MRB group

MEMORANDUM

TO: Peter Lombardi, czb

COPY:

FROM: Tim Carpenter, P.E.

DATE: December 14, 2023 **MRB GROUP PROJECT NO:** 2937.23001.000

RE: **Capital Facilities Analysis for Fargo Growth Plan – December 2023 Update**

Meeting Dates:

First Meeting - May 16-17, 2023
Second Meeting – September 11-12, 2023

Meetings held and report on each area:

1. Solid Waste Department
    a. Met at Solid Waste Office Building in May 2023 and again in September 2023.
    b. Met with: Scott Olson and Terry Ludlum, Kim Citrowske, and Mark Williams.
    c. The solid waste department is involved with:
        i. Residential garbage collection with City owned fleet
        ii. Operation of a Residential Transfer Station
        iii. Recycling collection
        iv. Compost & yard waste
        v. Household hazardous waste
        vi. Operation of Landfill at 4501 7 Ave N
        vii. The scale house which serves most MSW operations is located at 950 Aggregate Industries Drive.
    d. City provides curbside garbage pick-up and all-in-one recycling pickup to residential users throughout Fargo.
    e. Private haulers pickup approximately 60% of the commercial/multi-family users and typically use the City owned and operated landfill. The City picks up the remaining 40% (approximate) of commercial and multifamily users.
    f. Landfill Details:
        i. Several active cells and several closed cells.

   ii. Operators believe there are approximately 23 years of capacity remaining in current footprint.
   iii. Leachate flows to WWTP through sanitary sewers, and is not trucked to WWTP.
   iv. There is a wind generator and solar panels at the landfill site and energy is produced.

g. Methane gas is collected on-site and sold to nearby industrial users (i.e. Cargill, Transfer Station). About 600-1,200 cubic feet per minute (CFM) of biogas is produced by the landfill. Cargill utilizes about 500 to 1,000 CFM of the biogas, and most of the rest is consumed in City owned engine generators which produce electricity for beneficial reuse.
h. Projected growth in the City appears more likely in the south – near diversion - and to the north where there is some land available for development. Growth in the south – near diversion – would mean long trips for the City owned fleet of garbage trucks, and so may favor newer technology or a southern transfer station.
i. The garbage trucks owned by the City represent a large and ongoing investment with average truck age at 5 years.
j. Department has approximately 56 employees.
k. Landfill is being actively managed to maximize available space and extend life. Previously closed cells are being reopened and repacked more efficiently, with the cells being dug deeper and walls heightened to increase volume.
l. Landfill accepts waste from haulers sourced both in the City and outside – so the landfill is a Regional Resource.
m. Plastic and glass are recycled. Glass is broken and ground and used as filter media in the Landfill Inert cells.
n. Yard waste is collected by the City and composted, with compost sold in some instances when requested in large quantities. The City also holds several free compost giveaway days throughout the year.
o. Lime stabilized biosolids from WTP and WWTP are mixed with wood chips and soil for daily cover.
p. A new building is being planned and will be constructed to house offices.
q. The possibility of compressed natural gas driven garbage trucks and electrically powered trucks is being considered. Renewable energy credits and grant funding are being pursued for these options.
r. The City Solid Waste Managers are actively involved in the regional Solid Waste organization, and are up to date on handling, disposal and recycling technologies, and developing trends and ideas in waste management.

s. The City has commissioned and completed 3 studies in recent years which outline the possible future for the City landfill and Solid Waste Department.
t. My comments:
    i. Additional space - Coordination needed with West Fargo concerning the lot adjacent to existing landfill. This large lot in West Fargo is adjacent to the existing landfill, that could potentially be annexed to the City if it could somehow be cleared for use as an additional landfill space. It sounds like there is opposition to allowing this area to become a landfill, for the regular NIMBI reasons. Use of this lot for future landfill operations would extend the solid waste plan for both Fargo and West Fargo for another many years (15-20 years) at a large cost savings. Development of more landfill space at this location would allow the continued used of all of the ancillary landfill items – truck scales, biogas compression and utilization building, composting area, etc. I think that continued pursuit of this option must be a goal for Fargo.
    ii. Southern transfer station – if residential growth does develop to the south of the City the long drives for garbage trucks from there to the landfill will use a lot of operator time and cause truck wear that could be reduced if a transfer station is built to the south. Solid waste staff are fully aware of this option and will know when a transfer station should be considered.
    iii. Regional landfill – The Fargo landfill is a regional resource used by several other municipalities and many private waste hauling companies. The City might decide to extend the life of the landfill for City use by limiting the acceptance of waste generated from areas outside the City, or by raising the tipping fees for waste generated outside of the City. Solid waste management should appropriately be a State- or County- Wide consideration, and development of a Regional Landfill outside of Fargo for use by non-City entities would allow the City to extend the life of your landfill for many more years.
    iv. Landfill Location – having the landfill within the City is convenient for reducing hauling distance and cost, but has the drawback of having increased truck traffic, noise and odors located within the City. With the existing landfill already in place, there is no way to get away from operating it for many more years, but if a Regional Landfill ever comes into existence, you may consider the benefits of removing the garbage from the City.
    v. Revenue Generation Potential – the City sets the tipping fees and may elect to modify fees to increase revenue from this great

resource. Solid Waste staff will be aware of the garbage disposal costs for other nearby and regional municipalities. I think the City fee structure should be at least as high as similar costs for other regional Cities – not in order to maximize revenue but only harness this excellent resource that the City has.

vi. Overall capacity – the City is in a great position with over 20 years of remaining landfill space available at the City owned facility. Developing technologies for harvesting previously closed cells may be able to further extend the remaining life of the landfill. If significant residential growth occurs the landfill will be able to accept the solid waste generated with only small reductions in the amount of landfill space available because of ongoing technology improvements which result in more efficient use of landfill space.

2. Public Works (Mains Hydrants Streets and Sewers, Forestry, Central Garage)
    a. Met at Public Works (PW) Offices Building in May 2023 and again in September 2023.
    b. Met with: Ben Dow, Kim Citrowske, and Mark Williams.
    c. The PW department is involved with:
        i. Central Garage
        ii. Forestry
        iii. Streets and Sewers
        iv. Water Mains and Hydrants.
    d. Department has about 115 employees with a somewhat flexible departmental structure which allows the Director to concentrate resources for special events such as floods, snow storms, and other emergencies.
    e. Central Garage services City vehicles including garbage trucks, police, fire and DPW. Central Garage Building was new in 1968. City busses are serviced in a separate building.
    f. PW has Campus Master Plan for the use of the current offices and a number of existing buildings used for the many functions the department handles.
    g. PW Garage includes a fueling island where City vehicles are fueled.
    h. Hiring and retaining vehicle mechanics and equipment operators is a challenge in the current employment environment, and some work is outsourced to local businesses and contractors (vehicle oil changes, lubing, minor repairs: turf mowing, snow removal, concrete spot repair).
    i. The Forestry department maintains about 83,000 trees around the City! The department is funded by a $2.00/month charge on utility bills, and

loses money each year. The department prunes, removes, and plants trees using city staff and also uses some outside vendors to assist. New rate changes are proposed for 2024 which will increase the rates for these services, and should match revenues to costs.

j. Streets and Sewers Department has many functions, including
    i. Maintaining about 85 lift stations which are cleaned twice per year.
    ii. Maintaining sewer pipes and force mains.
    iii. Maintaining roadways, plowing, and a program for asphalt replacement by milling and paving.
    iv. Plowing sidewalks.
k. Water mains and Hydrants Department maintains and repairs water mains and handles water meter installation, repair and changes.
l. Dynamic Leadership – Ben is clearly an energetic leader who is working to keep this diverse group of public workers flexible with a goal of best serving the City. It appears that his leadership style allows him to direct resources quickly in response to the typical types of emergency situations which occur – water main breaks, snow storms, floods, etc.
m. Asset Management – the City has clearly embraced an asset management program used to track repairs and staff effort. This program has been in place for several years now and generates a lot of data. Analysis of this data may help to guide future staffing levels and adjustments to utility fees to better reflect actual effort and cost.
n. Financial – a helpful City website contains current rates for water sewer, garbage collection, storm sewer, forestry, mosquito control and street lighting.
o. My comments:
    i. The department organization seems to be very good at breaking down the barriers between departments that are typically seen in municipalities of this size. In most of the places I work, water department staff never assist sewer, street or other department staff. It appears that having a non-union shop and a history of flexibility serves the City very well.
    ii. Additional growth in the City directly impacts staffing in this department, since all the services provided are proportionate to the amount of residences and people being served.
    iii. Having made an ongoing investment in the asset management system, it is important to harness the data in coming years to better understand where effort is being used.
    iv. The department is operating well and is a big asset to the City.

3. Engineering
    a. Met in May 2023 and again in September 2023.
    b. Met with: Brenda Derrig, Thomas Knakmuhs, Nathan Boerboom, Jeremy Gordon, Kevin Gorder, Kim Citrowske and Mark Williams.
    c. The department is large and acts as a full service design group for many civil projects. It appears than most critical infrastructure projects (CIPs) are designed by department staff. This approach provides the benefit of high quality design by people who really care about the outcome and will be affected by it.
    d. The department does use some consultants for mechanical, electrical and plumbing and other specialty items.
    e. Department is able to hire and retain staff.
    f. As the amount of proposed new and redevelopment projects has increased in recent years, the staff want to develop and maintain a mult-year plan to allow them to decide what work to prioritize or possibly farm out to consultants.
    g. Department has a special interest in neighborhood improvement plans where all utilities and transportation are considered, and they believe they are best suited to design these projects because they are local and involved.
    h. The department is aware of grant funding and special programs which can help pay for projects, and is able to pursue the funding with in-house staff.
    i. Staff voiced a need for the implementation of a consolidated planning review for projects which involves all departments. They cited several instances where project sponsors or supporters were very focused on one aspect of a project, be it economic development, neighborhood improvement, flood mitigation, transportation, etc., and did not consider engineering or other aspects of the project early in the process, leading to difficult coordination being needed to complete the design.
    j. The need to consider how to move stormwater and sewer in the areas likely to be developed because of the diversion was identified. These large parcels to the south of the City center all need to transmit stormwater and sewer through existing pump stations and piping. Development of parcels farther to the south before the connecting infrastructure is in place is a concern.
    k. The staff are very aware that traffic may become a bigger concern as development increases.
    l. Inflow from illegal sump pump connections is a concern which needs to be addressed with education and enforcement.

m. Development in areas outside the City resulting in situations where City utilities may need to be re-sized due to non-City users is a concern – especially to the South. A plan allowing the City to assess such development to pay for infrastructure is needed.
n. Improvement projects are special assessed so that affected users pay for the projects.
o. My comments:
    i. The current staffing level seems just right as it allows in-house staff to handle most project work while engaging consultants for some work. In a City like Fargo which is growing and has a lot of project work, this approach works well.
    ii. The department staff are clearly connected to the City and so are motivated to do high quality work.
    iii. Many comments were made about the need for coordinated project review early in the process. Clearly this is a big opportunity to connect the planning process to the project development process and avoid trouble.

4. Administration
    a. Met in May 2023 and again in September 2023.
    b. Met with Michael Redlinger, Bruce Grubb, Brenda Derrig, Kim Citrowske and Mark Williams.
    c. The department has several missions including Land Use and Community Development. The work includes administration of the zoning laws and consideration of how to maintain and improve communities.
    d. In a growing City like Fargo this department is an active force in attracting new growth opportunities and maintaining and improving existing neighborhoods, businesses and industries. It's a complicated mission.
    e. It is apparent that the department must coordinate between planning, politics, and project work with the goal of promoting growth while maintaining the current look and feel of Fargo.
    f. The need for consolidated planning review of projects – involving all departments and addressing deals made with developers – was made by department staff from Administration, Engineering and Public Works.
    g. Department staff cited the need to refine how land is annexed into the City to avoid challenges with water and sewer and public works. The annexation of new areas which are far from the City center poses a big challenge to Public Works to provide the required range of services in these distant areas.

h. It appears that the utility rates for some areas of the City may need to be raised to account for the complexity of providing services far from the landfill, WWTP, WTP, and PW garage.
i. My comments:
    i. Newly announced department head Brenda Derrig is transferring from the Engineering Department, and so should be an agent of change to help establish a coordinated review process.
    ii. The department has some high level questions to consider as growth continues. These questions include considering if you will use City resources such as the landfill, WTP and WWTP as regional resources, or if you will try to retain these resources primarily for City use in coming decades. The current rate structures provide great service for City residents and external users. Many communities might choose to raise rates for external users to better protect the City resources and raise more revenues.

5. Water Reclamation
    a. Met in May 2023 and again in September 2023.
    b. Met with: Jim Hausauer, Mark Miller, Karla Olson, Kim Citrowske and Mark Williams.
    c. The WWTP is undergoing a large upgrade to increase Average Capacity from 15 MGD to 29 MGD, and Peak capacity from 26 MGD to 50 MGD. Project is in progress and will be complete in 12-24 months.
    d. Conceptual improvement could bring Average treatment capacity up to 50 MGD within the existing WWTP footprint.
    e. WWTP has a staff of about 25 operators and the Chief Operator believes staffing is about right.
    f. The WWTP is a regional plant, accepting sewage from West Fargo and Horace. Other area communities are considering connecting to the WWTP for service.
    g. West Fargo currently contributes approximately 2.75 MGD, and is expected to increase to 3.0 MGD by the end of 2024. The current agreement with West Fargo allows them to increase flows to 6.5 MGD over time. If flows ever approach 6.5 MGD, an additional point of connection will be needed to transfer flows above 6.5 MGD.
    h. Horace currently contributes approximately 0.25 MGD at an existing connection which can transfer up to 1.15 MGD. A second, future point of connection to Horace is being planned to transfer an additional 3.3 MGD. The total connected future load from Horace is expected to be a maximum of 4.45 MGD.

i. Current flows average 15 MGD in dry weather, and 20 MGD in wet weather, and serves a population of about 175,000 people (Fargo, West Fargo, Horace).
j. Estimated excess capacity once project is complete is 29 MGD minus 15 MGD = 14 MGD – 3 MGD reserve = 11 MGD. This is enough to serve about 92,000 additional people.
k. The WWTP has storage lagoons with a capacity of 1.6B gallons which can be used to store excess flows for future treatment. These lagoons are very useful during flood events.
l. With more development expected in the southern portion of the City, the wastewater will have to be pumped a long way to the existing WWTP on the north end of the City. Construction of a second WWTP on the southern side of the City has been considered, but is problematic because water for the City drinking water system is withdrawn from the Red River in the center of the City, and so would include recently treated sewage if a new WWTP was constructed.
m. A portion of the WWTP effluent (1.4 MGD) is cleaned to a very high standard using Reverse Osmosis technology and is sent to the local ethanol plant to be used in the process. There may be other industries, including a soybean processing one, which are interested in utilizing WWTP effluent, and the WWTP is working to encourage such partnerships.
n. Biosolids generated at the WWTP are trucked to the City landfill and used for daily cover.
o. The WWTP has digesters which generate biogas. The biogas is utilized in boilers for heat at the WWTP.
p. The current WWTP project includes a large electrical generation component where natural gas will drive generators to produce electricity for use at the WWTP to reduce the load on the local electrical grid, and to reduce costs for purchase of electricity.
q. My comments:
    i. Capacity – the current project will provide significant extra capacity equating to about 90,000 additional people. This appears to be plenty of extra capacity for 15-20 years, provided no additional large communities decide to send their wastewater to the Fargo WWTP.
    ii. This excess capacity also allows Fargo to welcome water intensive industries to the area by being able to offer treatment for several MGD of wastewater.
    iii. The ability to expand capacity further within the footprint has been considered, and can be accomplished in a few years of a determination that more capacity is needed. Since the decision to

accept large new customers such as Moorhead will develop slowly, there will be time to increase capacity when needed.

iv. The WWTP is a regional resource and can help other communities avoid very costly construction of new or upgrades to existing WWTPs.

v. WWTPs tend to work better the larger they are, and so having a large regional WWTP provides benefits to the local communities and the environment.

vi. The lagoon system is a great benefit which helps to ease stress during difficult periods when flooding or other problems are present.

vii. As with the landfill, the City may wish to consider the pricing structure for wastewater treatment. Many communities charge one rate for City residents and a higher rate for out of City residents in order to properly distribute the costs for capital projects.

viii. The WWTP system is in excellent condition and is positioned to serve at least 20 years of foreseeable growth without significant changes needed.

6. Diversion
    a. Met in May 2023 and again in September 2023.
    b. Met with Nathan Boerboom, FM Diversion Division Engineer, Kim Citrowske and Mark Williams.
    c. The diversion project has been in progress for decades – starting with studies, and then initial plans, and then a lot of negotiations on specifics.
    d. Project progressed, was funded, and is now in construction.
    e. There are many parts to the project – inlet structure, outlet structure, bridges over the diversion channel, raising of sections of roadways. Many different entities are involved. Significant progress is being made, with completion of most items in 2027/8 possible.
    f. The City is at the table and involved in project discussions with the other parties.
    g. Once complete the diversion will open a large area to development that was previously too risky and flood prone.
    h. Development within the reclaimed areas will need careful planning that needs to be put in place soon to avoid difficulties later. Possible problems include what type of development to allow, and how to support development which may occur near the diversion structure and is far away from the City center. Water, sewer, stormwater, snow plowing, and emergency services will all be time consuming in this area.

i. My comments:
    i. Development opportunities created by the Diversion project will be challenging for the City to support due to distance from City center.
    ii. Reconciling existing problems with developments to the south – how to provide water and transport sewer, involve political tension and are difficult.
    iii. Planning and Zoning for the area need to be put in place soon, and must consider the special conditions near the diversion dam, where smaller development lots may become available.

7. Water Supply
    a. Met in May 2023 and again in September 2023.
    b. Met with: Troy Hall, Dan Portlock, Kim Citrowske and Mark Williams
    c. The water treatment plant (WTP) functions as a regional resource, providing water to Fargo, West Fargo, and the Cass County Rural Water, which serves several communities and farms and is expanding service.
    d. The WTP has about 32 full time staff and appears to be appropriately staffed.
    e. Water supply is provided by several sources:
        i. The City is permitted to take as much as 100 MGD of water from the Red River and treat it either by membrane filtration or more traditional sand filtration.
        ii. The City is also permitted to take up to 16 MGD of water from the Sheyenne River.
        iii. The City has access to water stored in Lake Ashtabula as needed during occasional periods of drought.
        iv. In the future when a large water transmission project is completed the City will have access to take even more water transferred from the Missouri to the Sheyenne River. Estimated completion of this project is 2032.
    f. Current Capacity from membranes is 15 MGD.
    g. Current capacity from the sand filtration is 30 MGD.
    h. Total Capacity of 45 MGD
    i. Future expansion of the membrane treatment train could increase capacity if needed.
    j. Average consumption in recent years has averaged 14-15 MGD, with peak days of 31/32 MGD.
    k. Water is stored in 11 elevated storage tanks around Fargo, with an additional 5 tanks in West Fargo.

l. West Fargo traditionally had its own water supply system which was derived from wells, but now purchases water from Fargo.
m. Cass County Rural Water purchases water from the City and distributes it to an increasing number of entities around the perimeter of the City.
n. The Sheyenne River source is of higher quality than the Red River source and so is marginally easier to treat than the Red River source.
o. The current excess capacity is 45 MGD total capacity minus peak day of 32 MGD = 13 MGD, minus a reserve of 3 MGD = 10 MGD excess capacity right now. At 200 gpd per person this equates to spare capacity for another 50,000 people and the associated ancillary businesses to serve that population.
p. My comments:
    i. Current water supply and storage is adequate for current needs and foreseeable growth for approximately 20 years.
    ii. The planned Sheyenne project will increase supply and add even more capacity, so that a large amount of growth is possible.
    iii. Expansion to additional customers is possible with current supply, and so Cass Rural Water and other nearby communities can be supported without large new capital projects being needed at the WTP.
    iv. The WTP facility is in excellent condition and is well maintained.
    v. The WTP system is positioned to serve at least 20 years of foreseeable growth without significant changes needed.

8. Transportation
    a. Interstates – the City has East/West and North/South Interstate highways capable of moving large amounts of traffic to and through the area, providing great opportunities for shipping and transport development.
    b. Primary routes – the City is well served by large primary streets and avenues in a grid pattern which makes moving around the City quick and easy. These streets and avenues are mostly multi-lane with traffic signals at major intersections. Traffic at rush hour periods in the morning and afternoon was heavy but manageable during my visit, and was light at all other times. The rectangular layout of the major street system allows motorist to choose alternate routes easily and should help to ease traffic problems as development continues.
    c. Secondary streets – the secondary streets are mostly 2 lane streets with one lane in each direction, and have wide rights of way which allow for on street parking, sidewalks, and bicycle lanes in many locations.

d. Bicycle routes and lanes – there is an extensive network of both on-road and off-road bicycle paths around Fargo, West Fargo and Moorhead. Several websites show this network and I observed many cyclists during my visit. Many segments are marked bicycle lanes on driven streets and avenues, and other multi use paths through the City exist which do not allow automobile traffic. The downtown area has mostly shared lanes.
e. My comments:
    i. The City has a very good traffic situation with the interstates and large primary system.
    ii. The streets and avenues are widely spaced, which has allowed for sustained growth much more easily that might otherwise have been the case.
    iii. The street and avenue rights of ways appear to be wide enough for multiple lanes, turning lanes, sidewalks and bicycle lanes in most places.
    iv. Bicycle paths are well developed and allow access to most areas of City.

9. Electrical System
    a. Large high voltage supply feeds into the area exist along with a series of distribution lines operated by the Cass County Electrical Cooperative.
    b. An in depth evaluation of the electrical system was not conducted and is beyond the scope of this project. The existing electrical supply and distribution system is currently meeting the needs of residents and industry.
    c. Ongoing energy efficient changes to lighting and electrical systems tend to reduce the load on the existing electrical grid, while car charging stations and the occasional large industrial project adds load. There is a large amount of capacity on the high voltage supply lines serving the area which can easily support continued residential and industrial growth.
    d. Long term improvements to the electrical grid are the responsibility of the utility companies and will continue to support growth in the area.

10. Largest Opportunities and Challenges:
    a. Solid Waste – the landfill could be a huge long term benefit and revenue generator, or could just be a benefit. City must decide if it wants the landfill to be a regional low cost resource, or if it will raise rates on out of City users which will both generate revenue and foster regional solutions not driven by the City.
    b. Water and wastewater – City infrastructure is excellent. As with the landfill, the City might choose to raise rates on non-City users to increase revenue.

When outlying users can turn off their well systems (West Fargo) or choose to use Fargo water and/or sewer and not have to build, maintain and operate a WTP or WWTP plant, the savings are significant. The City needs to consider how much or a premium non-City users should pay, or if you want your facilities to be a regional resource at the lowest cost.

c. Administration – the City focus on promoting development and growth is apparent. Integration of this goal into planning, engineering, and local politics is a challenge, and has been recognized. A method to integrate these items in the planning process will help reduce internal departmental stress.
d. Administration - opportunities for growth in the areas to be improved due to the Diversion project need to be managed with direction from planning, zoning, and annexation to obtain good results in future years.

Appendix of Known Data

1. Most data has been compiled at: https://fileshare.fargond.gov/index.php/s/EfdAbNTdSCgsn23, and includes:

2. Appendix B from RFP (pg. 1&2): Plans, Policy Documents, & Resources
3. 5.19.23 Updates
   - 10-yr Strategic Plans - 2016Powerpoints (C_Utility)
     - SpecialAssessmentDistricts5.18.23.zip (F_GIS shp Files)
     - The "SpecialAssessmentDistricts5.18." is the active and correct layer for all of the special assessment boundaries. Unfortunately it provides all districts past and present and does not have any other data tied to it other than the ProjNum field.
     - "SAdata" is all the assessment boundaries that are current and have not been assessed yet.
   - Anticipated: TAZ data from FM MetroCOG should be added to FileShare
   - Downtown InFocus Playbook (downtown roadway design: downtown_infocus_playbook_final_highres.pdf (fargond.gov)
   - Additional Annexation on north side (E-Administrative Data_Annexation Info)
   - Sewer Agreement for ET property owner, experiencing septic failure seeking access to sanitary sewer system. (C_Utility & Services)
   - NDSU Research Park
     - Home - NDSU RTP (ndsuresearchpark.com)
     - Research and Technology Park (ndsu.edu)

4. 5.9.23 Updates:
   - Baker Tilly, Land Use Planning Fiscal Impact Model-2021 (A_Community Development & Land Use)
   - 2021 Solid Waste Facility Plan (C_Utility & Services)
   - 2022 Fire Department Annual Report presentation and Station 8 update (C_Utility & Services – 10)

5. 4.28.23 Updates:
   - 2001-2003 Budget information(E_Admin Data, 7-Budgets)

6. 4.25.23 Updates:
   - 2000, 2004-2012 Budget Books (E_Admin Data, 7-Budgets)
   - 2012-2000 Annual Building Permit Data (E_Admin Data, Building Permit Data)
   - MetroCOG West Perimeter Highway Study
     - RFP - FM COG (nd.gov)
     - Interstate Operations Analysis - Interstate Operations Analysis and Plan for Future Improvements :: Fargo-Moorhead Metro COG (fmmetrocog.org)

7. 4.21.23 Updates:
   C3-Water Plans (C-Utility Service)
   - Water Distribution Master Plan
   - Water Plant Facility Plan
   - Drought Management Plan
   - Southside water/wastewater preliminary planning document

   - C7-Public Works Campus Master Plan uploaded (C-Utility Service)
     - Phase 1 Report – Final
     - Phase 2 Implementation
     - Forestry Rate Analysis_04132018
   - F-GIS files
   - New GIS department data file ("2023CityOfFargoData.zip")
     - This contains updates to many updates to some of the outdated shp files and more robust details for the utilities and other requested layers previously unattained (i.e. transit/diversion/parks/trails/environmental/
       - Please note – Zoning related standalone layers are likely not up-to-date, since we update that data in a Parcel database, so that is the best source.
   - As reference of upcoming growth related items –
     - Pending Annexations info (E-Administrative Data_Annexation Info)

- Interstate Business Park District Addition (Duda – northside; May PC agenda)
- Veteran's Industrial Park Addition (Youness - northside; June PC agenda)
- A&T Addition (Fargo Public Schools – southside; June PC agenda)

- FM MetroCOG Policy Board is considering at 4/20/2023 meeting:
  - Proposal to update the Urbanized Area Boundary (based on 2020 Census data)
  - Issue RFP for an interstate bypass study, "West Metro Perimeter Highway Study".
- Go2030 Appendix, specifically Impact of Walkable Mixed Use Centers (starting on doc pg. 102) - go2030-appendices.pdf (fargond.gov)
- MetroCOG 2050 Demographic Forecast (Nov. 2022) - Metro COG Baseline 2050 Demographic Forecast :: Fargo-Moorhead Metro COG (fmmetrocog.org)

8. Community Development & Land Use:
   a. Go2030 Comprehensive Plan – http://fargond.gov/city-government/departments/planning-development/plans-studies/comprehensive-plan-go-2030
   b. Fargo Municipal Code – https://library.municode.com/nd/fargo/codes/code_of_ordinances
   c. Land Development Code (LDC) Diagnostic - The City of Fargo - Land Development Code (LDC) Diagnostic (fargond.gov)
   d. Core Neighborhood Master Plan (CNMP) - The City of Fargo - Core Neighborhoods Plan (fargond.gov)
   e. Downtown InFocus – http://fargond.gov/explore/downtown-fargo/framework-plan
   f. City of Fargo Housing Study – http://download.fargond.gov/0/2015_fargo_housing_study_-_final.pdf
   g. Metropolitan Area Housing Needs and Market Analysis - Housing Needs and Market Analysis :: Fargo-Moorhead Metro COG (fmmetrocog.org) (2.27.23-Final deliverables replace draft documents.)
   h. Public Art Master Plan – http://fargond.gov/city-government/departments/planning-development/arts-culture/public-art-documents
   i. 2007 Fargo Growth Plan (Also uploaded as a single PDF in folder along with 2001 Growth Plan for reference) – http://fargond.gov/city-

government/departments/planning-development/land-use-zoning/future-growth/2007-growth-plan
    a. 2019 Growth Area Evaluation by AE2S
    b. 2021 SW Pond Growth Plan
j. FM MetroCOG Demographic Forecasts
    a. Metro COG Baseline 2050 Demographic Forecast :: Fargo-Moorhead Metro COG (fmmetrocog.org)
    b. http://www.fmmetrocog.org/resources/planning/demographic-forecasts
k. Other City of Fargo Plans & Studies – http://fargond.gov/city-government/departments/planning-development/plans-studies
l. Programs & Incentives – http://fargond.gov/city-government/departments/planning-development/programs-incentives
m. HUD Action Plan

9. Transportation:

a. Capital Improve Districts - The City of Fargo - Capital Improvements Map (fargond.gov)
b. Metropolitan Transportation Plan – http://www.fmmetrocog.org/resources/long-range-transportation-plan
c. Fargo Transportation Plan – Fargo Transportation Plan :: Fargo-Moorhead Metro COG (fmmetrocog.org) (This is in draft form, as of 2.10.23)
    i. Northwest Metro Transportation Plan - Northwest Metro Transportation Plan :: Fargo-Moorhead Metro COG (fmmetrocog.org)
    ii. Southwest Metro Plan - SWMP_Executive_Summary.pdf (fmmetrocog.org)
d. Bike & Pedestrian Planning – http://www.fmmetrocog.org/resources/planning/bicycle-pedestrian-planning
    i. 2022 Bicycle & Pedestrian Plan
    ii. 2022 Bike/Ped Count Report
e. Parking & Access Study – http://www.fmmetrocog.org/projects-rfps/fargowest-fargo-parking-and-access-requirements-study
f. Red River Greenway Study - Red River Greenway Study: Fargo-Moorhead Metro COG (fmmetrocog.org)
g. Transit Development Plan - Transit Planning :: Fargo-Moorhead Metro COG (fmmetrocog.org)

h. Airport
    a. Authority - About Airport Authority - Hector International Airport (fargoairport.com)
    b. Airport Master Plan - Hector International Airport (fargoairport.com)
i. Engineering – base data: Files - Nextcloud (fargond.gov) (2020 & 2017 aerial imagery, AutoCAD base drawings, contour drawings)

10. Utilities & Services
    a. 2019 Southwest Infrastructure Master Plan (uploaded)
        i. Studied water, wastewater and stormwater systems, needs and infrastructure needed for the study area.
    b. Drought and Water Service Management Plan
    c. Water Distribution Master Plan and Facility Plan
    d. Wastewater Collection System Master Plan and Facility Plan (uploaded)
    e. Storm Water Collection System Master Plan
    f. Fiber Optic Connectivity Master Plan
    g. Public Works Campus Master Plan
    h. Snow Plow Route Optimization Study
    i. Library Master Plan
    j. Public Safety Building Update Plan
    k. 2018 Emergency Operations Plan - feop_2018.pdf (fargond.gov)
    l. Sustainability and Resilience Committee - src_white_paper.pdf (fargond.gov)
    m. Electricity
        i. Xcel Energy (also provides natural gas)
        ii. Cass County Electric Coop - Governance & Document Center | Cass County Electric

11. Schools
    a. Public Schools (Both Fargo and West Fargo School Districts are within Fargo city limits)
        i. Fargo Public Schools (New HS/MS sites determined for future construction in SW Fargo)
            1. Strategic Plan - Strategic Plan / Homepage (k12.nd.us)
            2. Long Range Facility Plan - Microsoft Word - BM 42 Long-Range Facility Plan Approval (k12.nd.us)
            3. Annual Report, 2021-2022 - About Us / Annual Report (k12.nd.us)
            4. Enrollment Data - About Us / Enrollment Data (k12.nd.us)

ii. West Fargo Public Schools
1. Annual Report, 2020-2021 - District Overview / Annual Report (k12.nd.us)
2. Enrollment Data

b. Private Schools
i. Shanley
ii. Oak Grove

c. Higher Education
i. NDSU - Campus Master Plan | Facilities Management | NDSU
ii. NDSCS,
1. Fargo Campus
2. Career_Workforce_Academy_100118_reduced.pdf (hbafm.com)

12. Parks
a. Fargo Park District - Fargo Park District Projects | Fargo Parks
I. Budgets - Park Board Documents | Fargo Parks

13. Diversion
a. FM Diversion - Home - Metro Flood Diversion Authority (fmdiversion.gov)
i. Study
ii. Alignment
iii. FM Greenway Recreation Master Plan - FM Greenway Recreation Master Plan :: Fargo-Moorhead Metro COG (fmmetrocog.org)

14. Municipal Information
a. Cass County, ND - Comprehensive Plan Documents | Cass County, ND (casscountynd.gov)
b. West Fargo
1. Comprehensive Plan - Comprehensive Plan | West Fargo, ND (westfargond.gov)
2. Other - Studies and Plans | West Fargo, ND (westfargond.gov)
c. Horace
1. Comprehensive Plan - Comprehensive Plan.pdf (revize.com)
d. Reiles Acres - METROCOG Land Use Board.pdf
e. Harwood - 2007-CITY-ZONE-MAP(1).pdf (cityofharwood.com)
1. - ET_Zoning_Map.pdf (cityofharwood.com)
f. Clay County, MN - 2045 Clay County Comprehensive & Transportation Plan | Clay County, MN - Official Website (claycountymn.gov)

g. Moorhead, MN - City of Moorhead : Long Range Planning
h. Dilworth, MN

15. Administrative Data:

a. Building Permit data (uploaded)
b. Available lots map catalog (uploaded) –
c. MLS transactions from previous 10 years with buyer/seller personal data removed
    i. Parcel ID, street name/number, physical characteristics and property type, list date, sale date, list price, sale price, terms of sale (cash, conventional, FHA/VA)
d. Vacancy rate data (uploaded)
e. Assessment Dept Annual Reports (property tax incentives) - The City of Fargo - Annual Report (fargond.gov)
f. Assessment database, current, with physical, ownership, and other characteristics (assessed value, square footage, etc.)
g. Finance Dept Annual Reports
    i. ACFR - The City of Fargo - Financial Reports (fargond.gov)
    ii. Annual Budgets - The City of Fargo - City Budget (fargond.gov)
    iii. Sales Tax - The City of Fargo - City Sales Tax (fargond.gov)
h. Economic Development
    i. Incentives Policies & Guidelines
    ii. Program White Paper (TischlerBise)
    iii. State Programs
        1. Renaissance Zone
        2. ND Business Incentives
    iv. The City of Fargo - Economic Development Corp. (fargond.gov)

16. GIS .shp files:
    a. Cass County general data - Cass County Hub (arcgis.com)-(uploaded)
        1. All parcel data (This is also noted, with more fields under 4-Staked Parcels 2022 – 2.27.2023)
        ii. Cass County (northdakotaassessors.com)
        iii. Property Sales Application | Cass County Hub (arcgis.com)
            1. Municipal boundaries
            2. ETJ limits
            3. School districts
    b. Annexations into Fargo over the past 10 – 20 years (2.27.2023 – current through 2019, if you compare parcel data, you will see where more

recent annexations have occurred. We could probably update, if requested.)

c. Building permits issued by year for the past 10 years (2.27.20223 – Data from E. Administrative Data permits could be joined/merged by parcel number to illustrate permit data)
d. Stacked parcels (2.27.2023 - includes multi-story condo data – please note, lot area is repetitive in stackedparcel.shp. Also we have annually saved the parcel/stacked parcel data from 2001-2022, please request if interested.)
e. Building footprints (2.27.2023-Current as of 2022)
f. Existing land uses (2.27.2023-Noted as Field in Parcel data)
g. Growth/FLUM- 2.27.2023
h. Subdivisions (2.27.2023-Noted as Field in Parcel data)
i. HOA boundaries (if available)
j. Zoning
    a. City of Fargo (may be repetitive with regular parcel data, since zoning is just a field)
    b. Cass County
    c. Municipalities in Cass County (e.g., West Fargo, Horace, etc.)
        i. West Fargo
        ii. Horace
            1. Zoning Map - May 2021 (arcgis.com)
            2. ArcGIS - City of Horace Future Land Use Map
        iii. Moorhead - City of Moorhead Hub (arcgis.com)
k. Planning Overlays
l. Historic Overlays (historic district boundaries) (2.27.2023-Includes historic overlays located in core neighborhoods and national register districts.)
m. Renaissance Zone, Opportunity Zone, and other economic development (e.g., TIF boundaries, redevelopment areas, etc.) areas
n. Forestry/tree canopy (2.27.2023 capturing street/boulevard tree inventory)
o. Diversion/Flood – specific location/GIS data for the Diversion and the impacted area
    a. Notes for shp files that are also available:
        i. Flood stage elevation polygons
        ii. Elevation contours for 2002, 2005, 2006, 2008, 2011, 2014, 2017 & 2019
p. Water features, wetlands, and hazard (or sensitive lands) areas
q. Parks, trails, and conservation areas (2.27.2023-I haven't done and QAQC, but found these layers with points of interest and parks)

r. Community facilities (especially those to be included in a capital facilities analysis) (2.27.2023-I haven't done and QAQC, but found these layers with points of interest and parks)
s. Transit stops and routes
t. Utility corridors (including powerline easements if available) - 2.27.2023 copy from cityworks
u. Water infrastructure (water lines) - 2.27.2023 copy from cityworks
v. Sanitary lines - 2.27.2023 copy from cityworks
w. Stormwater lines - 2.27.2023 copy from cityworks
x. Pavement edges-(for rights-of-way)
y. Solid Waste (2.27.2023-I haven't done and QAQC, but found these shp files.)