



MARSHALL
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FEASIBILITY REPORT

Project Z83

James Avenue and Camden Drive Reconstruction Project

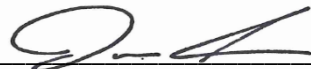
October 27, 2020



Table of Contents

FEASIBILITY REPORT	2
1.0 SCOPE	2
2.0 BACKGROUND / EXISTING CONDITIONS	2
3.0 PROPOSED IMPROVEMENTS.....	3
4.0 STATEMENT OF PROBABLE COST	4
5.0 PROPOSED ASSESSMENTS	5
6.0 FEASIBILITY/CONDITIONS/QUALIFICATIONS	5
7.0 PROPOSED PROJECT SCHEDULE	6
APPENDIX	7
PROJECT LIMITS.....	8
PROJECT LAYOUTS.....	9

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

By: 
Jason R. Anderson, P.E.
Registration No. 53322

FEASIBILITY REPORT

PROJECT Z83 JAMES AVENUE AND CAMDEN DRIVE RECONSTRUCTION PROJECT

CITY OF MARSHALL, MINNESOTA

1.0 SCOPE

This Feasibility Report as authorized by the City Council, covers the following proposed improvements: reconstruction and utility replacement on James Avenue between Camden Drive and South 4th Street and Camden Drive between James Avenue and South 4th Street. All utilities will be replaced, including watermain, sanitary sewer, and storm sewer on James Avenue and Camden Drive. Other items of work included in this project are pavement removal, aggregate base, bituminous surfacing, sidewalks, curb and gutter and other minor work.

2.0 BACKGROUND / EXISTING CONDITIONS

Street

City records indicate that James Avenue was originally constructed in 1959. Camden Drive was originally constructed in 1962. This street received a 1.5" mill and overlay resurfacing between James Avenue and South 4th Street in 1993 and lastly in 2001. The existing pavement surface is beginning to show its age with considerable cracking. Camden Drive has portions of the street section where the pavement has completely deteriorated and has begun to pop out of the road section. Block/fatigue cracking is significant along the outside thirds of the roadway between James Avenue and South 4th Street.

The existing street width on James Avenue is generally 40-FT as measured from back of curb to back of curb. The existing street width on Camden Drive is generally 32-FT as measured from back of curb to back of curb. Currently, the existing segment of James Avenue is wide enough to accommodate two travel lanes and parallel parking on both sides of the street. On Camden Drive, the existing street comfortably accommodates two travel lanes with parallel parking on the south side of the street.

There is currently 4.5-FT wide sidewalk on both sides of James Avenue directly behind the existing curb. On Camden Drive, there is an existing 5-FT wide sidewalk on the south side of the street. The Parks Department operates and maintains a 10-FT wide multi-use trail on the north side of Camden

Drive. The existing sidewalk is currently exhibiting some cracking and buckling. The existing pedestrian ramps at the intersection of Camden Drive and James Avenue are not ADA compliant.

Utilities

The existing watermain along James Avenue is 6" polyvinyl chloride (PVC). The installation year of the PVC watermain is approximately 1982. There is no existing watermain along Camden Drive between James Avenue and South 4th Street. MMU has recommended that this segment of watermain be replaced with the project.

The existing sanitary sewer main along James Avenue is 8" vitrified clay pipe (VCP). The age and condition of the sewer in these segments make this sewer a good candidate for replacement with this project. There is no existing sanitary sewer along Camden Drive between James Avenue and South 4th Street.

The existing storm sewer along James Avenue is currently a 21" reinforced concrete pipe (RCP). There are two existing catch basins at the intersection of Camden Drive and James Avenue that lead to a manhole where the 21" RCP main from the west and the 21" RCP main from James Avenue intersect at the manhole. From that manhole, the storm sewer main continues northeast where it intersects the lead that collects stormwater from two catch basins located on Camden Drive approximately halfway between James Avenue and South 4th Street. The storm sewer then crosses Country Club Drive where it intersects with a manhole in the golf club property. From there, the storm sewer main proceeds northwest as a 30" RCP to the outfall directly into the Redwood River. The pipe system is undersized for the existing fully developed watershed. There are various intersections along low points on the South 4th Street corridor that have flooded regularly.

3.0 PROPOSED IMPROVEMENTS

Street

A bituminous pavement section will be proposed and discussed in this feasibility report. Staff is proposing a street section comprised of 4" of bituminous surfacing and 12" of Class 5 aggregate base on James Avenue and Camden Drive. A geotextile fabric will be placed on the subgrade prior to the placement of the aggregate base. A 6" perforated drain tile shall be installed at the back of the curb below the aggregate base to provide subsurface drainage for the street section.

The proposed roadway will be 36-FT travel way (as measured from curb face to curb face) on James Avenue. The project proposes two 10-FT travel lanes and two 8-FT parallel parking lanes. The proposed segment of James Avenue will be 3-FT narrower than the existing street. The purpose for the narrowing is to reduce project costs. The proposed roadway on Camden Drive (as measured from curb face to curb face) will be 31.5-FT. The project proposes two 11.5-FT travel lanes and one 8.5-FT parallel parking lane in the eastbound direction. The proposed street width of Camden Drive will match what is currently in place. It is the opinion of staff that the proposed road widths will be adequate to serve the corridors.

A 7-FT sidewalk directly behind the proposed curb is proposed on James Avenue on both sides of the street. This proposed walk is 2-FT wider than existing. Due to large, mature trees along this corridor, moving the sidewalk back to allow for a typical 5-FT boulevard would require significant tree removal. A 5-FT wide sidewalk with a 2-FT boulevard was considered. Due to the difficulty of turf establishment and maintenance, this option was eliminated from consideration. The project proposes replacing existing sidewalk adjacent to James Avenue where there is currently sidewalk. The 5-FT wide sidewalk along Camden Drive will be replaced in its existing alignment. The two pedestrian ramps at the intersection of Camden Drive and James Avenue will be replaced and upgraded to meet current ADA standards.

Utilities

The proposed utility improvements include replacing existing VCP sanitary sewer, existing CIP watermain, and existing storm sewer.

The watermain improvements will consist of replacing all circa-1982 PVC watermain with new PVC watermain pipe. Watermain improvements are planned in close coordination with MMU staff input. The existing 6" PVC watermain along James Avenue will be replaced with 6" PVC pipe.

The sanitary sewer system improvements will include replacing all manholes, sewer main, and sewer services along James Avenue. The 8" VCP main will be replaced with 8" PVC main. All sewer services will be replaced to the right-of-way (ROW) with a minimum 4" pipe size.

The storm sewer system improvements will include replacing all existing manholes, catch basins and catch basin leads. The project will increase the size of the storm sewer main on James Avenue from existing 21" RCP to proposed 58" RCP arch span pipe (48" RCP-equivalent). The pipe will be an arch pipe due to limited pipe cover along James Avenue. Along Camden Drive and through the golf course, the storm sewer main is proposed to be a 54" RCP round pipe. The storm sewer crossing under Country Club Drive and under the north ditch will be a 65" RCP arch span pipe (54" RCP-equivalent). The pipe will be an arch pipe due to limited pipe cover underneath Country Club Drive. The increase in storm sewer main along the project area is proposed to provide relief to frequent on-street flooding on South 4th Street and other surrounding areas in the drainage area. Additional water quality improvements will be proposed at the outfall to the Redwood River to provide stormwater treatment.

4.0 STATEMENT OF PROBABLE COST

The estimated costs to complete the proposed improvements are shown below. The estimated construction costs include a 10% allowance for contingencies and a 16% allowance for administrative and engineering costs. The unit prices for each item of work used in determining the estimated cost of construction is based on previous projects similar in nature and is subject to change.

Street and Curb and Gutter	\$340,000.00
Watermain Replacement	\$60,000.00
Sanitary Sewer Replacement	\$65,000.00
Storm Sewer Replacement	<u>\$455,000.00</u>
Subtotal Estimated Construction Cost	\$920,000.00
Contingencies (10%)	<u>\$92,000.00</u>
Total Estimated Construction Cost	\$1,012,000.00
Estimated Engineering, & Administration (16%)	<u>\$162,000.00</u>
Total Estimated Project Cost	<u><u>\$1,174,000.00</u></u>

5.0 PROPOSED ASSESSMENTS

The adjacent properties will not be assessed for the watermain improvements. All costs for watermain and related work will be paid by MMU.

The adjacent properties will not be assessed for sanitary sewer main improvements. All costs for sanitary sewer main will be paid by the City of Marshall Wastewater Department. Sanitary sewer service lines and connection points to the main will be assessed to the adjacent property owners according to current sanitary sewer assessment procedures.

Costs for the street replacements will be partially assessed to the adjacent property owners in accordance with the most recent Special Assessment Policy and partially funded by the Wastewater Department, MMU, and Surface Water Management Utility fund.

A preliminary assessment roll showing the estimated assessments for each benefiting parcel, City Participation, and utility participation will be prepared at a later date for consideration by the City Council in accordance with the most recent Special Assessment Policy.

6.0 FEASIBILITY/CONDITIONS/QUALIFICATIONS

The proposed improvements as described in this report are necessary, cost-effective, and feasible from an engineering standpoint. The feasibility of this project is contingent upon the findings of the City Council pertaining to project financing and public input.

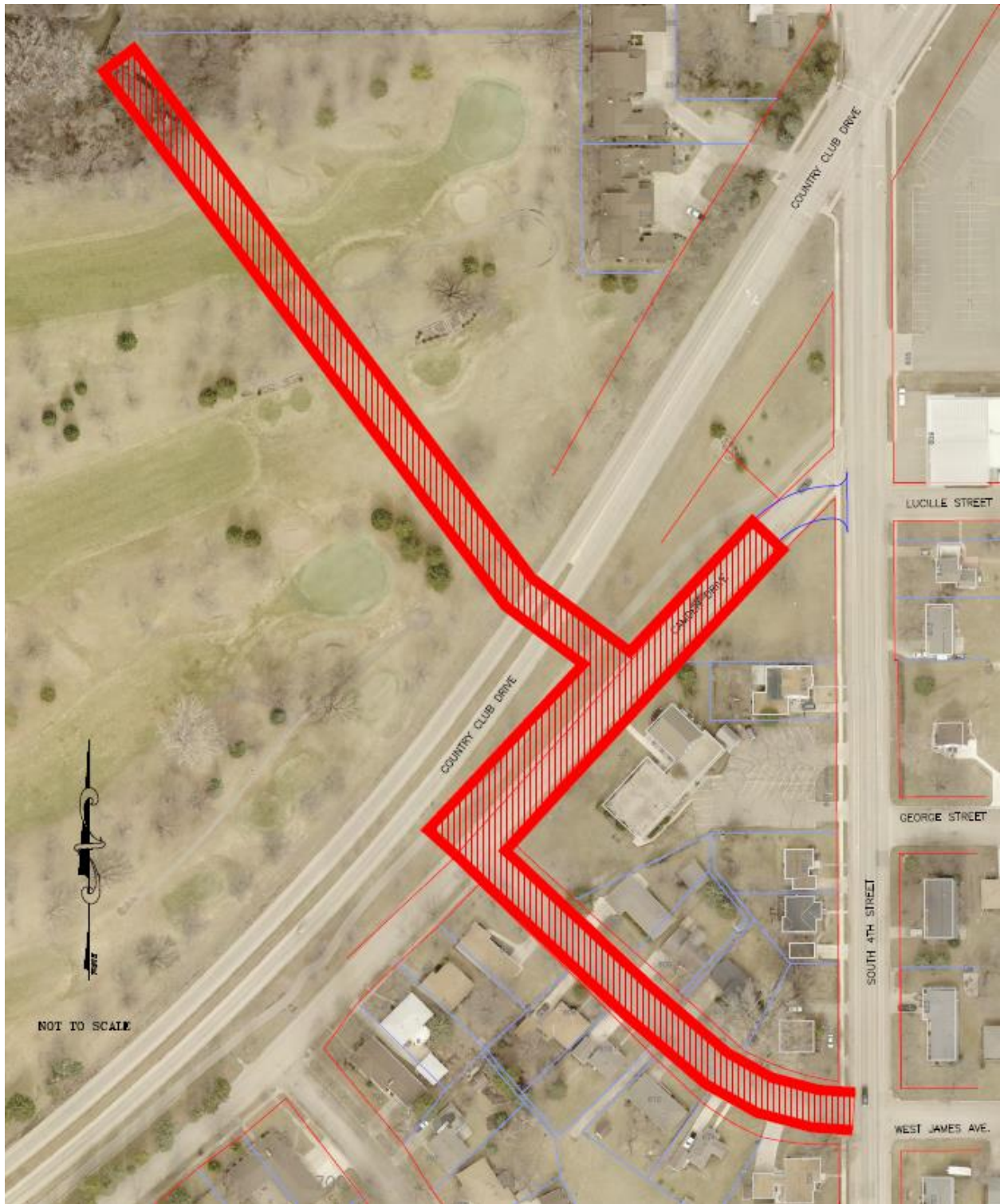
7.0 PROPOSED PROJECT SCHEDULE

The following is the anticipated schedule for the project, assuming the City Council elects to proceed with the proposed improvements.

November 10, 2020	Public Hearing on Improvement/Order Plans & Specs
January 26, 2021	Approve Plans & Specs/Authorize Call for Bids
January 29 and February 5, 2021	Advertise for Bids
February 17, 2021	Bid Opening Date
February 23, 2021	Award Contract
April 16, 2021	Notice to Proceed
April 2021	Begin Construction
September 21, 2021	Public Hearing on Assessment/Adopt Assessment
September 2021	End Construction

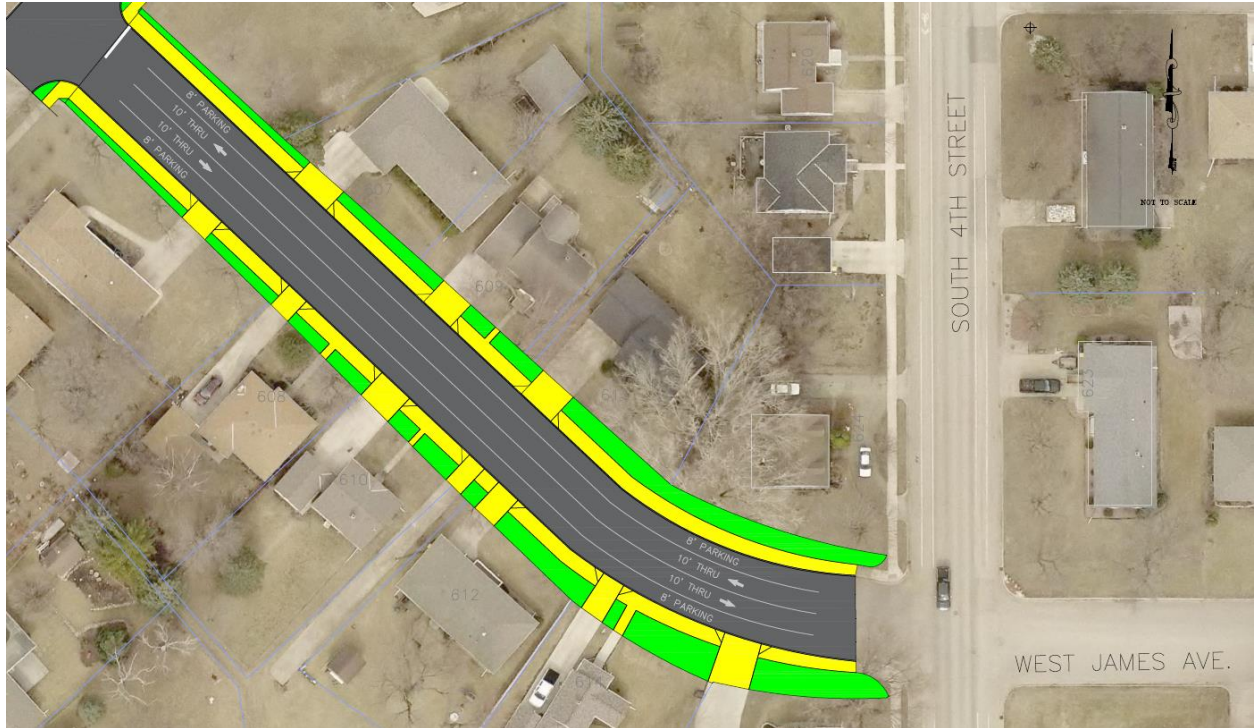
APPENDIX

PROJECT LIMITS



PROJECT LAYOUTS

James Avenue – Camden Drive to South 4th Street



Camden Drive – James Avenue to South 4th Street

