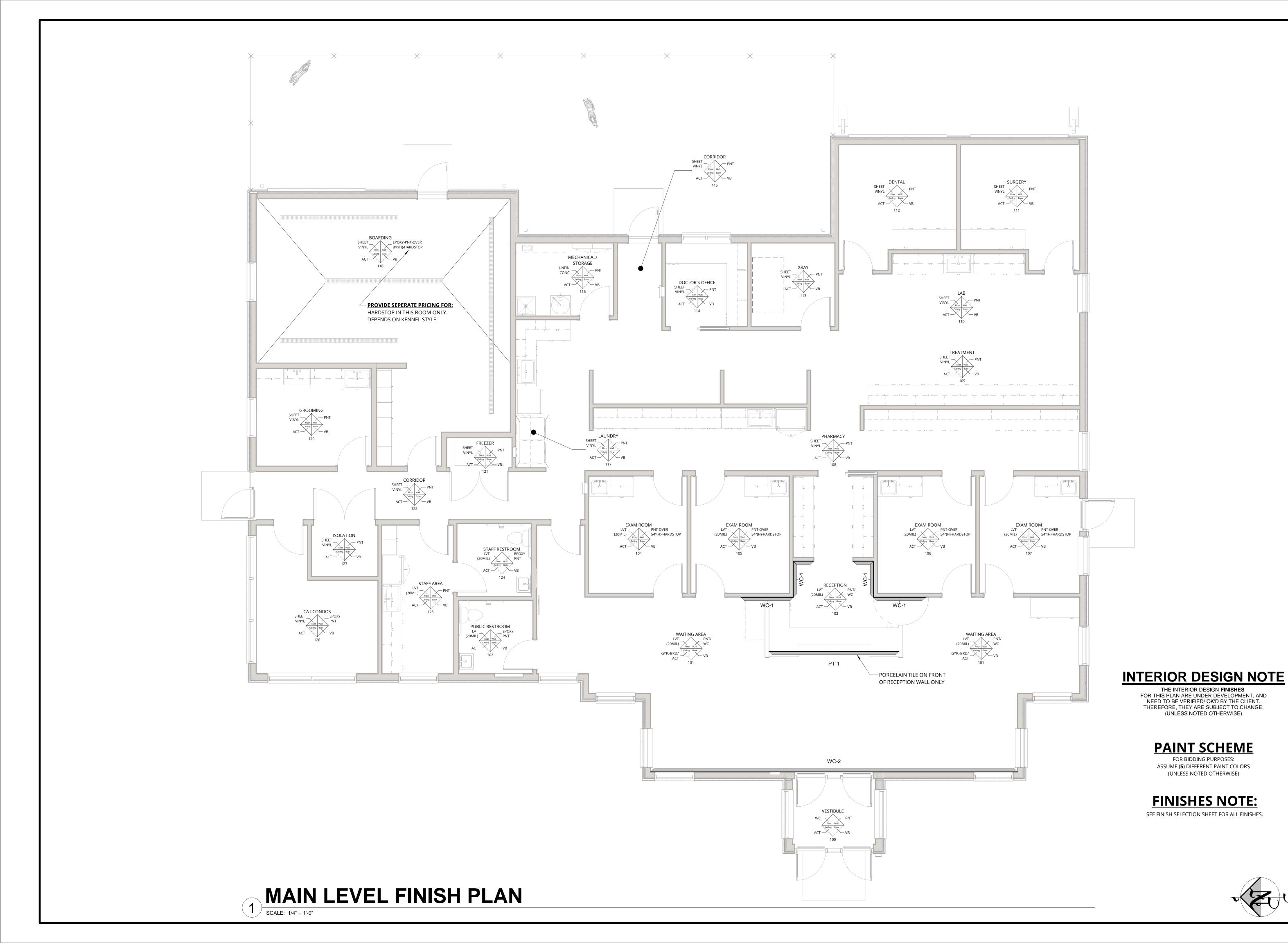
SHEET NO.

**A-900** 









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Lot-

Clinic Carlisle

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## **REVISIONS**

08/31/2020 - DD Concept 09/03/2020 - DD Revision 09/08/2020 - DD Revisions 09/15/2020 - Bid Set Updates 09/21/2020 - Bid Set Updates 10/02/2020 - CD/ Permit Set

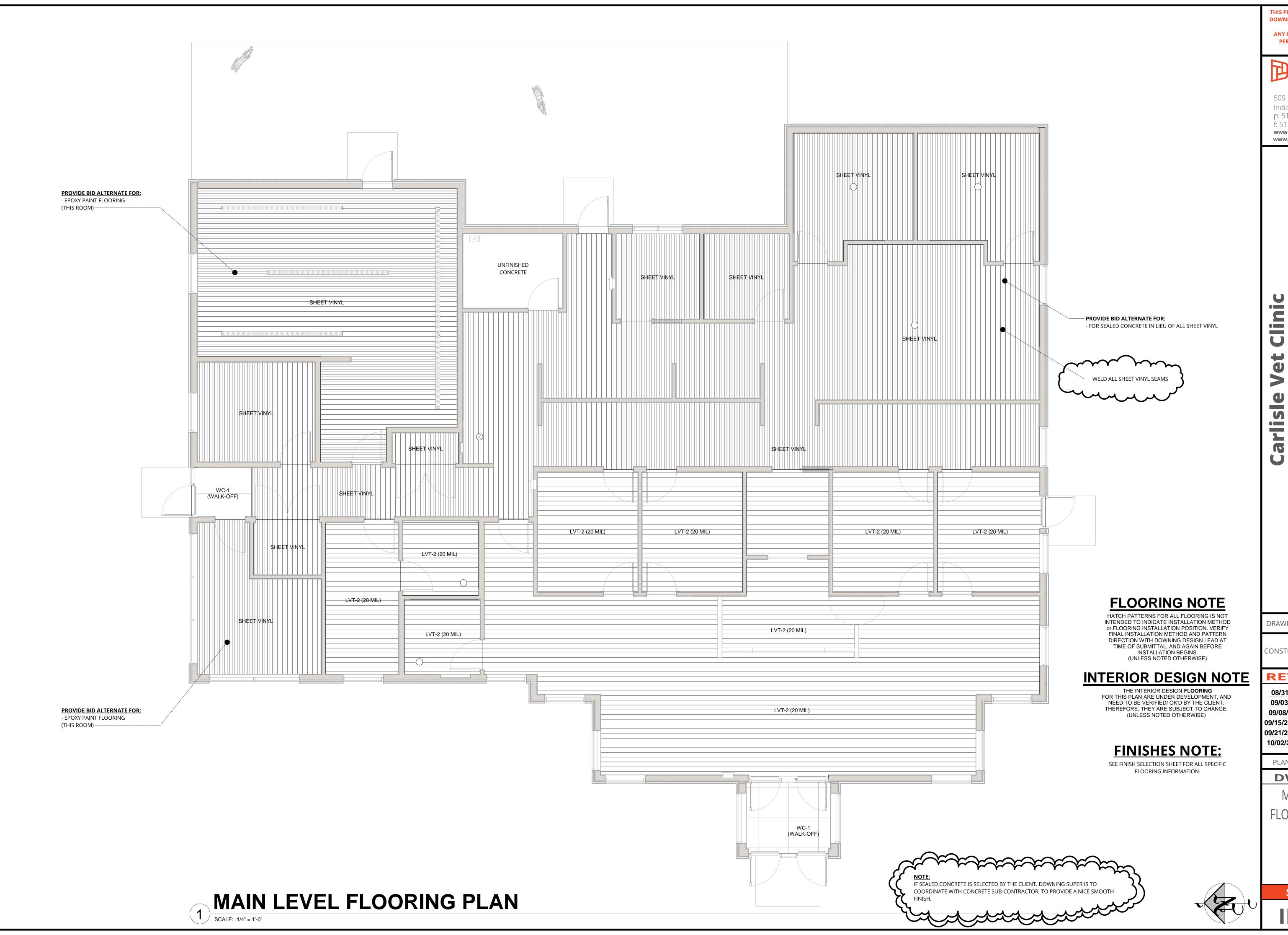
PLAN NO. = **20-012** 

**DWG. LIST** 

MAIN LEVEL FINISH

PLAN

SHEET NO. **ID-101** 



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DI ANI NIO - 20-013

PLAN NO. = **20-012** 

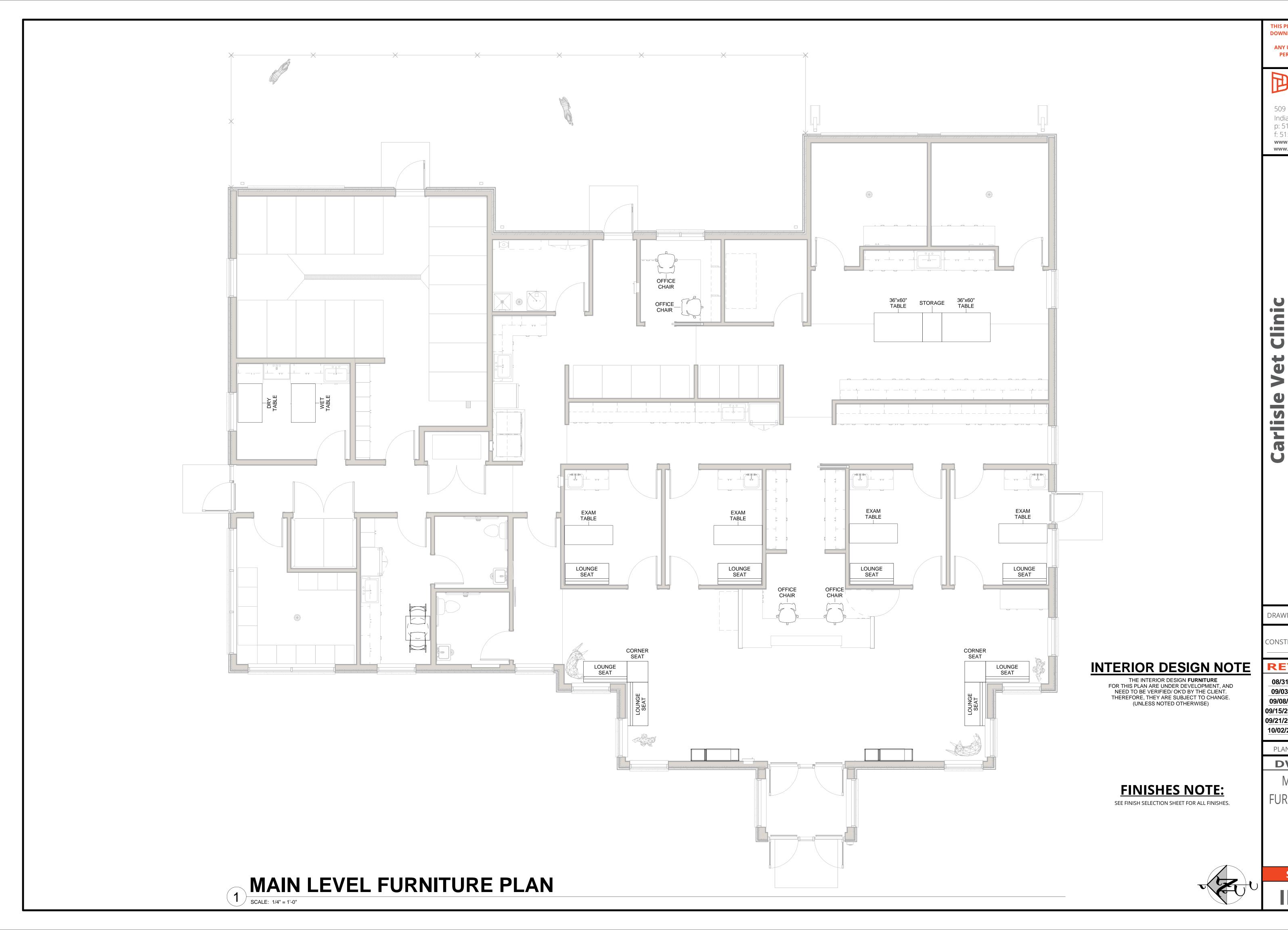
DWG. LIST

MAIN LEVEL

FLOORING PLAN

SHEET NO.

ID-111



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PLAN NO. = **20-012 DWG. LIST** 

MAIN LEVEL

FURNITURE PLAN

SHEET NO.

Final Selections Workshee		PRODUCT	Revised: 09/11/2020	COLOR	CIZE	I FAD TIME	NOTES
PRODUCT Roofing	MANUFACTURER	PRODUCT	PRODUCT #	COLOR	SIZE	LEAD TIME	NOTES
	TBD						TPO Metal (Ribbed and/or Standing Seam)
Exterior Sheet Metals	TDD						
	TBD						Metal Wall Panels Soffit
							Fascia Gutters (or Scuppers) & Downspouts
							Coping Cap (Flat Roof Parapet Cap) Flashings
Gutters							
Gutters	TBD						
Downspout	TBD						
Pre-Finished Siding							
	TBD						
EIFS	TBD						
Manufactured Stone							
maneractal ca storie	Centurion Stone	Oxford Mountain Ledge					
Storefront Assemblies				Dark Bronze - T.B.D.			
Woodwork Paint/Stain							
	Nichiha	RoughSawn	EPC241N	Tobacco			
Door Paint/Stain	Formica		6438-58	Washed Knotty Ash			Door Panel: Wood
	Torriica		0430-30	washed knotty Ash			Bid Alternate: Metal Doors Hollow Metal Frame
Maller ff Course Tile (MCDT)							Hollow Metal Hame
Walkoff Carpet Tile (WCPT) WCPT-1	Patcraft	Moving	10536-00560	Saunter			Installation Method: Monolithic
Sheet Vinyl	M. I. I.		62020.050		Cl 4.21		NI/A
Language Afficial Tile (IAT)	Mohawk	Serenity Collection	C2020-959	Sensation	6' or 12'		N/A
Luxury Vinyl Tile (LVT) LVT-1	Mannington	Spacia	SS5W2542	Dusky Walnut	7.25 x 48		Installation Method: Stagger.
Porcelain Tile (PT) PT-1	Wow USA	Love Affairs	WOWLACAHEXAGON	Calacatta			Front of Recepton
PT-2	Wow USA	Chevron Floor	TOTAL COLLEGEN	TBD			Front of Recepton
Grout	TBD						
V. 10 0/0	שטו						
Vinyl Base (VB) VB-1	TBD						
Sealed Concrete							
Epoxy Paint Flooring							Bid Alternate
Paint							Bid Alternate
PNT-1 PNT-2	Sherwin Williams Sherwin Williams		SW 7653 SW 7655	Silverpointe Stamped Concrete			Field Accent
PNT-3	Sherwin Williams		SW 7017	Dorian Gray			Exterior
PNT-4 PNT-5	Sherwin Williams Sherwin Williams		SW 9142 SW 7674	Moscow Midnight Peppercorn			Accent (trim)
Ceiling Paint							
PNT-6	TBD						
Acoustical Ceiling Tile ACT-1	USG	Radar					
ACT-1	USG	Astro					Bid Alternate
Plastic Laminate PLAM-1	Formica		6438-58	Washed Knotty Ash			Cabinetry
Wall Protection							
PLAM-2	Formica		8826-58	Neutral Twill			See Finish Plan Locations
Solid Surface/Quartz SS-1		Formica Signatures	748	White Renew			Countertops
	Formica	- U		-			
	Formica						
Type II Vinyl Wallcovering	Formica Source One (Momentum)	) Intarsia	2VIA-01	Craft			
Type II Vinyl Wallcovering	Source One (Momentum)	) Intarsia	2VIA-01	Craft			To be used on exterior corner wallcovering conditions.
Type II Vinyl Wallcovering  Vinyl Wallcovering Metal	Source One (Momentum)	) Intarsia	2VIA-01	Craft			To be used on exterior corner wallcovering conditions.
Type II Vinyl Wallcovering	Source One (Momentum)  TBD  es  Spectrum	One Light Outdoor Lantern	5755219	Black			Exterior Sconces: https://shop.spectrumlighting.biz/brand-13/sku-5755219
Type II Vinyl Wallcovering  Vinyl Wallcovering Metal	Source One (Momentum)  TBD  es  Spectrum  Spectrum	One Light Outdoor Lantern One Light Pendant	5755219 5755647	Black Aged Zinc			Exterior Sconces: https://shop.spectrumlighting.biz/brand-13/sku-5755219 Interior Sconces: https://shop.spectrumlighting.biz/brand-13/sku-5755647
Type II Vinyl Wallcovering  Vinyl Wallcovering Metal	Source One (Momentum)  TBD  es  Spectrum	One Light Outdoor Lantern	5755219	Black			Exterior Sconces: https://shop.spectrumlighting.biz/brand-13/sku-5755219

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Carlisle Vet Clinic

Plat

Holdings wa 50047

Park

Lot-

T.B.D.

DRAWN BY: **Precon. Team** 

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PLAN NO. = **20-012** 

DWG. LIST

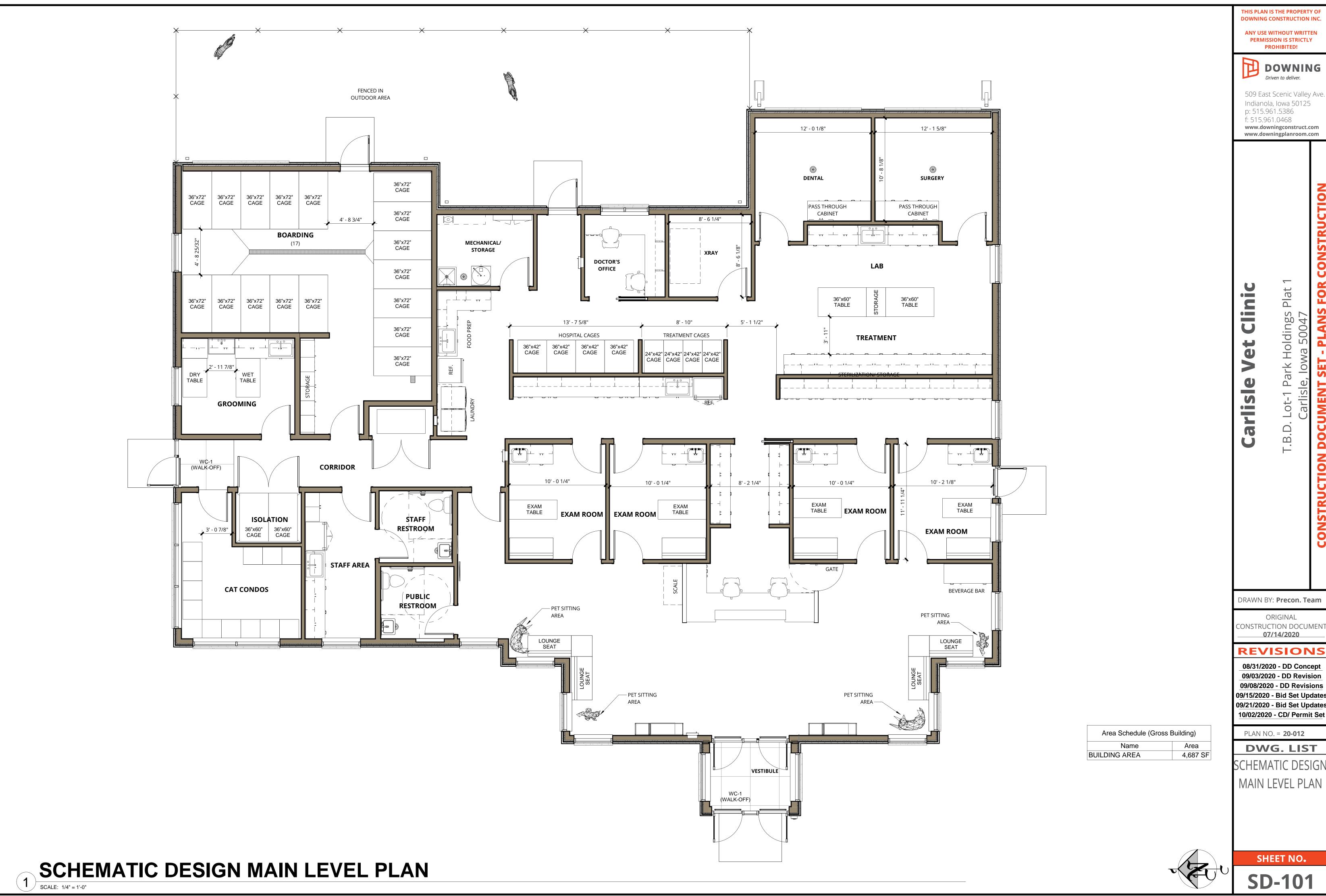
**FINISHES NOTE:** 

SEE FINISH SELECTION SHEET FOR ALL FINISHES.

INTERIOR DESIGN
SCHEDULES

SHEET NO.

**ID-600** 



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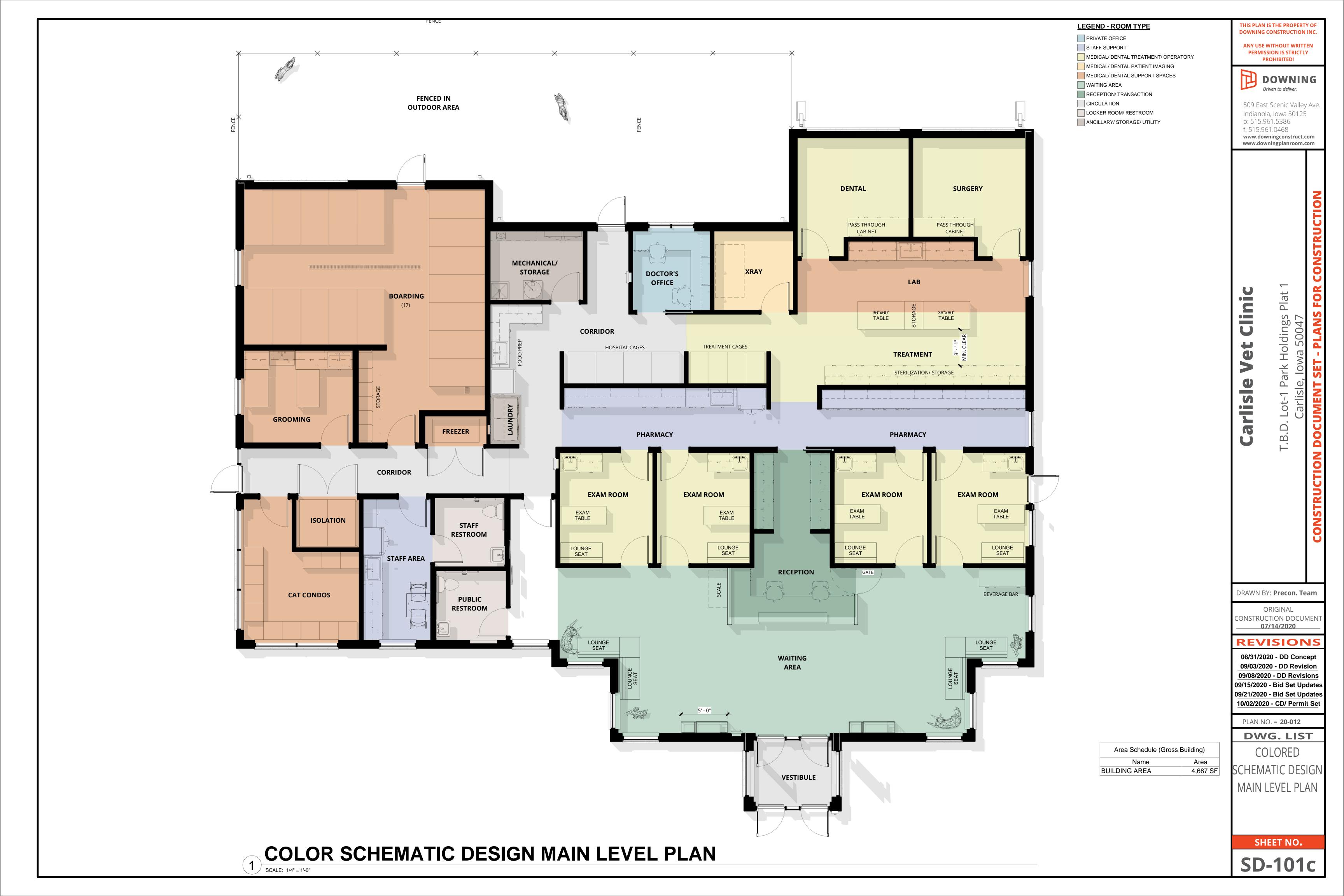
Holdings

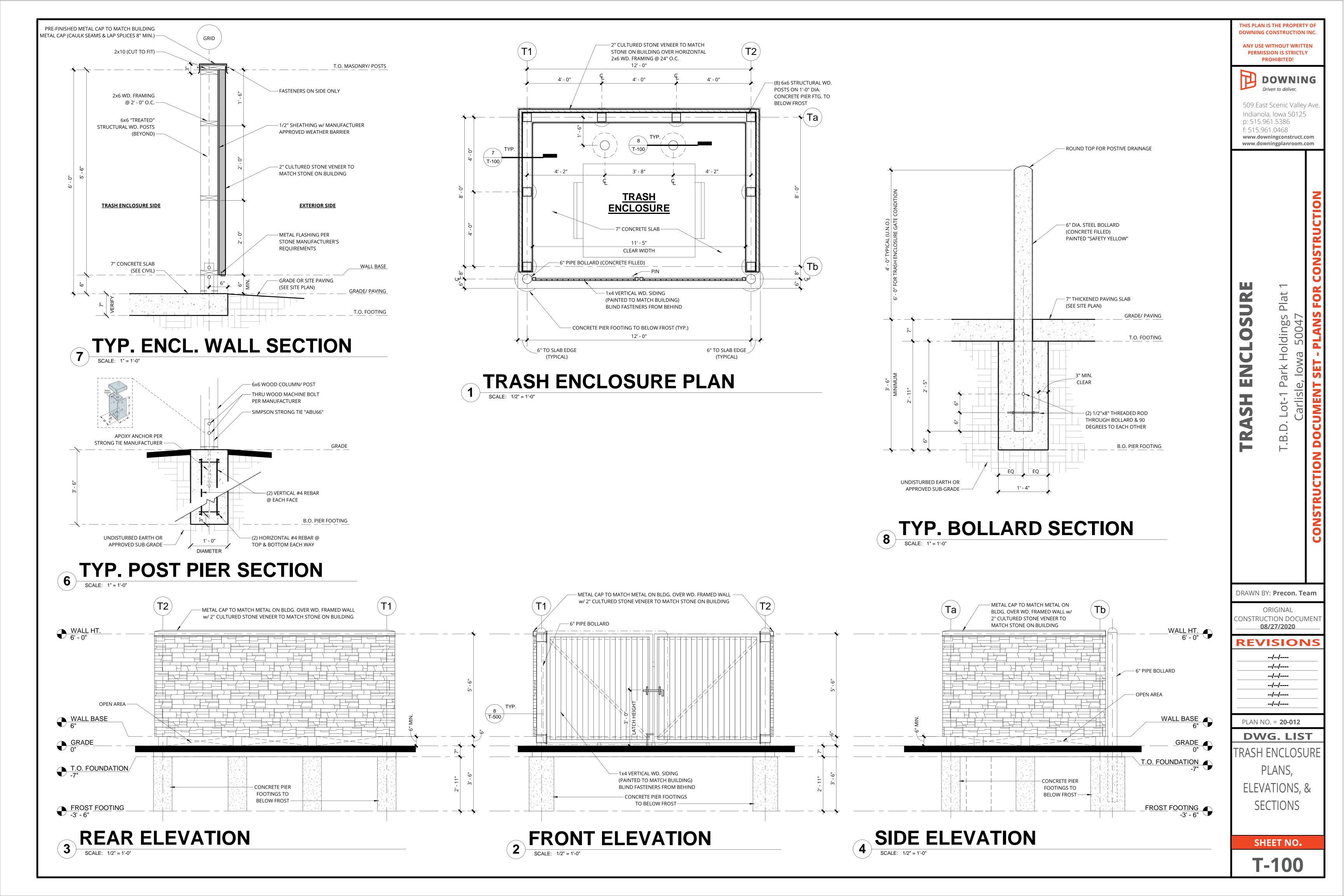
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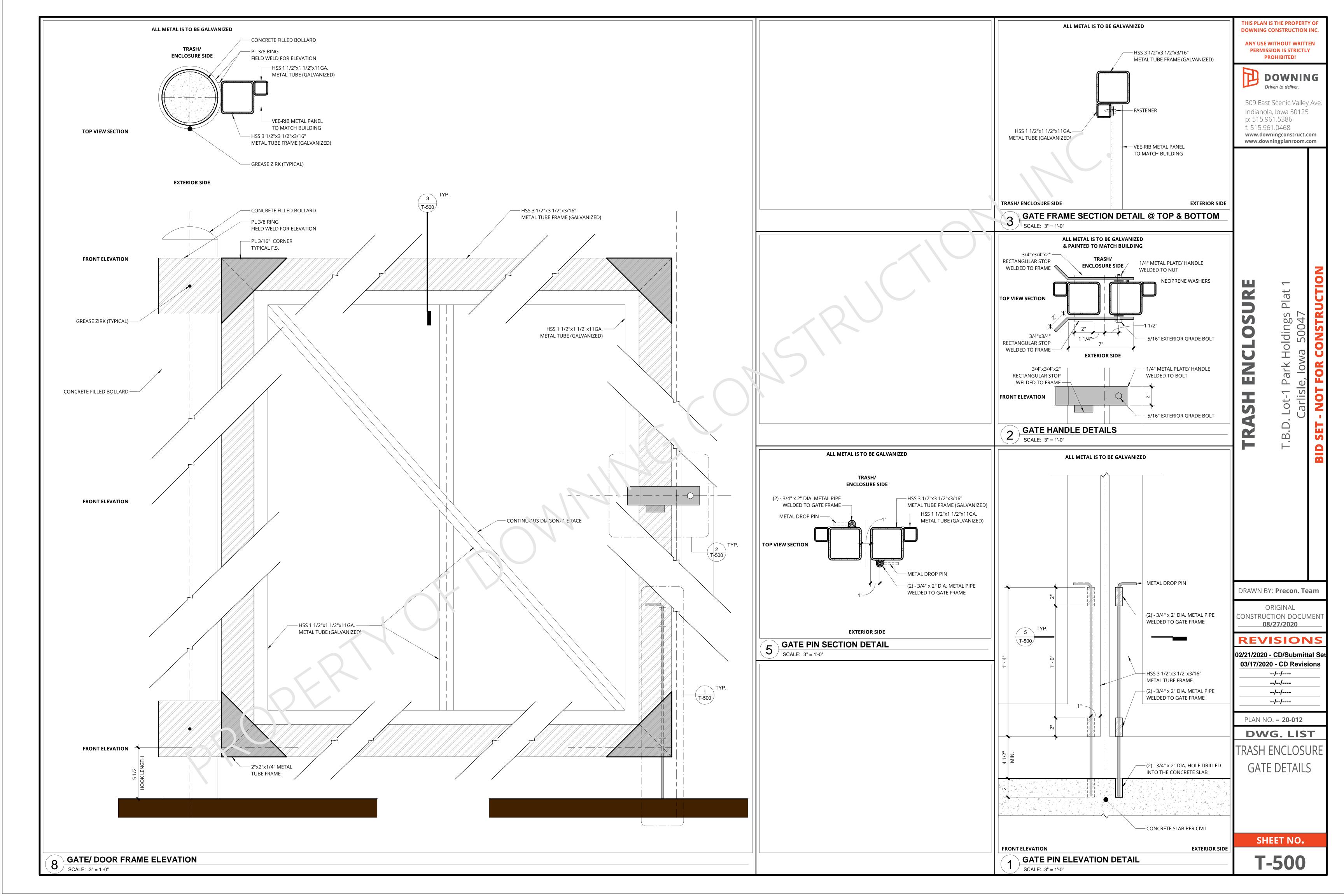
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ORIGINAL

07/14/2020







## SITE PLANS FOR

# CARLISLE VET CLINIC

AND

# PUBLIC IMPROVEMENTS FOR ROADWAY AND STORM SEWER

LOT 1 PARK HOLDINGS PLAT 1 CITY OF CARLISLE, WARREN COUNTY, IOWA

OWNER PARK HOLDINGS, LC



**VICINITY MAP** 



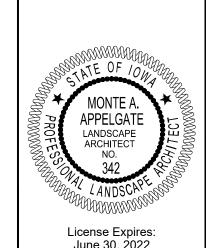
NOT TO SCALE

#### **Sheet List Table**

Sheet Number Sheet Title TITLE SHEET PROJECT INFORMATION **DEMOLITION PLAN** DIMENSION PLAN GRADING STORM AND EROSION CONTROL PLAN

UTILITY PLAN

PLANTING PLAN



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.

Monte A. Appelgate, ASLA License Number 342

Pages or sheets covered by this seal: Sheet C600

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

> My License Renewal Date is December 31, 2020 Pages or sheets covered by this seal:

> > Project No: 120.0776 Sheet C100

& ASSOCIATES

Jon L. Hanson, P.E. License Number P15562 Sheet C100 - C500

#### LEGEND **FEATURES FOUND** Section Corner 1/2" Rebar, Cap # 11579 (Unless Otherwise Noted) ROW Marker ROW Rail Control Point Bench Mark Platted Distance Measured Bearing & Distance Recorded As Deed Distance Calculated Distance Minimum Protection Elevation MPE Centerline \_\_\_\_\_\_ Section Line \_\_\_\_\_ 1/4 Section Line 1/4 1/4 Section Line \_\_\_\_\_ **Easement Line EXISTING FEATURES** X 1225.25 Spot Elevation -7235\_\_\_\_\_X Contour Elevation \_\_\_\_X Fence (Barbed, Field, Hog) \_\_\_\_//\_\_\_\_ \_\_\_\_//\_\_\_ Fence (Chain Link) \_\_\_\_O\_\_\_ \_\_\_\_o\_\_\_ Fence (Wood) Fence (Silt) Tree Line Tree Stump Deciduous Tree \\ Shrub Coniferous Tree \\ Shrub \_\_\_\_ c \_\_\_\_ Communication **Overhead Communication** \_\_\_\_OC\_\_\_\_ —— FO(\*) —— — \_\_\_\_FO\_\_\_\_ Fiber Optic **Underground Electric** —— E(\*) —— —— —— OE(\*) —— —— \_\_\_\_OF\_\_\_ Overhead Electric —— G(\*)—— —— —— G —— Gas Main with Size High Pressure Gas Main with Size — HPG(\*) — — ——— HPG ——— \_\_\_\_ W(\*)\_\_\_\_\_ \_\_\_\_ w \_\_\_\_ Water Main with Size ——S(\*)——— \_\_\_\_\_s \_\_\_\_ Sanitary Sewer with Size — DUCT(\*) — — — \_\_\_\_\_ DUCT \_\_\_\_\_ Duct Bank Test Hole Location for SUE w/ID

#### (\*) Denotes the survey quality service level for utilities Sanitary Manhala

Sanitary Manhole		
Storm Sewer with Size		s <u>T</u>
Storm Manhole	$\oslash$	$\oslash$
Single Storm Sewer Intake		
Double Storm Sewer Intake		
Fire Hydrant	Q	
Fire Hydrant on Building	₹,	<del>,</del>
Water Main Valve	$\bowtie$	×
Water Service Valve	$\otimes$	⊗
Well	W	₩
Utility Pole	<del></del>	<del>===</del>
Guy Anchor	op	$oldsymbol{ au}$
Utility Pole with Light	0	<u>o</u> -≪
Utility Pole with Transformer	<del>-</del>	<del></del>
Street Light	□-<-	□-≪
Yard Light	Ø	¤
Electric Box	EB	EB
Electric Transformer	E	E
Traffic Sign	_O_	
Communication Pedestal	C	C
Communication Manhole	©	©
Communication Handhole	C	C
Fiber Optic Manhole	<b>©</b>	€
Fiber Optic Handhole	FO	FO
Gas Valve	ÞG⊲	•G•
Gas Manhole	©	<b>©</b>
Gas Apparatus	G	G
Fence Post or Guard Post	•	•
Underground Storage Tank	(UST)	
Above Ground Storage Tank	(AST)	
Sign	_O_	•
Satellite Dish	Q	Ą
Mailbox	•	•
Sprinkler Head	+	+

#### UTILITY QUALITY SERVICE LEVELS

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI/ ASCE 38-02 STANDARD.

QUALITY LEVEL (D) INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS.

QUALITY LEVEL (C) INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH QUALITY D INFORMATION.

QUALITY LEVEL (B) INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QUALITY LEVEL (A) IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

#### UTILITY WARNING

Irrigation Control Valve

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

#### **GENERAL NOTES**

NOTIFY UTILITY PROVIDERS PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES AND COORDINATE WITH UTILITY PROVIDERS AS NECESSARY DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION, AND DEPTH OF ALL UTILITIES. PROTECT ALL UTILITY LINES AND STRUCTURES NOT SHOWN FOR REMOVAL OR MODIFICATION. ANY DAMAGES TO UTILITY ITEMS NOT SHOWN FOR REMOVAL OR MODIFICATION SHALL BE REPAIRED TO THE UTILITY OWNER'S SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

2. CONSTRUCTION OF ALL STREET AND UTILITY IMPROVEMENTS SHALL CONFORM TO THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE SOILS REPORTS PREPARED BY OTHERS.

LENGTH OF UTILITIES SHOWN ON PLANS ARE DIMENSIONED FROM CENTERLINE OF STRUCTURE TO CENTERLINE OF STRUCTURE.

ALL TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). WHEN CONSTRUCTION ACTIVITIES OBSTRUCT PORTIONS OF THE ROADWAY, FLAGGERS SHALL BE PROVIDED. FLAGGERS SHALL CONFORM TO THE MUTCD IN

APPEARANCE, EQUIPMENT AND ACTIONS. NOTIFY OWNER, ENGINEER, CITY OF CARLISLE, AND IOWA DEPARTMENT

CONSTRUCT MANHOLES AND APPURTENANCES AS WORK PROGRESSES. BACKFILL WITH SUITABLE MATERIAL AND COMPACT TO 95% MAXIMUM

OF TRANSPORTATION AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.

IN THE EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.

8. ALL FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE RECONNECTED AND NOTED ACCORDINGLY ON THE AS-BUILT

DIMENSIONS, BUILDING LOCATION, UTILITIES AND GRADING OF THIS SITE ARE BASED ON AVAILABLE INFORMATION AT THE TIME OF DESIGN. DEVIATIONS MAY BE NECESSARY IN THE FIELD. ANY SUCH CHANGES OR CONFLICTS BETWEEN THIS PLAN AND FIELD CONDITIONS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT VERIFICATION OF ALL SITE IMPROVEMENTS PRIOR TO

10. CONTRACTOR TO LOAD AND TRANSPORT ALL MATERIALS CONSIDERED TO BE UNDESIRABLE TO BE INCORPORATED INTO THE PROJECT TO AN APPROVED OFF-SITE WASTE SITE.

11. CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL FROM ALL AREAS TO BE CUT OR FILLED. RESPREAD TO MINIMUM 6" DEPTH TO FINISH

12. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE FINISHED GRADES AND/OR TOP OF PAVING SLAB (GUTTER), UNLESS

13. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM NEIGHBORING STREETS, DRIVEWAYS, AND SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES IN A TIMELY MANNER.

14. THE ADJUSTMENT OF ANY EXISTING UTILITY APPURTENANCES TO FINAL GRADE IS CONSIDERED INCIDENTAL TO THE SITE WORK.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING EROSION CONTROL MEASURES AS NECESSARY. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING ANY EXISTING EROSION CONTROL MEASURES ON SITE AT THE TIME OF CONSTRUCTION. GRADING AND SOIL EROSION CONTROL CODE REQUIREMENTS SHALL BE MET BY CONTRACTOR. A GRADING PERMIT IS REQUIRED FOR THIS PROJECT

16. CONTRACTOR TO COORDINATE NATURAL GAS, ELECTRICAL, TELEPHONE AND ANY OTHER FRANCHISE UTILITY SERVICES WITH UTILITY SERVICE PROVIDER, CITY OF CARLISLE, AND THE OWNER PRIOR TO CONSTRUCTION.

17. CONTRACTOR TO VERIFY ALL UTILITY CROSSINGS AND MAINTAIN MINIMUM 18" VERTICAL AND HORIZONTAL CLEARANCE BETWEEN UTILITIES. CONTRACTOR TO COORDINATE UTILITY ROUTING TO BUILDING AND VERIFY CONNECTION LOCATIONS AND INVERTS PRIOR TO

18. THE OWNER OF THE LOT IS RESPONSIBLE FOR THE COSTS ASSOCIATED WITH PLACING FUTURE SIDEWALKS. THE SIDEWALKS SHALL BE INSTALLED WITHIN 3 MONTHS OF NOTIFICATION FROM THE CITY. THE CITY OR CARLISLE HAS REQUIRED THIS NOTE ON ALL SITES WHERE SIDEWALKS ARE NOT IMMEDIATELY REQUIRED. THE CITY RESERVES THE RIGHT TO REQUIRE A SIDEWALK AND/OR TRAIL AT A FUTURE DATE TO BE PAID BY THE DEVELOPER.

#### NOTES

BUILDING LINES AND CORNERS ARE FOR USE IN PREPARING CIVIL SITE PLAN DOCUMENTS. BUILDING CORNERS AND BUILDING LINES SHOULD BE SPECIFICALLY VERIFIED, AS NECESSARY, PRIOR TO DESIGN FOR CONSTRUCTION OF ANY PROPOSED EXPANSION OR CONNECTION OF BUILDING COMPONENTS.

FOR CLARITY PURPOSES, SURVEY SPOT ELEVATIONS ARE NOT SHOWN ON THIS SURVEY, BUT ARE CONTAINED WITHIN THE DIGITAL CADD FILES.

3. FOR THE PURPOSE OF THIS SURVEY, STORM SEWER, SANITARY SEWER AND WATER MAIN LINES ARE ASSUMED TO FOLLOW A STRAIGHT LINE FROM STRUCTURE TO STRUCTURE.

4. UTILITY SERVICE LINES TO BUILDINGS ARE APPROXIMATE ONLY. AN INTERNAL BUILDING INVESTIGATION, EXCAVATION AND/OR SUBSURFACE LOCATING/DESIGNATING WOULD NEED TO BE PERFORMED TO DETERMINE THE LOCATION OF SERVICES ENTERING THE BUILDING.

5. UNDERGROUND PIPE MATERIALS AND SIZES ARE BASED UPON VISIBLE EVIDENCE VIEWED FROM ACCESS MANHOLES/STRUCTURES. DUE TO THE CONFIGURATION AND/OR CONSTRUCTION OF THE STRUCTURE, IT MAY BE DIFFICULT TO ACCURATELY DETERMINE THE PIPE MATERIAL AND/OR SIZE. THE SURVEYOR WILL USE THEIR JUDGMENT AND EXPERIENCE TO ATTEMPT TO DETERMINE, BUT COMPLETE ACCURACY CANNOT BE GUARANTEED.

6. BOUNDARY LINES SHOWN ON THE EXISTING SITE SURVEY ARE TO FACILITATE DESIGN OR CONCEPT NEEDS AND ENABLE CREATION OF SAID CONSTRUCTION DOCUMENTS. THESE LINES DO NOT CONSTITUTE A CERTIFIED BOUNDARY SURVEY AND MISSING MONUMENTS WILL NOT BE

#### PROPERTY DESCRIPTION

LOT 1 PARK HOLDINGS PLAT 1

PROPERTY ADDRESS 2757 FRONTLINE ROAD

#### ZONING

C-2 HIGHWAY COMMERCIAL

EXISTING/PROPOSED LAND USE

EXISTING: UNDEVELOPED PROPOSED: VETERINARY CLINIC

#### **BULK REGULATIONS**

**SETBACKS:** FRONT YARD: 45 FEET SIDE YARD: 0 FEET REAR YARD: 0 FEET

#### PARKING REQUIREMENTS

1 SPACE PER 200 SF OF GROSS FLOOR AREA PLUS 1 SPACE FOR EACH OFFICE IN PRINCIPAL BUILDING

4,687SF/ 200 SF = 24 SPACES REQUIRED 1 OFFICE SPACE = 1 SPACE REQUIRED 25 TOTAL PARKING SPACES REQUIRED 25 TOTAL PARKING SPACES PROVIDED (INCLUDING 1 HANDICAPPED ACCESSIBLE SPACE)

#### OPEN SPACE CALCULATIONS

TOTAL SITE AREA: 39,640 SF (0.91 AC) PROPOSED BUILDING: 4,687 SF PROPOSED PAVEMENTS: 9.142 SF TOTAL DEVELOPED AREA: 13,829 SF

OPEN SPACE PROVIDED: 28,226 SF (0.65 AC)

#### BENCHMARKS

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 - GEOID12A) IARTN DERIVED - US SURVEY FEET

BM500 N=7459612.08 E=18554477.00 ELEV=792.66 NORTHWEST BURY BOLT ON HYDRANT AT THE NORTHWEST END OF NORGARD CIRCLE, NORTHWEST SIDE OF SITE.

BM501 N=7458752.82 E=18555180.74 ELEV=789.25 NORTHEAST BURY BOLT ON HYDRANT IN THE NORTHEAST QUADRANT OF IOWA HIGHWAY 5 & GATEWAY DRIVE, SOUTH SIDE

#### CONTROL POINTS

IOWA REGIONAL COORDINATE SYSTEM ZONE 8 (AMES-DES MOINES) NAD83(2011)(EPOCH 2010.00) IARTN DERIVED - US SURVEY FEET

CUT "X" IN NORTH CURB OF NORGARD CIRCLE 35' NORTH OF LIGHT POLE, NORTH SIDE OF SITE. N=7459343.95 E=18554508.53 Z=790.06

N=7459589.92 E=18554629.38 Z=789.47

CUT "X" IN CURB 3' WEST OF INTAKE AT THE WEST SIDE OF PARKING LOT, WEST SIDE OF SITE.

N=7459021.47 E=18554421.71 Z=790.82 CUT "X" IN CONCRETE AT THE NORTH SIDE OF IOWA HIGHWAY 5 120', NORTHWEST OF HIGHWAY 65 MASON CITY SIGN, SOUTHWEST CORNER OF SITE.

N=7459018.62 E=18554878.52 Z=789.88 CUT "X" IN CURB AT THE NORTHWEST CORNER OF CASEY'S PARKING LOT, SOUTH SIDE OF SITE.

N=7458677.43 E=18555214.01 Z=787.76 CUT "X" IN CONCRETE AT THE SOUTH SIDE OF FRONTAGE ROAD 50' EAST OF GATEWAY DRIVE, SOUTHEAST CORNER OF SITE.

#### UTILITY CONTACT INFORMATION

UTILITY CONTACT FOR MAPPING INFORMATION SHOWN AS RECEIVED FROM THE IOWA ONE CALL DESIGN REQUEST SYSTEM, TICKET NUMBERS 552005473 & 552005474.

OE1-OVERHEAD ELECTRIC MIDAMERICAN ENERGY UE1-UNDERGROUND ELECTRIC CRAIG RANFELD

515-252-6632 MECDSMDesignLocates@midamerican.com

**CENTURYLINK** CO1-COMMUNICATION Tom Sturmer 720-578-8090 thomas.sturmer@centurylink.com

FO1-FIBER OPTIC IOWA COMMUNICATIONS NETWORK **Shannon Marlow** 

800-572-3940 icnoutsideplantiowaonecall@iowa.gov

**IOWA DOT** NO RESPONSE SCOTT SMYTH 515-250-5290 scott.smyth@iowadot.us

WATER AND SANITARY SEWER **INFRASTRUCTURE** 

CITY OF CARLISLE TOMMY THOMPSON 515-505-4299

#### CARLISLE STANDARD NOTES

#### GENERAL NOTES:

- A. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF CARLISLE SUPPLEMENTAL SPECIFICATIONS.
- B. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THIS MEETING WITH THE
- CITY OF CARLISLE & FOX ENGINEERING C. THE CITY OF CARLISLE MUST BE NOTIFIED BY ALL CONTRACTORS 48 HOURS PRIOR TO COMMENCING WORK. CALL CITY OF CARLISLE (TOMMY THOMPSON 515-505-4299) &
- FOX ENGINEERING (MITCH HOLTZ 515-233-0000). D. ALL PERMITS (IDNR, IDOT, ARMY CORP., ETC.) SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.
- E. ALL UTILITY CONTRACTORS AND/OR OWNERS SHALL BE RESPONSIBLE TO PROVIDE THE CITY OF CARLISLE WITH
- "AS-BUILT" DRAWINGS OF ALL IMPROVEMENTS. F. ALL SIGNAGE SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.
- G. ALL SITE LIGHTING SHALL NOT SPILL ONTO ADJACENT PROPERTIES OR RIGHT-OF-WAYS.

2. SANITARY SEWER NOTES:

SDR 23.5 (4" TO 6").

A. THE CONTRACTOR IS REQUIRED TO PLACE A TEMPORARY PLUG IN THE EXISTING DOWNSTREAM SANITARY SEWER MANHOLE PRIOR TO THE START OF CONSTRUCTION. THE PLUG SHALL BE REMOVED FOLLOWING APPROVAL OF CONSTRUCTION BY THE CITY OF CARLISLE. B. SANITARY GRAVITY PIPE MATERIAL SHALL BE PVC SDR 26

OR TRUSS (8" TO 15"). C. SANITARY GRAVITY SERVICE PIPE MATERIAL SHALL BE PVC

D. ALL SANITARY SEWER MANHOLES CASTINGS SHALL BE SEALED WITH INTERIOR CHIMNEY SEALS. IN ADDITION, THE MINIMUM SPACER RING SIZE IS 4-INCHES AND THE MAXIMUM NUMBER OF SPACER RINGS SHALL NOT EXCEED 12-INCHES.

E. ALL SANITARY SEWER MANHOLES SHALL HAVE STEPS. F. ALL SANITARY SEWER MANHOLE CASTINGS LOCATED WITHIN PAVEMENT SHALL BE BOXED OUT.

G. MANDREL AND PRESSURE TESTS ARE REQUIRED FOR ALL SANITARY SEWER LINES (8" AND ABOVE) PRIOR TO PAVING. IN ADDITION, ALL SANITARY SEWER LINES SHALL BE TELEVISED. THE SEWER SYSTEM SHALL BE FLUSHED WITH WATER PRIOR TO TELEVISING.

3. WATER MAIN NOTES:

A. ALL FIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION 250 (3-WAY A-423), 6" MJ SHOE, 2-1/2" HOSE NOZZLE, 4-1/2" STEAMER NOZZLE, NST THREADS, PENTAGON OPERATING NUT, CHAIN ON CAP, OPEN LEFT, AND FACTORY PAINTED RED. THE MINIMUM HYDRANT LEAD SHALL BE 2-FEET.

B. ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY OF CARLISLE WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.

C. A TRACER WIRE RECEPTACLE SHALL BE INSTALLED AT EACH HYDRANT (FLUSH MOUNT VALVCO OR APPROVED EQUAL). D. TRACER WIRE SHALL BE ADDED TO ALL WATER MAIN. E. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.

F. WATER SERVICE SHALL BE 1-INCH MINIMUM TYPE K G. THE CONTRACTOR IS RESPONSIBLE FOR PRESSURE

TESTING, CHLORINATION, AND BACTERIA TEST.

#### 4. STORM SEWER NOTES:

- A. ALL STORM SEWER IN THE ROW SHALL BE RCP, UNLESS OTHERWISE APPROVED BY THE CITY.
- B. ALL FLARED END SECTIONS SHALL HAVE FOOTINGS AND APRON GRATES. THE LAST 3 PIPE SECTIONS AND THE FLARED END SECTION ON ALL CULVERTS SHALL BE TIED. ALL STORM SEWER JOINTS SHALL BE WRAPPED WITH ENGINEERING FABRIC.
- C. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY FIELD TILE DAMAGED DURING CONSTRUCTION. THE TILE SHOULD BE DIRECTED TO PUBLIC STORM SEWER IF POSSIBLE. THE CONTRACTOR SHALL RECORD THE ELEVATION AND LOCATION OF ALL TILES.
- D. ALL SUMP SERVICE LINES SHALL HAVE TRACER WIRE. E. ALL RIP-RAP SHALL BE UNDERLAIN WITH ENGINEERING FABRIC AS SPECIFIED IN THE URBAN SPECIFICATIONS.

1-800-292-8989

www.jowaonecall.com

#### POLLUTION PREVENTION NOTES

#### A. POLLUTION PREVENTION AND EROSION PROTECTION

- CODE COMPLIANCE: THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL POTENTIAL POLLUTION AND SOIL EROSION CONTROL REQUIREMENTS OF THE IOWA CODE THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR) NPDES PERMIT. THE U.S. CLEAN WATER ACT AND ANY LOCAL ORDINANCES. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT AGAINST EROSION AND POLLUTION FROM THIS PROJECT SITE AND ALL OFF-SITE BORROW OR DEPOSIT AREAS DURING PERFORMANCE OR AS A RESULT OF PERFORMANCE.
- 2. DAMAGE CLAIMS: THE CONTRACTOR WILL HOLD THE OWNER AND ARCHITECT / ENGINEER HARMLESS FROM ANY AND ALL CLAIMS OF ANY TYPE WHATSOEVER RESULTING FROM DAMAGES TO ADJOINING PUBLIC OR PRIVATE PROPERTY, INCLUDING REASONABLE ATTORNEY FEES INCURRED TO OWNER, FURTHER, IF THE CONTRACTOR FAILS TO TAKE NECESSARY STEPS TO PROMPTLY REMOVE EARTH SEDIMENTATION OR DEBRIS WHICH COMES ONTO ADJOINING PUBLIC OR PRIVATE PROPERTY. THE OWNER MAY, BUT NEED NOT REMOVE SUCH ITEMS AND DEDUCT THE COST THEREOF FROM AMOUNTS DUE TO THE CONTRACTOR.

#### B. STORM WATER DISCHARGE PERMIT

- 1. THIS PROJECT REQUIRES COVERAGE UNDER THE NPDES GENERAL PERMIT NO. 2 FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDNR, AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS ARE RESPONSIBLE FOR COMPLIANCE WITH AND FULFILLMENT OF ALL REQUIREMENTS OF THE NPDES GENERAL PERMIT NO. 2 AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- 2. ALL DOCUMENTS RELATED TO THE STORM WATER DISCHARGE PERMIT, INCLUDING, BUT NOT LIMITED TO, THE NOTICE OF INTENT, PROOF OF PUBLICATIONS, DISCHARGE AUTHORIZATION LETTER, CURRENT SWPPP, SITE INSPECTION LOG, AND OTHER ITEMS, SHALL BE KEPT ON SITE AT ALL TIMES AND MUST BE PRESENTED TO ANY JURISDICTIONAL AGENCIES UPON REQUEST. FAILURE TO COMPLY WITH THE NPDES PERMIT REQUIREMENTS IS A VIOLATION OF THE CLEAN WATER ACT AND THE CODE OF IOWA.
- 3. A "NOTICE OF DISCONTINUATION" MUST BE FILED WITH THE IDNR UPON FINAL STABILIZATION OF THE DISTURBED SITE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES. ALL PLANS, INSPECTION REPORTS, AND OTHER DOCUMENTS MUST BE RETAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION. THE CONTRACTOR SHALL RETAIN A RECORD COPY AND PROVIDE THE ORIGINAL DOCUMENTS TO THE OWNER UPON PROJECT ACCEPTANCE AND/OR SUBMITTAL OF THE NOTICE OF DISCONTINUATION.

#### C. POLLUTION PREVENTION PLAN

- 1. THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS A SEPARATE DOCUMENT IN ADDITION TO THESE PLAN DRAWINGS. THE CONTRACTOR SHOULD REFER TO THE SWPPP FOR ADDITIONAL REQUIREMENTS AND MODIFICATIONS TO THE POLLUTION PREVENTION PLAN MADE DURING CONSTRUCTION.
- 2. THE SWPPP ILLUSTRATES GENERAL MEASURES AND BEST MANAGEMENT PRACTICES (BMP) FOR COMPLIANCE WITH THE PROJECT'S NPDES PERMIT COVERAGE. ALL BMP'S AND EROSION CONTROL MEASURES REQUIRED AS A RESULT OF CONSTRUCTION ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY, NOTE AND IMPLEMENT. ADDITIONAL BMP'S FROM THOSE SHOWN ON THE PLAN MAY BE REQUIRED.
- 3. THE SWPPP AND SITE MAP SHOULD BE EXPEDITIOUSLY REVISED TO REFLECT CONSTRUCTION PROGRESS AND CHANGES AT THE PROJECT SITE.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE GENERAL PERMIT AND SWPPP, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING BMP'S UNLESS INFEASIBLE OR NOT APPLICABLE:
- a. UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE WHEN DISCHARGING FROM BASINS, PROVIDE AND MAINTAIN NATURAL BUFFERS AROUND SURFACE WATERS, DIRECT STORM WATER TO VEGETATED AREAS TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORM WATER INFILTRATION, AND MINIMIZE SOIL
- b. INSTALL PERIMETER AND FINAL SEDIMENT CONTROL MEASURES SUCH AS SILT BARRIERS, DITCH CHECKS, DIVERSION BERMS, OR SEDIMENTATION BASINS DOWNSTREAM OF SOIL DISTURBING ACTIVITIES PRIOR TO SITE CLEARING AND GRADING OPERATIONS.
- c. PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION AND LIMIT TO A MINIMUM THE TOTAL AREA DISTURBED BY CONSTRUCTION OPERATIONS AT ANY d. MAINTAIN ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IN WORKING

ORDER, INCLUDING CLEANING, REPAIRING, REPLACEMENT, AND SEDIMENT REMOVAL

THROUGHOUT THE PERMIT PERIOD. CLEAN OR REPLACE SILT CONTROL DEVICES WHEN THE MEASURES HAVE LOST 50% OF THEIR ORIGINAL CAPACITY. e. INSPECT THE PROJECT AREA AND CONTROL DEVICES (BY QUALIFIED PERSONNEL ASSIGNED BY THE CONTRACTOR) EVERY SEVEN CALENDAR DAYS. RECORD THE FINDINGS

OF THESE INSPECTIONS AND ANY RESULTING ACTIONS IN THE SWPPP WITH A COPY

SWPPP AND IMPLEMENT ANY RECOMMENDED MEASURES WITHIN 7 DAYS.

SUBMITTED WEEKLY TO THE OWNER OR ENGINEER DURING CONSTRUCTION. REVISE THE

- f. PREVENT ACCUMULATION OF EARTH AND DEBRIS FROM CONSTRUCTION ACTIVITIES ON ADJOINING PUBLIC OR PRIVATE PROPERTIES, INCLUDING STREETS, DRIVEWAYS, SIDEWALKS, DRAINAGEWAYS, OR UNDERGROUND SEWERS. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR FUTURE PREVENTION.
- g. INSTALL NECESSARY CONTROL MEASURES SUCH AS SILT BARRIERS, EROSION CONTROL MATS, MULCH, DITCH CHECKS OR RIPRAP AS SOON AS AREAS REACH THEIR FINAL GRADES AND AS CONSTRUCTION OPERATIONS PROGRESS TO ENSURE CONTINUOUS RUNOFF CONTROL. PROVIDE INLET AND OUTLET CONTROL MEASURES AS SOON AS STORM SEWERS ARE INSTALLED.
- h. RESPREAD A MINIMUM OF 6 INCHES OF TOPSOIL (INCLUDING TOPSOIL FOUND IN SOD) ON ALL DISTURBED AREAS. EXCEPT WHERE PAVEMENT. BUILDINGS OR OTHER IMPROVEMENTS ARE LOCATED.
- i. STABILIZE UNDEVELOPED, DISTURBED AREAS WITH MULCH, TEMPORARY SEED MIX, PERMANENT SEED MIX, SOD, OR PAVEMENT IMMEDIATELY AS SOON AS POSSIBLE UPON COMPLETION OR DELAY OF GRADING OPERATIONS. INITIATE STABILIZATION MEASURES IMMEDIATELY AFTER CONSTRUCTION ACTIVITY IS FINALLY COMPLETED OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WHICH WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
- . COORDINATE LOCATIONS OF STAGING AREAS WITH THE OWNER AND RECORD IN THE SWPPP. UNLESS NOTED OTHERWISE, STAGING AREAS SHOULD CONTAIN THE FOLLOWING: JOB TRAILERS, FUELING / VEHICLE MAINTENANCE AREA, TEMPORARY SANITARY FACILITIES, MATERIALS STORAGE, AND CONCRETE WASHOUT FACILITY. CONTROL RUNOFF FROM STAGING AREAS WITH DIVERSION BERMS AND/OR SILT BARRIERS AND DIRECT TO A SEDIMENT BASIN OR OTHER CONTROL DEVICE WHERE POSSIBLE. CONCRETE WASHOUT MUST BE CONTAINED ONSITE.
- FILING OF THE "NOTICE OF DISCONTINUATION"

k. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND SITE WASTE PRIOR TO

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& ASSOCIATES

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