Tab 4

Zoning Text

Statement of Purpose

This document rezoning land parcel from R5 and C3, to a new PUD/GDP/SIP is established to encompass the new operations proposed for the Charter Street Heating Plant Rebuild Project.

Permitted Uses

The permitted use of this PUD/GDP/SIP shall include the following:

a) Public utility and services uses, including but not limited to the generation of steam heat, chilled water and electricity
b) Electric substations
c) Storage, handling and warehousing of solid fuel
d) Railroad operations facilities
e) Accessory uses related thereto, including temporary building for storage of building materials and equipment for construction purposes

Lot Area, Bulk and Yard Requirements

Lot area, building heights, floor area ratio; front, side, and rear yards; and open space shall be as shown on the approved specific implementation plans.

Off-Street Parking and Loading

Off-street parking for plant personnel and off-street loading to maintain required plant operations will be provided as shown on the approved specific implementation plans.

Landscaping

Landscaping will be designed in accordance with City of Madison ordinance for public ROW lands, and as shown on the approved specific implementation plans.

Exterior Lighting

Exterior lighting will be designed in accordance with City of Madison ordinance for public ROW lands, as shown on the approved specific implementation plans.

Exterior Signage

Exterior signage will be designed in accordance with City of Madison ordinance for public ROW lands, as shown on the approved specific implementation plans.

Alterations and Revisions

No alteration or revision of this GDP and subsequent SIP shall be permitted unless approved by the City Plan Commission. However, the Zoning Administrator may approve minor alterations which are approved by the Director of Planning and Development and the district Alderperson and are compatible with the concept stated in the underlying GDP/SIP approved by the Plan Commission.

Tab 5
Plant Operations

Project Summary

The scope of the Charter Street Heating Plant Rebuild (CSHP) Project is to replace the steam capacity of existing coal fired boilers by constructing a new biomass boiler which will produce 350,000 lbs/hour of steam and two package boilers which will have a steam capacity of 225,000 lbs/hour for each boiler. The total steam production capacity of CSHP will be increased to 1,150,000 lbs/hour of steam by the end of the year 2013.

The steam will be used to generate electricity heat UW Madison campus buildings and produce chilled water for cooling. The new boiler will be housed separately from the existing boilers in a new Boiler #8 Building. The package boilers will also be housed in a new building called Dayton St. Building.

An existing 300,000 lbs/hr rated Boiler 5 which burns natural gas and has the capability to burn ultra low sulfur distillate oil as backup fuel will remain in operation.

The existing coal fired boilers will either be removed or retired.

A new steam turbine driven electrical generator will be installed in the Dayton St. Building with the package boilers. This generator will provide additional electrical capacity for UW Campus consumption.

The Project will also upgrade the rail delivery system at the site and provide a fuel handling system for biomass fuels with an on-site storage capacity for three to four days of use. The proposed rail delivery system includes modifications to the WSOR rail line extending from North Charter Street to West Washington Ave., including widening of the North Park Street bridge for a new main rail line, two sidings for rail car handling between North Park Street and West Washington Ave., and an adjustment in the location of the Southwest Bike Path located in the railroad right-of-way, east of the Campus Mall.

Project Background

The State of Wisconsin conducted a planning study for the main heating plants servicing the UW–Madison campus and other state office buildings. The study was a result of an agreement between Departments of Administration, the Department of Natural Resources, the University of Wisconsin and the Sierra Club to analyze the feasibility of alternatives to bring the CSHP into compliance with the Clean Air Act and for making necessary upgrades to other state owned heating plants in Madison, Wisconsin.

Independent of the study, the state decided to phase out the use of coal at the CSHP and to increase fuel diversity, primarily by the inclusion of significant renewable biomass resources in the plant's fuel mix.

Tab 5

Plant Operations

Plant Description Overview

The existing Charter St. Heating Plant (CSHP) project site is located in the City of Madison, Wisconsin. The site is surrounded by a mixture of University of Wisconsin campus buildings, and privately owned student housing apartment buildings. A main railroad track with railcar storage spur tracks are located adjacent to the site to the north, south and east.

The CSHP is believed to have been constructed in the year 1957 with the installation of three coal burning boilers. An additional coal burning boiler was installed in the year 1965. A natural gas and fuel oil burning boiler was installed in 1970. At the southwest side of the site, chilled water equipment and large elevated industrial cooling towers were installed in the years 1966 and 1973.

The chilled water is distributed through the campus underground distribution system to cool UW Madison campus buildings.

New Boiler Unit(s) of Capacity at 350,000 #/hr

The Project will include the installation of a new water-cooled vibrating grate Boiler Unit #8 at 350,000 lbs/hr, fueled by biomass fuel and/or natural gas with ultra low sulfur distillate oil back-up. Air pollution control equipment for SOx, NOx, and particulates including a single new double flue stack. Current design plans consider the addition of a future Boiler Unit #9 of similar capacity.

New Boiler Units of Capacity at 225,000 #/hr

The Project will include the installation of two New Package Boilers – Units # 6 & # 7. Each boiler will have a steam production capacity of 225,000 #/hr, fueled by natural gas with ultra low sulfur distillate oil as a back-up. Air pollution limits for NOx will be met by using the flue gas recirculation type of air pollution control equipment. Limits for SOx, CO, VOC and Particulates will be met without using any air pollution control equipment.

New Steam Turbine Generator(s)

The Project includes the addition of a New Steam Turbine Generator Unit #2. The steam turbine is a controlled extraction back pressure type. The electrical generator will have a nominal capacity of 22 MW. The Project will provide space and connections for the future installation of Steam Turbine Generator Unit #3 of similar capacity.

Fuel System Conversion

The Project includes the conversion of the coal fuel handling system to a biomass fuel system. This work will include the:

- Demolition of the existing coal handling and storage system
- Demolition of the FPM Building at 115 Mills Street for a new biomass fuel receiving and handling system

- Construction of new biomass fuel receiving, unloading, storage, handling and conveying systems and equipment including a rotary car unloader.

The Project also includes adjacent off-site rail and bike path construction and related Project work. It is anticipated that mainline rail expansion and industrial track storage spurs work will be on rail road right-away and will be under the direction of the local railroad.

Biomass Fuel Utilization

The Project includes the effective and efficient utilization of biomass fuels. This includes finalizing the determination of biomass fuel specifications and fuel quality analyses ranges and maximums. These parameters will be defined and refined as the project proceeds.

Coordination and Interface with Existing Operations

This Project needs to be completed and coordinated with the existing plant operations and capacity for steam and cooling supplies being maintained and in service. The new plant Project tie-ins and conversions will be required to tie into the existing plant systems and U W Systems are part of this Project.

Electric Distribution System Enhancements

The Project also includes plant electric distribution systems enhancements and modifications, including a new substation to be installed in a location to be determined in the future. An evaluation is underway which considers a location across the street from the existing boiler building on the north side of Dayton St.; and other locations including in the areas of the existing boiler building, and the new Package Boilers / Steam Turbine Generator building.

Water Treatment System Enhancements

The Project will include the installation of a New Water Treatment System, to replace the existing one.

Cooling Tower System Enhancements

The Project will include the installation of a New Cooling Tower Unit #6, to replace existing Cooling Towers Units 1, 2 & 3. The New Cooling Tower #6 will have increased cooling capacity.

Standby Electricity System Enhancements

The Project will include the installation of a new diesel engine driven electrical generator with a projected capacity of 1 MW of electricity. There is an existing diesel engine driven electrical generator with a 1 MW electrical capacity.

Tab 5

Plant Operations

Plant Operations Overview

The Charter Street Heating Plant (CSHP) operates continuously year round, providing steam, chilled water and electricity for the University of Wisconsin Madison campus buildings. Staff is on site 24 hours, 7 days a week.

Secure Regulated site

The CSHP is operated by University of Wisconsin personnel on a secure site, with full site enclosure, and no public access. The plant operates under an Air Permit regulated by the State of Wisconsin Department of Natural Resources Bureau of Energy.

On-site Buildings and Equipment Enclosures

The rebuilt CSHP will include the construction of several new buildings, equipment enclosures, and structures to store and convey bio-fuel, and to secure the site. With the exception of the wood chip fuel delivery operations described below, all operations of the plant occur on site within the site enclosure, including staff parking. No un-supervised public access will be allowed.

Operating Personnel

Generally, the staff that operates the existing plant will be retained and trained to operate the new plant. In the current plant, there are typically a maximum of about 14 personnel on site during the day and about 4 over the night shifts. Personnel monitor the plant equipment from a central location within the plant. The rebuilt plant will operate in much the same way, with a similar staff size.

Safety Protocols

The rebuilt CSHP will be built in accordance with all current building codes and standards, and operate under an air permit regulated by the DNR, and in compliance with all other regulations in effect. Design for this plant occurred with the input of all Authorities Having Jurisdiction.

New buildings and conveyor galleries will be designed to be equipped throughout with fire protection systems and other safety features requested by the Madison Fire Department and the Wisconsin Department of Commerce.

A new private underground fire hydrant system with diesel engine driven and electric jockey fire water pumps will be installed.

The design of the entire facility is "above code minimum" for systems and features related to safety.

Maintenance and inspection of equipment and systems occur on a periodic basis. Emergency operations plans will be updated. The City of Madison Fire Department conducts routine inspections of the facility on a regular basis.

Tab 5

Plant Operations

Fuel Delivery Operations – Overview

The rebuilt plant will burn blended wood chips, agricultural and paper pellets, and Tire Derived Fuel chips (in the future).

The rebuilt plant will include a fuel handling yard on the east side of Mills Street, which has direct access to the WDOT land on which the WSOR railroad operates.

The conversion to bio-fuel will result in change that will be the most obvious to the public. The current coal fired plant burns on average the equivalent of 3 rail cars of coal a day to meet the demand for power. There is a large stockpile of coal on the existing site which provides several days worth of inventory fuel on site, so rail delivery of the coal fuel occurs roughly weekly. The rail line runs through the site, and the coal is off-loaded on site.

The quantity of bio-fuel required to produce the equivalent energy from coal fuel is significantly greater by volume. It is anticipated that at peak operation, the plant will require 28-34 rail cars of fuel each day.

A remote fuel depot will receive process, store and load the biomass fuel for delivery to the CHSP in Madison.

Delivery Operations – Rail

The majority of wood chips will be supplied by open top railcar and emptied utilizing a side rail car dumper. The fuel will be received into the Railcar Dumper Hopper. The hopper can hold a complete railcar contents and will discharge onto an Unload Conveyor. From the Unload Conveyor, the biomass fuel will travel to the Incline Conveyor. The Incline Conveyor discharges to the Upper Distribution Gate which directs it to the Wood Fuel Silo Feed Conveyor. The Wood Fuel Silo Feed Conveyor then directs the biomass to Wood Fuel Silo No.1 or No.2 based on silo inventories. An alternate process flow is to flop the Upper Distribution Gate, biomass travels to the Lower Distribution Gate where it goes into the Pellet Silo.

The anticipated delivery operation at peak design capacity is to receive and unload two to three trains per day, with up to 16 railcars of fuel in each train. Two rail sidings within the existing WDOT rail corridor will be used for the delivery and unloading operations, one for full cars, the other for empty cars. When a train arrives to deliver 16 full cars, it will pull 16 empty cars away and return them back to the fuel yard outside of Madison. Full rail cars will be pulled from the rail siding to the unloader building located on the fuel handling site via track-mobile in strings of 4 cars at a time

Tab 5
Plant Operations

Delivery Operations – Truck

Normally, wood pellets, paper pellets, agriculture waste pellets and TDF chips (future) will be shipped from the manufacturer's source by truck, although railcar deliveries of pellets and TDF chips (future) are feasible. Fuel pellets and TDF chips (future) will be weighed then discharged directly into a truck dumper reclaim hopper. Fuel from the hopper will be metered onto the Truck Dump Conveyor. A chute will transfer the pellets to the Unload Conveyor. From the Unload Conveyor, the pellets will travel to the Incline Conveyor. The Incline Conveyor discharges to the Upper Distribution Gate which directs it to the Lower Distribution Gate and to the Pellet Silo.

Trucks will be processed by entering the CSHP site where they will be weighed on a scale located near the south side of the site. They will then enter the Fuel Handling yard by crossing North Mills Street. They will maneuver within the yard so as to back into the fuel handling building where they will off-load the fuel via live bottom off-loader into the fuel hopper, where it is then conveyed to the appropriate storage silo. Once emptied, the truck will re-weigh on a scale located in the Fuel Handling yard, and then leave the yard and facility. It is anticipated that under normal planned operations, the number of trucks that will unload fuel as described above will be in the range of 4 to 15 per day. It is possible to receive and unload wood chip fuel via truck in the event of an emergency, such as an event were rail delivery is not possible, but this would occur only in this circumstance.

Delivery Operations – Other Fuels

The new Boiler #8 is designed with the capability to burn a mix of fuels, which include fuel categories of ADF/PDF (agriculturally derived fuels/pelletized derived fuels), wood pellets, natural gas and ultra low sulfur distillate (ULSD) oil, in addition to the wood chips. New Package Boilers 6 and 7 will burn natural gas and have the capability to burn ULSD as a back-up/emergency fuel.

ULSD oil will be stored on the CSHP site as a back-up emergency fuel. This fuel will be delivered via tanker truck in a manner similar to other fuels, where truck arrives, weighs in, unloads, re-weighs, then leaves the site. Since this fuel is designed for use as an emergency fuel, daily delivery of this fuel is not required or anticipated. ULSD oil has a shelf life and it will be necessary to burn the fuel at intervals so as to maintain a usable supply of this fuel at all times.

Natural gas is available at the site and does not require special means for delivery.

Tab 5
Plant Operations

Delivery Operations - Plant related

The new Boiler 8 will have Fly ash and bottom ash as bi-products of combustion. Limestone or sodium bicarbonate will be used to treat the gaseous mixture exiting the boiler to reduce pollutants. Aqueous ammonia is used on site as well as water treatment chemicals.

Silos located in an open area between the existing Charter St. Heating Plant building and the new Boiler 8 will hold the limestone or sodium bicarbonate, aqueous ammonia, fly ash, and bottom ash. These materials will arrive or leave the site via truck of the appropriate type for the product being moved. The daily trucking activities for all of these materials will be in the range of 4 to 5 trucks per day at peak plant operation.

Chemicals used for water treatment will arrive by smaller size delivery truck on interval as needed. Chemicals are brought into the building by hand truck and stored in appropriate containers.

There are no other regular trucking activities required in the operation of the Plant beyond that described above.

Emissions Controls

The #8 Boiler will implement the following emissions control equipment:
- Fabric Filter Baghouse for particulate control
- Selective Catalytic Reactor for NOx control
- Oxidation Catalyst for CO Control
- Sorbent Injection for Acid Gas Control (if required)

The systems above are proven technology and represent the equipment prescribed in the air permit application submitted to the Wisconsin Department of Natural Resources.

The new 225,000 lbs/hr each Package Boilers will primarily burn natural gas. Air pollution limits for NOx will be met by using the flue gas recirculation type of air pollution control equipment. Limits for SOx, CO, VOC and Particulates will be met without using any air pollution control equipment.

Noise Control

The City of Madison Noise Control Regulation (Chapter 24, Section 24.08 in the Code of Ordinances) provides the regulatory framework governing noise emissions within the city. The maximum allowable daytime and nighttime sound levels of a continuous sound located across the street from the site within residential developments are listed in the Table below

Maximum Allowable Sound Level – City of Madison (Within Residential Developments)

Receiving Zone Classified	Source Level Zoned	Maximum Permitted Sound Level (dBA)
Residential, Conservancy, Wetlands, PCD, PUD, Planned Community Mobile Home Park District	All Zoning Districts	65 (Day or Night)

In addition, a reduction of 5 dB(A) will apply to the above for impulse noises. An impulse noise is defined as a sound of short duration, usually less than one second, with an abrupt onset and rapid decay. Examples include explosions, drop forge impacts and the discharge of firearms.

The ordinance contains an exemption from the 65 or 60 dB(A) noise limit for construction purposes between the hours of 7:00 am and 7:00 pm of any day of the year.

Sound levels at the existing CSHP are similar to those at other industrial plants. Sound level measurements in the community surrounding the plant were taken continuously for twenty-four hours between 6:00 pm on January 26, 2010 and 6:00 pm on January 27, 2010. The sound level measured included both noise from the CSHP, as well as street traffic noise from trucks, cars, busses and Vespa motorized scooters. Due to the cold January weather, the CSHP chillers and cooling towers were not operating during the ambient noise survey.

Noise levels were measured in 7 different locations around the perimeter of the proposed site. The highest existing noise level measured was 58 dB(A), measured at two locations. One was at the intersection of Dayton St and Mills St, on the northwest corner in the general area of a University of Wisconsin Noland Zoology campus building. The other was on the west side of Charter St. and east side of the Weeks Hall for Geological Sciences campus building.

Other measured values ranged from 50 to 54 dB(A). For comparison, 55 dB(A) is the approximate level of a quiet subdivision during daylight hours.

To comply with the City of Madison Noise Ordinance, various techniques for attenuating noise will be performed as part of the project. Some equipment will be installed in the buildings' concrete wall basements. Other sound sources will have noise attenuating mufflers and silencers. Special noise attenuating gas ducts and building wall louvers will be installed where required.

In summary, after the project has been completed, the continuous noise that residences located across the street from the project will not exceed 65 dB(A) during the day or night; and will not exceed 60 dB(A) day or night for impulse noises.

Dust Control and Deflagaration System

Many of the fuels characterized as biomass derived fuels are considered dust generating fuels. For this reason consideration in the air permit, fire protection design, and safety of personnel and equipment dust control and deflagaration equipment has been included with the scope of the project.

To contain and remove dust generated during the unloading, and transfer of the biomass fuels used on the site a vacuum collection system will be installed. The primary components for this system are induced draft fans and filter baghouses. The site will have three separate systems due to the proximity requirements of the systems. The systems will be located as follows:

- Baghouse 1 – Near the fuel unloading area east of Mill Street
- Baghouse 2 – Near the fuel silos east of Mill Street
- Baghouse 3 – Near the #8 Boiler on the roof of the proposed Dayton Street Building

Baghouse 1 will primarily be used to remove dust created during the unloading of trucks and rail cars in the Unload Building. Vacuum generated by the ID Fan will carry the dust to the baghouse filter via round ductwork and separate it from the air prior to the air being discharged. In addition to the vacuum system used on the rail unload area, a fogging system is being proposed to augment the dust control system. This is still under investigation.

Baghouse 2 will primarily be used to remove dust from the conveyor transfer points located above and below the fuel silos. The dust will be drawn to the baghouse from pickup points above and below each conveyor transfer point by the ID fan. Once the dust is filtered from the air it can be discharged back to the atmosphere.

Baghouse 3 will primarily be used to remove dust from the conveyor transfer points located above and below on the west side of Mills Street. The dust will be drawn to the baghouse from pickup points above and below each conveyor transfer point by the ID fan. Once the dust is filtered from the air it can be discharged back to the atmosphere.

Dust from combustible materials creates a safety risk due to its ability to rapidly combust and expand the air volume in confined areas (explode). The conveying, storage, and dust collection systems being provided for the Charter Street Heating Plant will contain measures to minimize the risk to the employees, the public, and the equipment for this to occur. These items will include explosion relief panels, explosion suppression canisters, as well as the dust collection system which will limit the fuel for such events. The design will be within the recommended guidelines stated by NFPA, and the industry standards for this type of installation.

Required Lighting and Light Pollution

By safe practice, interior lighting of buildings and structures that require daily routine inspection at all work shifts will remain on constantly at a safe ambient light level. It is anticipated that Fuel Handling operations will occur during the day, so the Fuel Handling Yard not be in operation at night, and will only be illuminated to a safe ambient light level within the yard. Light from interior light sources will be visible through glazed areas of building enclosures. No exterior architectural lighting is included in the design. The rebuilt CSHP will comply with City of Madison Lighting Ordinances.

Tab 6
Other Information

Project Approvals General Requirement

The nature of this Project necessitates that it receive many approvals from many authorities and governing bodies in addition to the City of Madison Department of Planning and Development, to insure the Project is constructed and operates in a manner that meets all of the requirements of these various agencies and approvals.

The details of this GDP/SIP land use application and subsequent approval is considered in context with these other Project approvals. Any condition of another required approval will be considered a condition of the GDP/SIP approval.

Other Approvals

Air Permit

The Project will be designed, built, and operated in accordance with all of the provisions, conditions, and restrictions mandated by the approved Air Permit.

Environmental Impact Statement

The Project will be designed, built, and operated in accordance with all of the provisions, conditions, and restrictions mandated by the approved Environmental Impact Statement, and pursuant to all national, state, and UW System WEPA/NEPA guidelines.

Risk Management Plan

The Project will be designed, built, and operated in accordance with all of the provisions, conditions, and restrictions mandated by the recorded Risk Management Plan. This document was prepared by P3M with the input of the Owner, Plant Operators, University's Insurance Carrier, and most importantly, the Madison Fire Department, who is the Authority Having Jurisdiction for issues related to Fire Prevention and protection of the public from hazards related to the operation of this facility.

Developer's Agreement

The Project will be designed, built, and operated in accordance with all of the provisions, conditions, and restrictions mandated by the approved Developer's Agreement between the City of Madison and the State of Wisconsin.

Tab 6

Other Information

Other Required Permits and Reviews

The Project will be designed, permitted, built, and operated in accordance with all of the provisions, conditions, and restrictions of these City Departments and other governing authorities:

- City of Madison Water Utility Review for well head protection zone
- City of Madison Board of Public works for pedestrian path and bike path committee reviews
- City of Madison Engineering Departments under Planning and Development
- State of Wisconsin DNR Bureau of Energy

Site Layout

The general site plan arrangement of the new for the CSHP is depicted on the plan following this section. The plan includes labels to identify all of the buildings, equipment enclosures, and structures which are planned to occupy the site. Exact sizes of some of the elements are subject to change based upon final equipment selections and completion of detailed design and engineering work

Building Sizes

The anticipated sizes of buildings and equipment enclosures are listed in the matrix following the site plan arrangement drawing. Again, exact sizes of some of the buildings and elements are subject to change based upon final equipment selections and completion of detailed design and engineering work. This facility is located within the Capitol View Preservation zone, and is in compliance with this zoning regulation.

Architectural Description

The Charter Street Heating Plant (CSHP) Project includes construction of several new buildings and structures. The goals of the architectural design effort are to make the facility a good neighbor to its surrounding urban context, including UW Madison Campus and near by private property. Special attention was paid to including structures in the design program to secure the site and contain noise, dust, and light pollution; with a visual appeal that included pedestrian scale considerations.

The architectural concept for the facility is to celebrate the removal of all coal from the site per the Governor's mandate, and show off the bio-fuel material delivery, storage, and handling as it is moved across Mills Street to the new Boiler where it is burned to produce clean energy.

Building enclosure materials are selected and utilized in a visually composed manner for their aesthetic qualities so as to tell the story of this facility, and to fit within the overall budget. Some aesthetic upgrades to the existing buildings to remain is anticipated.

Tab 6

Other Information

Energy Efficiency

The Charter Street Heating Plant (CSHP) Project will comply with the Governor's initiative on energy efficient buildings (Executive Order 145) which stipulates that new buildings will be designed to be 30% better than the code in effect at the time of the Order.

The design effort to achieve this goal will be pursued through the detail design of Electrical and HVAC.

Project Construction Schedule

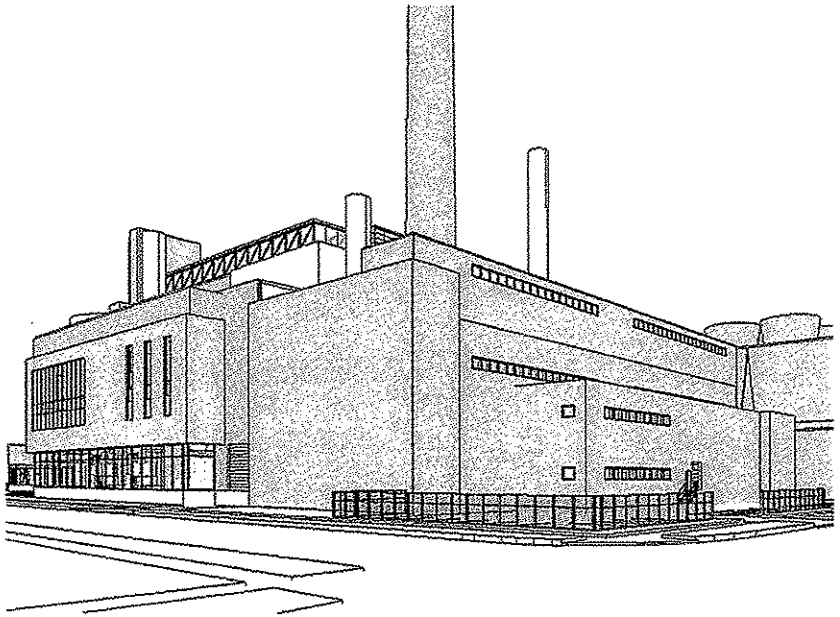
The Charter Street Heating Plant (CSHP) Project is planned for construction to start in the late summer of 2010 and be complete by Fall or 2013. The detail of the construction schedule shall be developed by the EPC Contractor. There is a general concept for the phasing of the construction to allow the Plant to remain operational during the construction phase:

- Build the E half of the Dayton Street Building to bring Package Boilers #6 and #7 on line.
- Burn off all inventory of coal fuel on site and retire coal fired boilers.
- Remove on-site rail spurs and demolish existing buildings on site planned for removal.
- Build remainder of the Dayton Street Building, new Boiler #8, and other structures on the CSHP site.

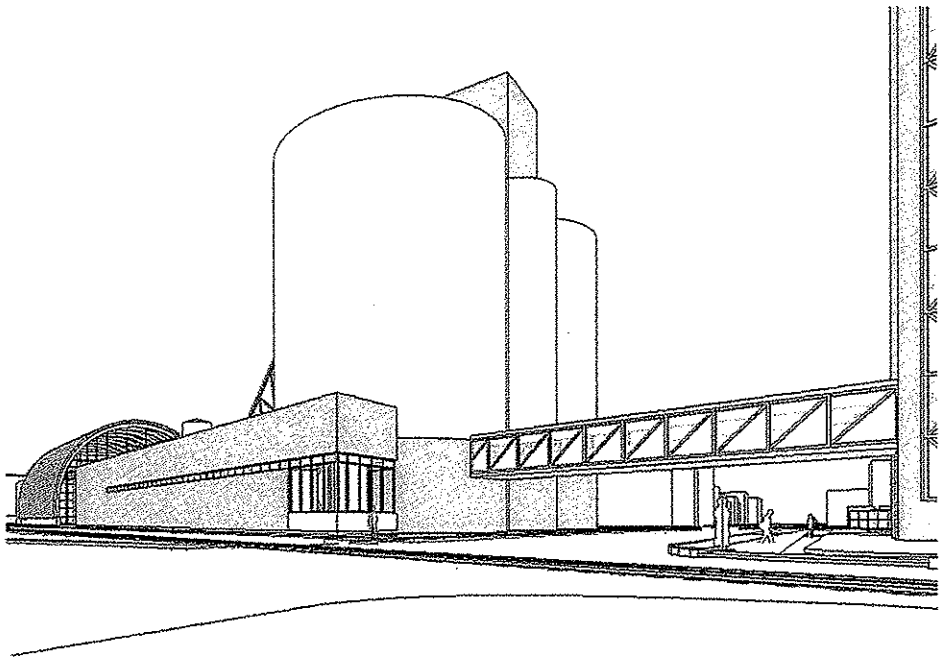
Construction of structures on the Fuel Handling Site and construction on the WDOT rail corridor may be able to precede the sequence described for the CSHP site. Construction may occur in several areas concurrently. It is anticipated that Mills Street will require temporary street closure for some duration during the project construction phase. The Southwest Bike Path will remain open, but may be detoured during periods of time during the construction phase.

1 A211 DAYTON STREET ELEVATION

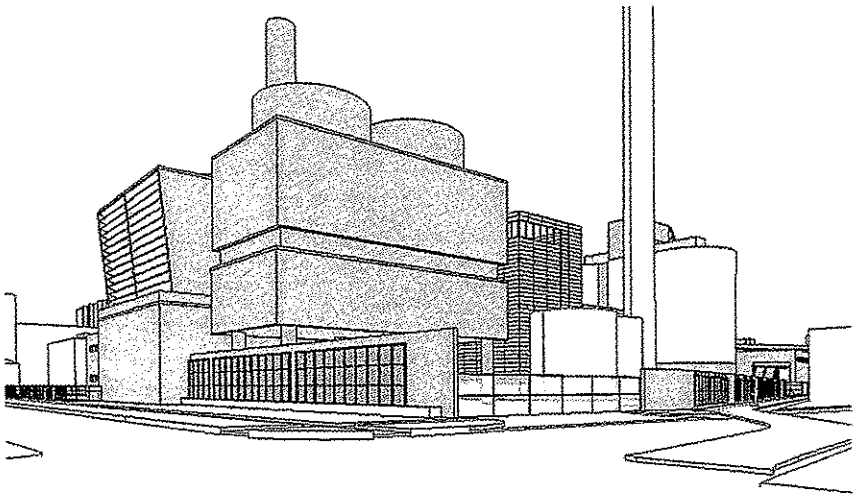
2 A211 BOILER & SCR BUILDINGS EAST ELEVATION



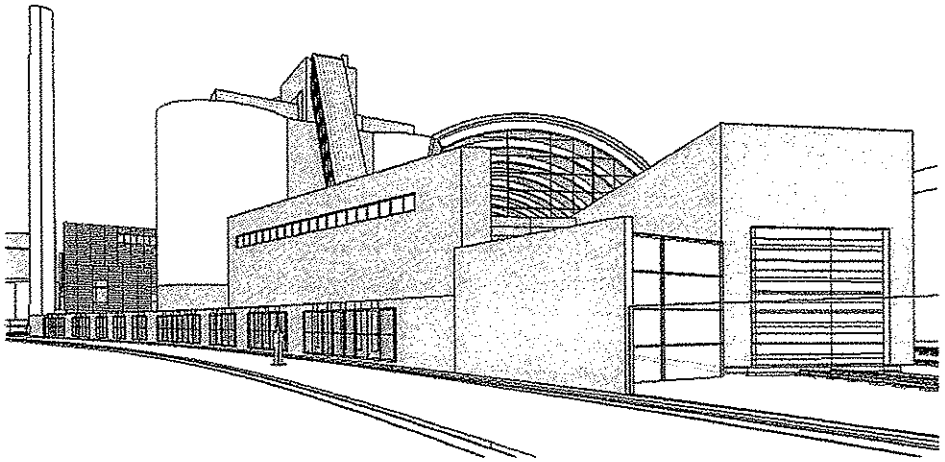
4 A212 CHARTER & DAYTON STREET INTERSECTION



1 A212 RAIL SHED, HOPPER & FUEL STORAGE SILOS



3 A212 BIKE PATH @ CHARTER STREET LOOKING EAST



2 A212 RAIL SHED, HOPPER & FUEL STORAGE EAST ELEVATION

DSF Project No. 09A2L

Charter Street Heating Plant Rebuild

GDP APPLICATION
3/10/10

Building Classification Data

DESCRIPTION	USE & OCCUPANCY CLASSIFICATION (see note 1)	IBC REF.	TYPE OF CONSTRUCTION	IBC REF.	Sprinklered? (see note 2)	ALLOW. BLDG. AREA, SQ. FT.	IBC REF.	WIDTH	LENGTH	APPROXIMATE ROOM OR STORAGE HEIGHT	APPROXIMATE EAVE HEIGHT	ALLOWABLE HEIGHT	IBC REF.	ALLOWABLE STORIES	IBC REF.	ACTUAL STORIES	COMMENTS
Existing Plant Buildings			existing	IEBC	Y	existing	existing	existing	existing	existing							
Dayton St. Building	Industrial Group F-1	306.2	II-B	602.2, Table 601	Y			86'-0"	209'-0"		60'-0"					2	
No. 6 Boiler Enclosure	Industrial Group F-1	306.2	II-B	602.2, Table 601	Y	Unlimited	503.1.1	66'-0"	66'-0"		115'-0"	Unlimited	503.1.1				
No. 6 Boiler AQCS	Industrial Group F-1	306.2	II-B	602.2, Table 601	Y	Unlimited	503.1.1	112'-0"	148'-0"			Unlimited	503.1.1			1	
High Bay					Y			46'-0"	148'-0"		90'-0"						
Low Bay					Y			66'-0"	148'-0"		50'-0"						
Biomass Material Handling	High Hazard Group H-2	307.1, 307.4	II-B	602.2, Table 601	Y	Unlimited	503.1.1	105'-0"	124'-0"		53'-0"	Unlimited	503.1.1			1	
West Train Shed Enclosure	High Hazard Group H-2	307.1, 307.4	II-B	602.2, Table 601	Y	Unlimited	503.1.1	24'-0"	238'-0"		24'-0"	Unlimited	503.1.1				
East Train Shed Enclosure	High Hazard Group H-2	307.1, 307.4	II-B	602.2, Table 601	Y	Unlimited	503.1.1	24'-0"	74'-0"		24'-0"	Unlimited	503.1.1				
Control & Elec. Bldg.	Industrial Group F-1	306.2	II-B	602.2, Table 601	Y	Unlimited	503.1.1	30'-0"	66'-0"		32'-0"					2	Area includes stair/eleva
Control Room	Industrial Group F-1	306.2	II-B	602.2, Table 601	Y	Unlimited	503.1.1	30'-0"	36'-0"	12'-0"							2nd Flr, Above Boiler MCC Room
Boiler MCC Room	Industrial Group F-1	306.2	II-B	602.2, Table 601	Y	Unlimited	503.1.1	30'-0"	66'-0"	20'-0"							Ground Floor
DCS Rack Room	Industrial Group F-1	306.2	II-B	602.2, Table 601	Y	Unlimited	503.1.1	30'-0"	30'-0"	12'-0"							2nd Flr, Above Boiler MCC Room
Fuel Storage Silos	High Hazard Group H-2	307.1, 307.4	II-B	602.2, Table 601	Y	Unlimited	503.1.1					Unlimited	503.1.1				
Wood Chip Storage Silo #1					Y			72'-0" Diameter		82'-0"	116'-0"						
Wood Chip Storage Silo #2					Y			72'-0" Diameter		92'-0"	116'-0"						
ADF/PDF Storage Silo					Y			30'-0" Diameter		79'-0"	111'-0"						
Future TDF Storage Silo					Y			30'-0"	24'-0"	30'-0"	62'-0"						
Fuel Conveyor Galleries	High Hazard Group H-2	307.1, 307.4	II-B	602.2, Table 601	Y	Unlimited	503.1.1					Unlimited	503.1.1				
Inclined Conveyor Gallery					Y			20'-0"	200'-0"	14'-0"	166'-0"						
Mills Street Conveyor Gallery					Y			16'-0"	97'-0"	10'-0"	26'-0"						
Boiler Feed Conveyor Gallery					Y			24'-0"	150'-0"	50'-0"	114'-0"						
East Transfer Tower	High Hazard Group H-2	307.1, 307.4	II-B	602.2, Table 601	Y	Unlimited	503.1.1	20'-0"	31'-0"	116'-0"		Unlimited	503.1.1				Tower is under Penthouse
East Transfer Tower Penthouse	High Hazard Group H-2	307.1, 307.4	II-B	602.2, Table 601	Y	Unlimited	503.1.1	40'-0"	60'-0"	50'-0"	166'-0"	Unlimited					
West Transfer Tower	High Hazard Group H-2	307.1, 307.4	II-B	602.2, Table 601	Y	Unlimited	503.1.1	34'-0"	41'-0"		140'-0"	Unlimited	503.1.1				
Boiler Stack			II-B					17' Bot/16' Top Dia.			275'-0"						
Package Boiler Stack																	

6-7

Notes:
1. OCCUPANCY CLASSIFICATION WITHIN THE IBC MOST CLOSELY FITTING THE INTENDED USE OF THIS ENCLOSURE OR STRUCTURE.
2. "N" INDICATES NO SPRINKLER SYSTEM PROVIDED
   "Y" INDICATES THAT AN APPROVED AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED THROUGHOUT THE BUILDING IN ACCORDANCE WITH SECTION 903.3.1.1 (2006 IBC)
   "TBD" INDICATES ITEM TO BE DETERMINED OR CONFIRMED

GENERAL NOTES:

UTILITIES AS SHOWN ARE APPROXIMATE AND ARE BASED ON DIGGERS HOTLINE MARKOUTS PER TICKET NUMBER 20092910251, OBSERVED EVIDENCE AND RECORD DRAWINGS PROVIDED BY UTILITY COMPANIES.

HORIZONTAL CONTROL AND BEARINGS ARE REFERENCED TO UW-MADISON CONTROL MONUMENTS #4 AND #3 ON THE WISCONSIN COUNTY COORDINATE SYSTEM, DANE COUNTY ZONE.

VERTICAL CONTROL BASED ON UW-MADISON CONTROL MONUMENTS #3, #4 AND #10 ON NAVD88 DATUM.

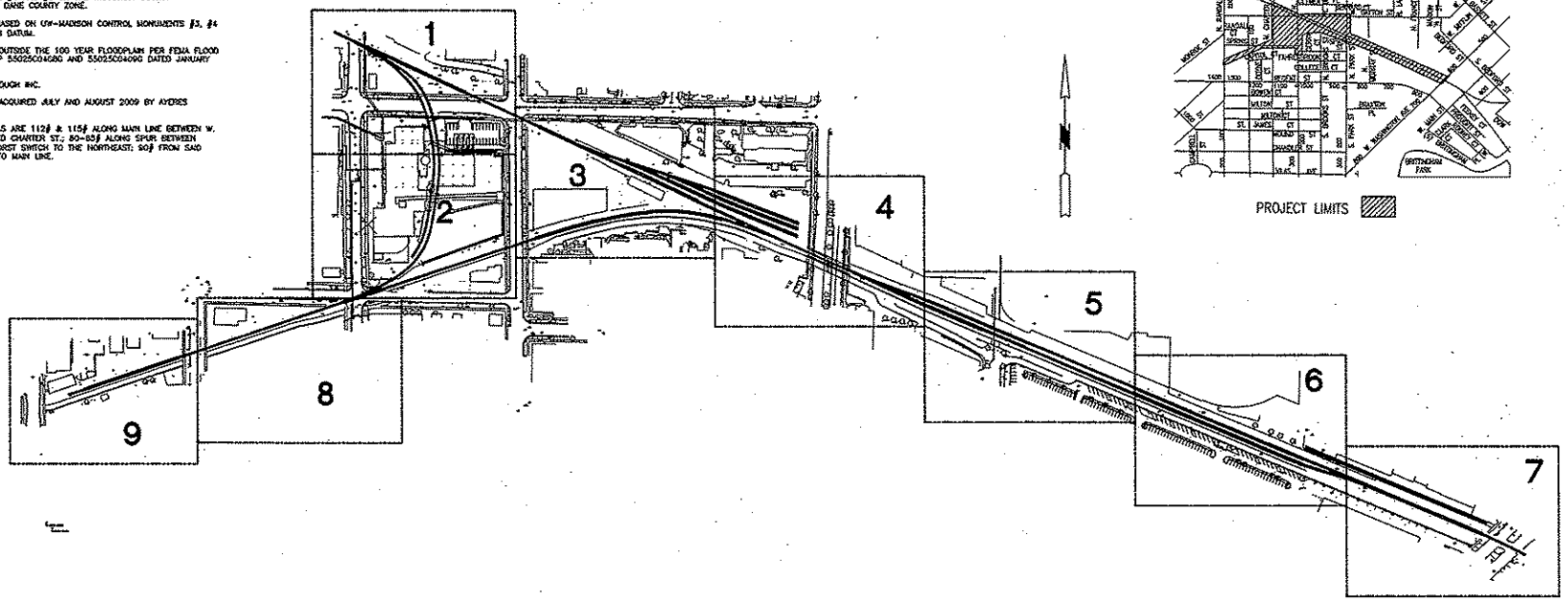
PROJECT LIMITS LIE OUTSIDE THE 100 YEAR FLOODPLAIN PER FEMA FLOOD INSURANCE RATE MAP 55025C0140G AND 55025C0140D DATED JANUARY 2, 2009.

SURVEYED FOR MIDDOUGH INC.

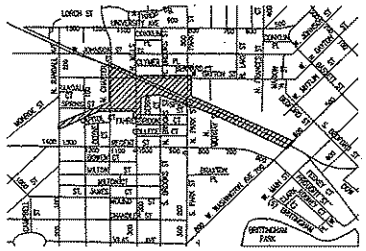
FIELD SURVEY DATA ACQUIRED JULY AND AUGUST 2009 BY AYRES ASSOCIATES.

EXIST. RAILROAD RAILS ARE 112# & 115# ALONG MAIN LINE BETWEEN W. WASHINGTON AVE. AND CHARTER ST.; 80-85# ALONG SPUR BETWEEN RANDALL AVE. AND FIRST SWITCH TO THE NORTHEAST; 50# FROM SAID SWITCH NORTHEAST TO MAIN LINE.

GENERAL DEVELOPMENT PLAN SHEET LAYOUT



LOCATION MAP (NO SCALE)



PROJECT LIMITS

LEGEND

MH	MANHOLE
	INLET
WV	WATER VALVE
GV	GAS VALVE
	STREET LIGHT
	FIRE HYDRANT
	CONIFEROUS TREE
	DECIDUOUS TREE
	FENCE
	EDGE OF GRAVEL AREA
T	UNDERGROUND TELEPHONE
E	UNDERGROUND ELECTRIC
FO	UNDERGROUND FIBER OPTIC
SAN	UNDERGROUND SANITARY
G	UNDERGROUND GAS
W	UNDERGROUND WATER
CW	CHILLED WATER LINE
SS	STORM SEWER
STM	STEAM LINE
FW	FIRE WATER LINE
OH	OVERHEAD ELECTRIC
PS	OILY WATER & PROCESS SEWER
	STEAM ACCESS STRUCTURE
SIGN	MISC. SINGLE POLE SIGN
B	CONCRETE/STEEL BOLLARD
	ELECTRIC PULLBOX
CP #18	SURVEY CONTROL POINT
	BENCH MARK
802.44	SPOT ELEVATION
	INTERMEDIATE CONTOUR
	INDEX CONTOUR
	3/4" X 18" IRON STAKE SET
	3/4" IRON STAKE FOUND
	CHISLED CROSS FOUND
	IRON PIPE FOUND (1" UNLESS OTHERWISE NOTED)
x	CHISLED CROSS SET
+	PK NAIL FOUND
	RIGHT-OF-WAY LINE
	LOT LINES
	EASEMENT LINES
	RR SWITCH
	RR SIGNAL BOX
	RR SIGNAL
E	ELECTRIC METER
G	GAS METER
	TRAFFIC SIGNAL LIGHT
	TRAFFIC SIGNAL W/LIGHT MAST ARM POWER POLE
	W/LIGHT MAST ARM
GUY	GUY WIRE ANCHOR
	POWER POLE
	TELEPHONE POLE
T	ABOVE GROUND TANK
	EDGE OF RR TIES
	RR TACKS
	EXISTING TO BE DEMOLISHED
	EXISTING TO BE DEMOLISHED BY OTHERS
GVT	GAS VENT
	BRUSHLINE
	ELECTRIC PEDESTAL
	PARKING METER
	POST INDICATOR VALVE
FDC	FIRE DEPT. CONNECTION

CIVIL DRAWINGS LIST

C-000	GDP COVER SHEET
C-001	GDP SITE PLAN
C-002	GDP SITE PLAN
C-003	GDP SITE PLAN
C-004	GDP SITE PLAN
C-005	GDP SITE PLAN
C-006	GDP SITE PLAN
C-007	GDP SITE PLAN
C-008	GDP SITE PLAN
C-009	GDP SITE PLAN
C-201	GDP DEMOLITION PLAN
C-202	GDP DEMOLITION PLAN
C-203	GDP DEMOLITION PLAN
C-204	GDP DEMOLITION PLAN
C-205	GDP DEMOLITION PLAN
C-206	GDP DEMOLITION PLAN
C-207	GDP DEMOLITION PLAN
C-208	GDP DEMOLITION PLAN
C-209	GDP DEMOLITION PLAN
C-301	GDP U/G UTILITY AND SEWER PLAN
C-302	GDP U/G UTILITY AND SEWER PLAN
C-303	GDP U/G UTILITY AND SEWER PLAN
C-304	GDP U/G UTILITY AND SEWER PLAN
C-305	GDP U/G UTILITY AND SEWER PLAN
C-306	GDP U/G UTILITY AND SEWER PLAN
C-307	GDP U/G UTILITY AND SEWER PLAN
C-308	GDP U/G UTILITY AND SEWER PLAN
C-309	GDP U/G UTILITY AND SEWER PLAN
C-401	GDP FIRE WATER PLAN
C-402	GDP FIRE WATER PLAN
C-403	GDP FIRE WATER PLAN
C-501	GDP GRADING AND DRAINAGE PLAN
C-502	GDP GRADING AND DRAINAGE PLAN
C-503	GDP GRADING AND DRAINAGE PLAN
C-504	GDP GRADING AND DRAINAGE PLAN
C-505	GDP GRADING AND DRAINAGE PLAN
C-506	GDP GRADING AND DRAINAGE PLAN
C-507	GDP GRADING AND DRAINAGE PLAN
C-508	GDP GRADING AND DRAINAGE PLAN
C-509	GDP GRADING AND DRAINAGE PLAN

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Department of Administration
Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

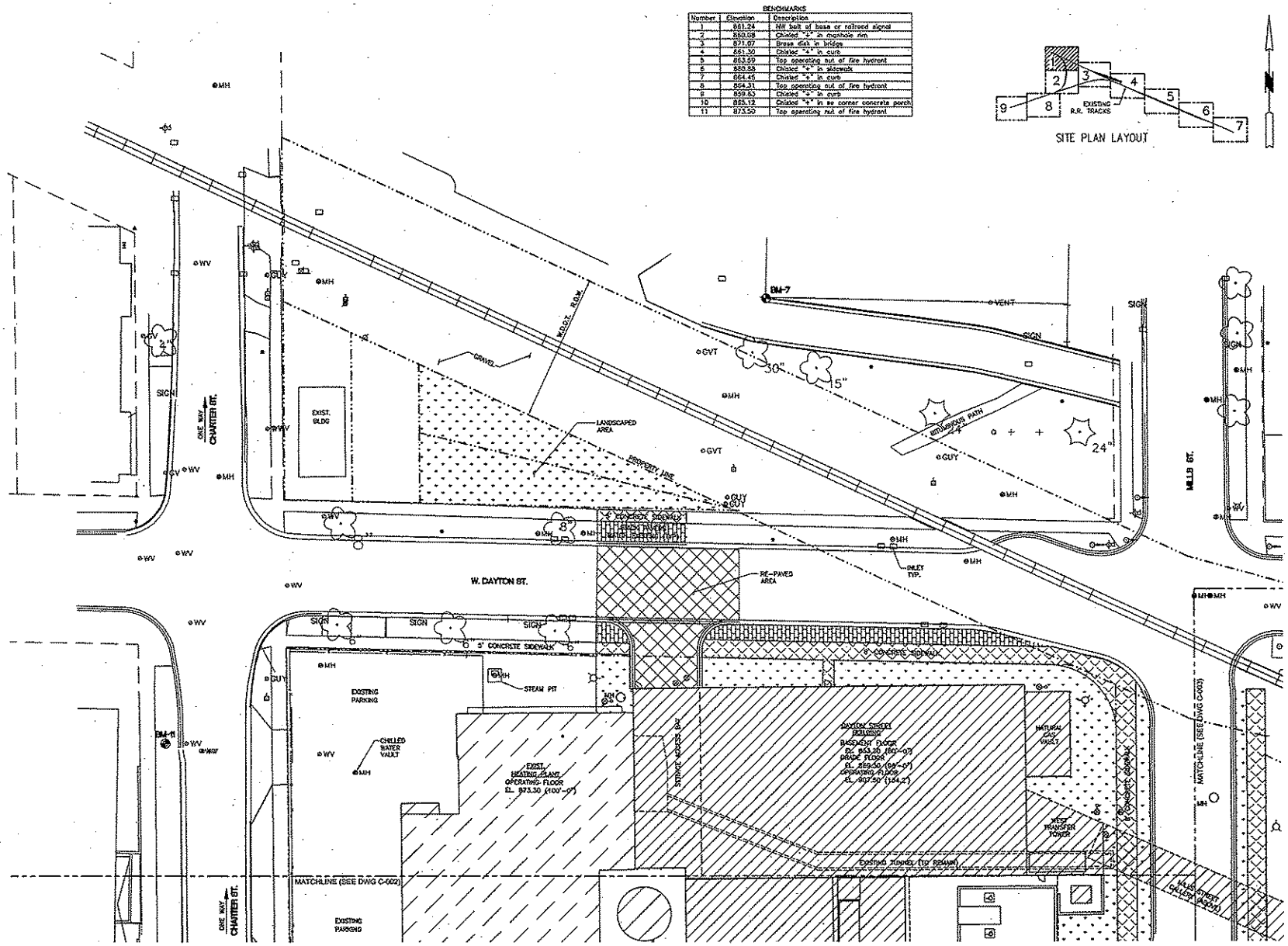
Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI

Sheet Title: GDP COVER SHEET

Revisions:			
No.	Date:	By:	Description:
1	03-10-10	MD	GDP SUBMITAL

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-000



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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GSP SITE PLAN

Revisions:			
No.	Date:	By:	Description:
1	12-04-09	MG	FOR REVIEW
2	01-15-10	MG	FOR REVIEW
3	03-10-10	MG	GSP SUBMITTAL

Graphic Scale	20 0 20
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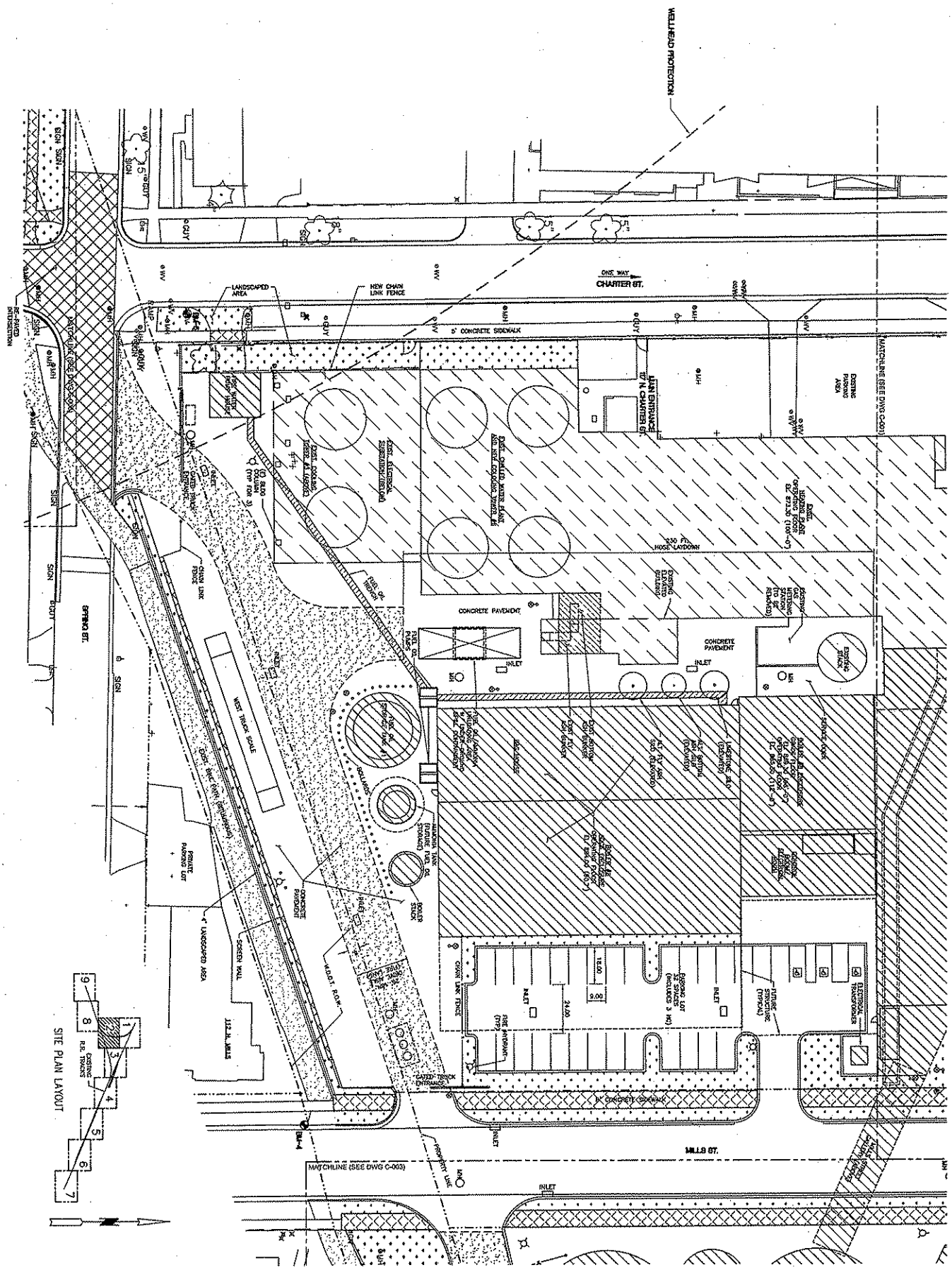
Date Issued	03-10-10
Sheet Number	C-001



Project Title: CHARTER STREET REBUILD	State of Wisconsin Department of Administration Division of State Facilities	PEC POWER ENGINEERS COLLABORATIVE LLC	middough Potter Lawson
Project Location: MADISON, WI.		PÖYRY	
Sheet Title: GDP SITE PLAN	Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON		

Sheet Number	Date Issued	Set Type	BSF Number	Graphic Scale
C-002	03-10-10	PR	0942L	

No.	Date	Description
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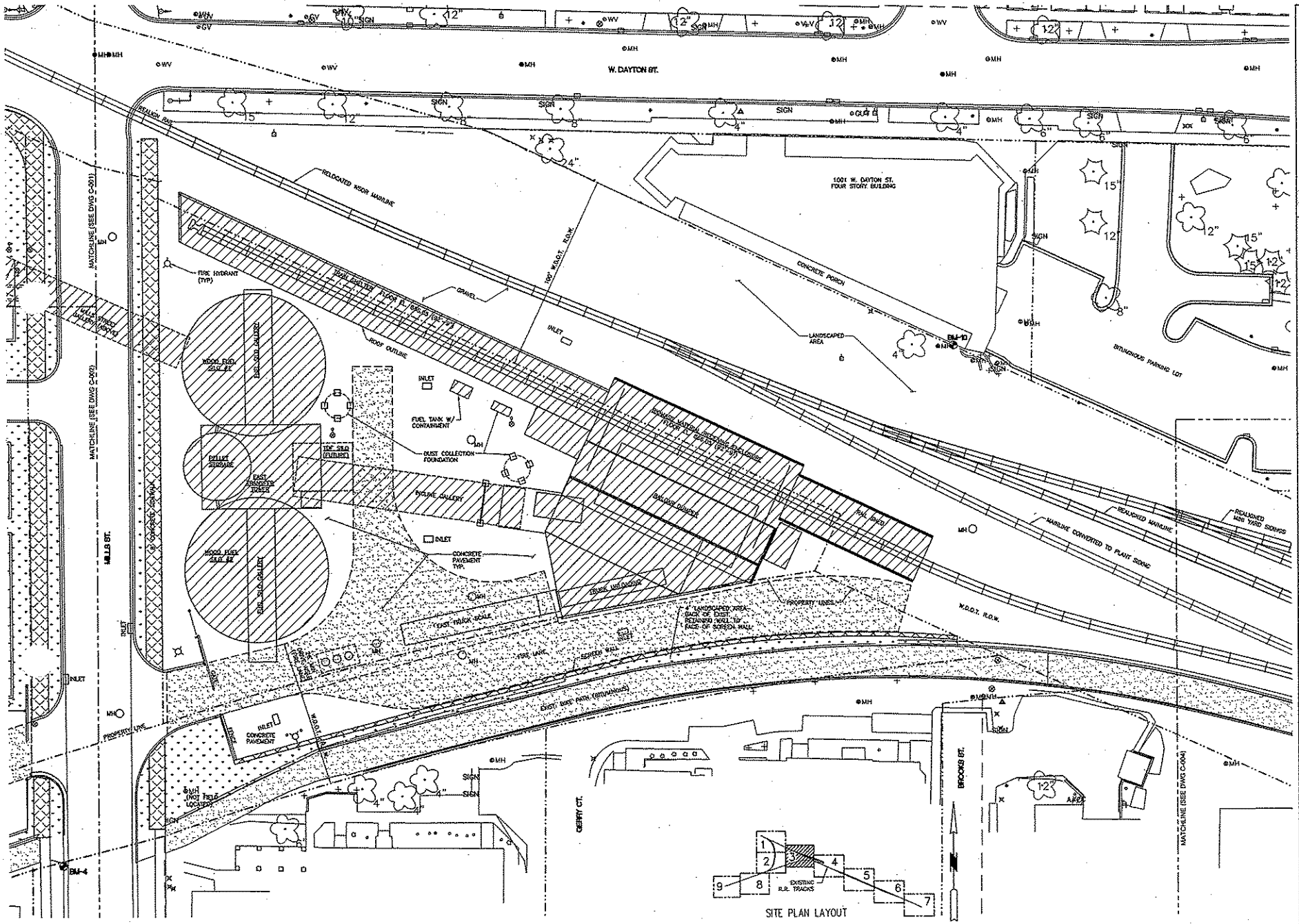
2	01-15-10	GDP REVIEW
3	03-10-10	PR REVIEW



SITE PLAN LAYOUT

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Project Title:
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Project Location:
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Sheet Title:
GDP SITE PLAN

Revisions:			
No.	Date:	By:	Description:
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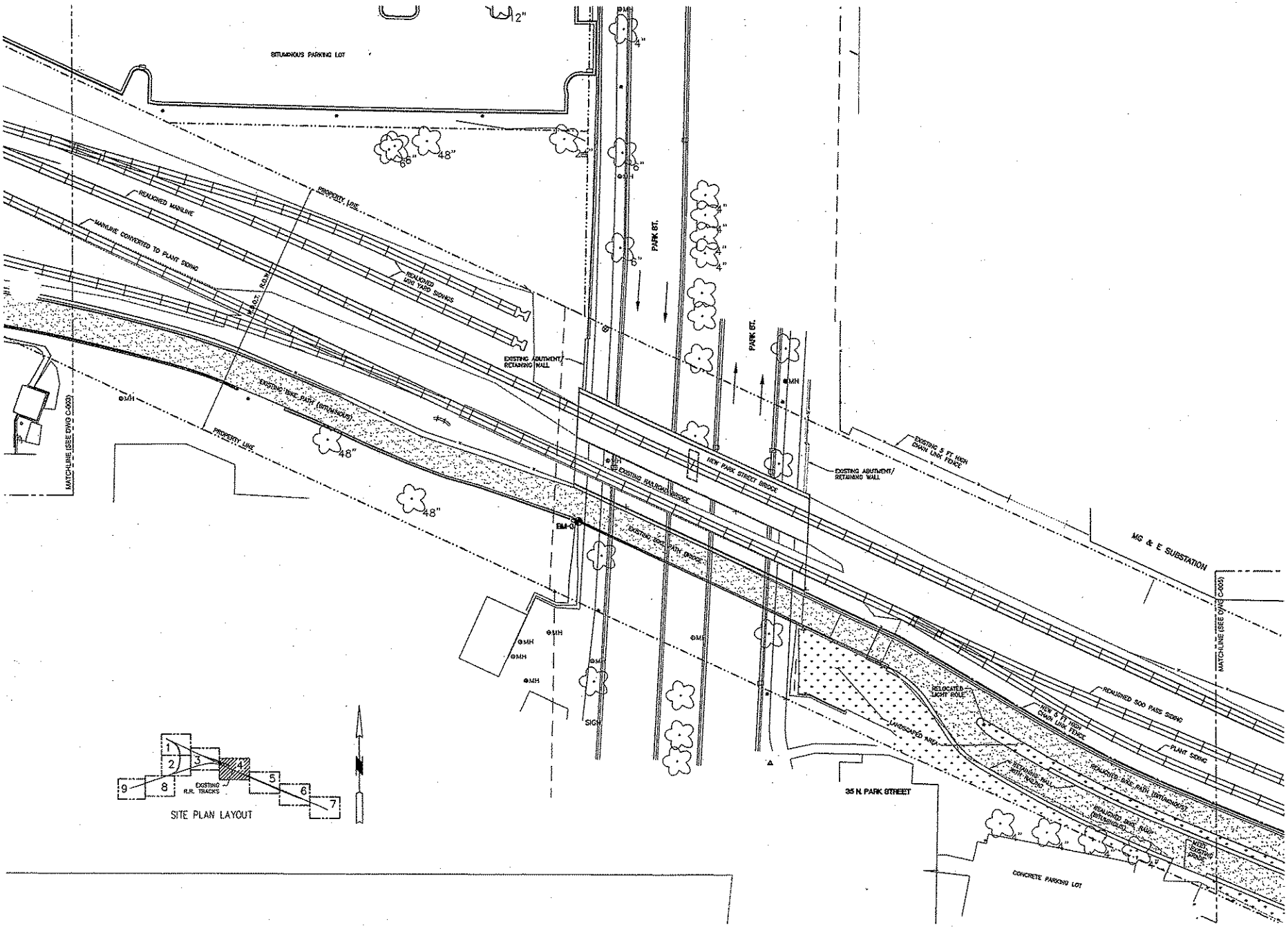

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Project Title:
CHARTER STREET REBUILD

Project Location:
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Sheet Title:
GDP SITE PLAN

Revisions:			
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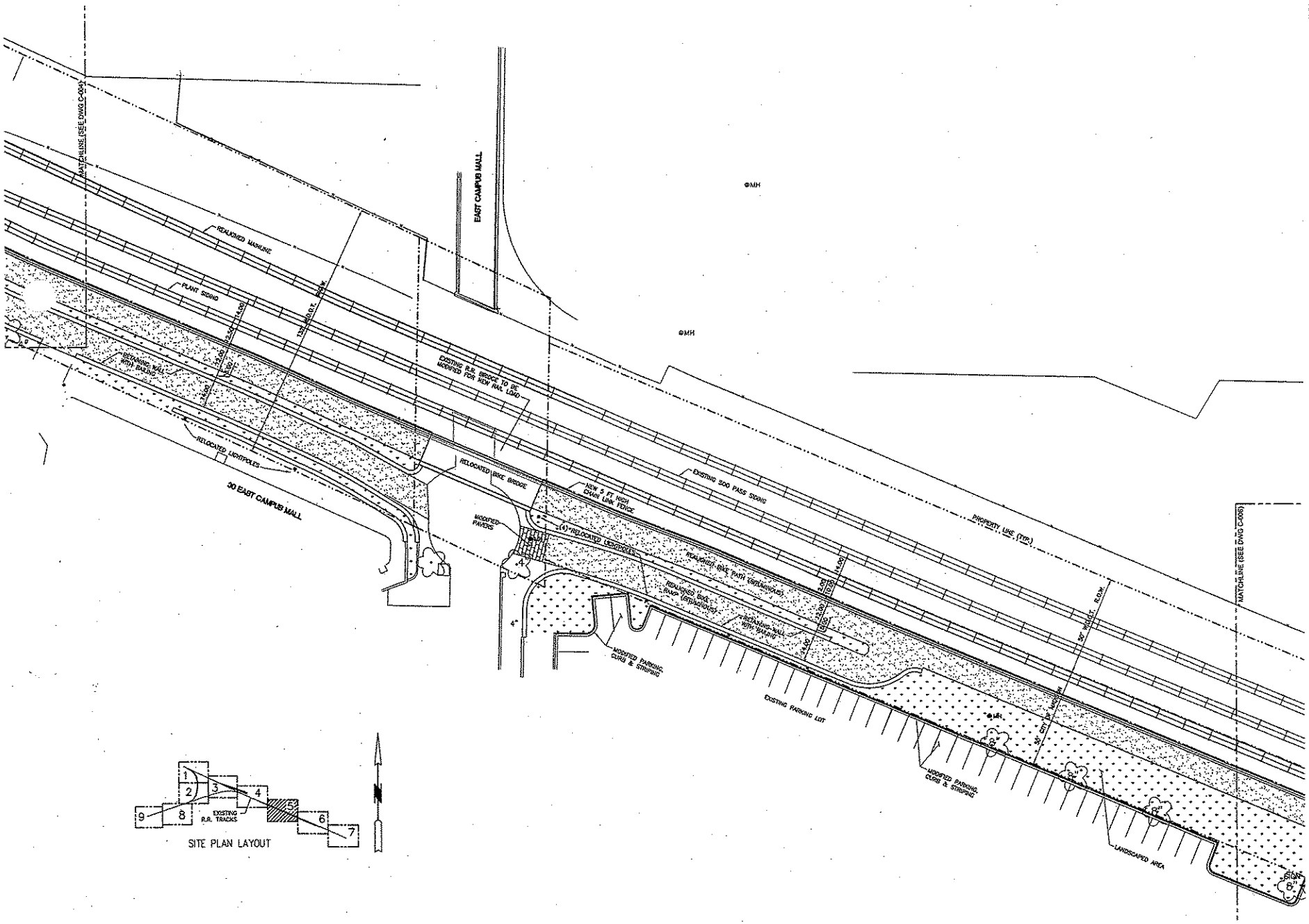

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Project Location:
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Sheet Title:
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No.	Date:	By:	Description:
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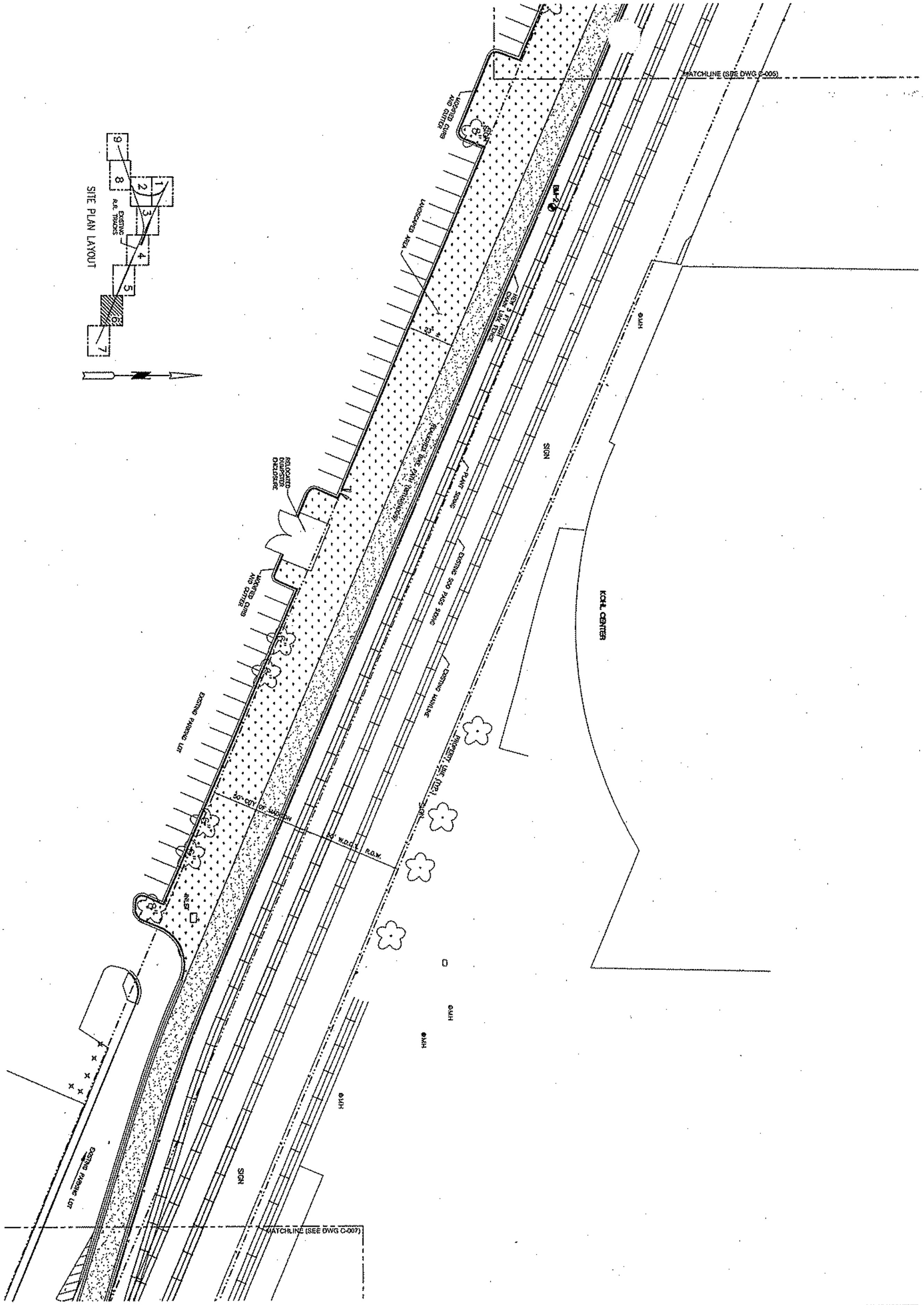

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C-006	03-10-10	PR	09A2L	

Revisions:

No.	Date	By	Description
1	03-10-10	NG	GDP SUBMITTAL

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP SITE PLAN

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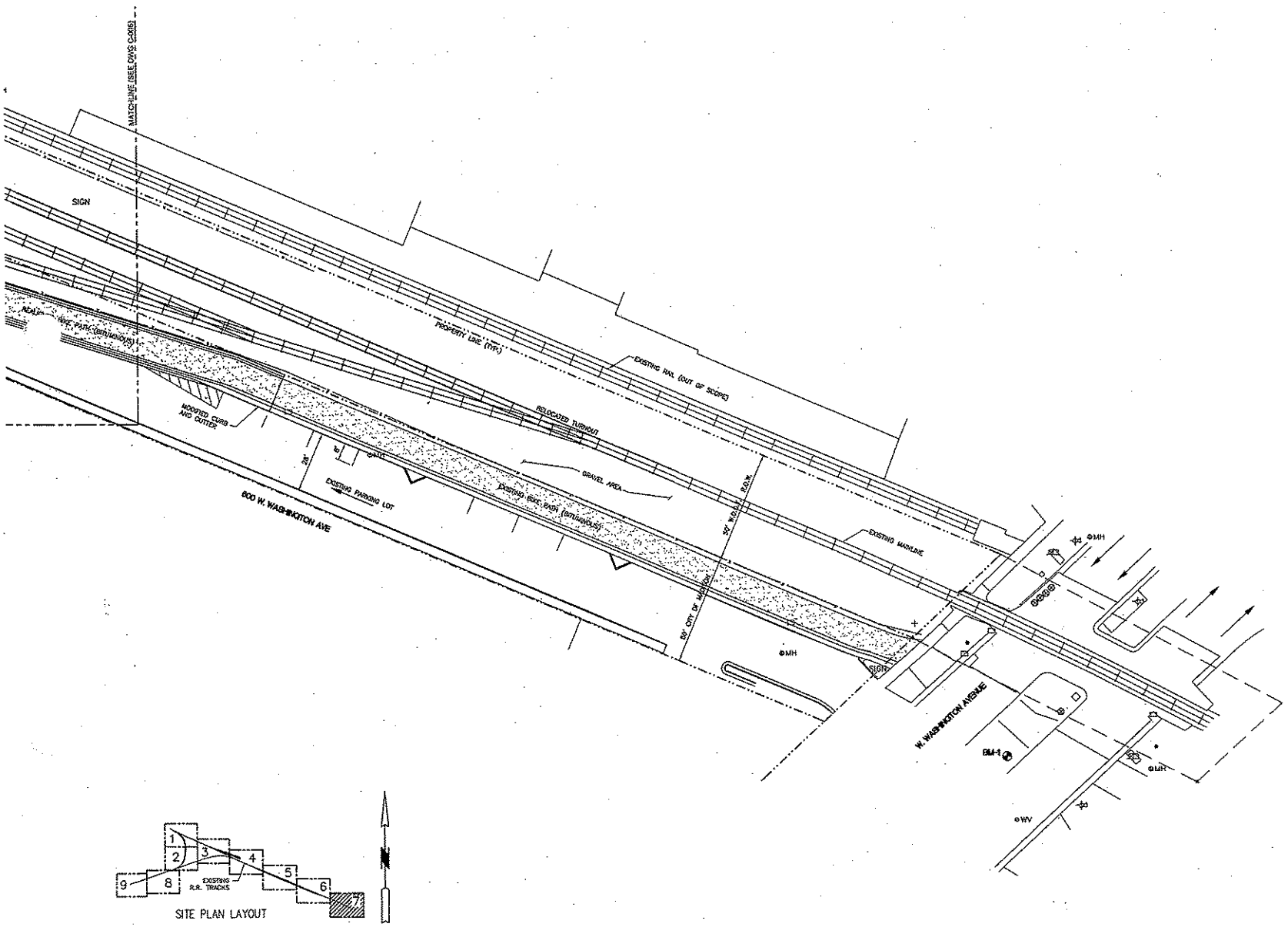

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Project Title:
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Project Location:
MADISON, WI.

Sheet Title:
GDP SITE PLAN

Revisions:			
No.	Date:	By:	Description:
1	03-10-10	MD	GDP SUBMITTAL

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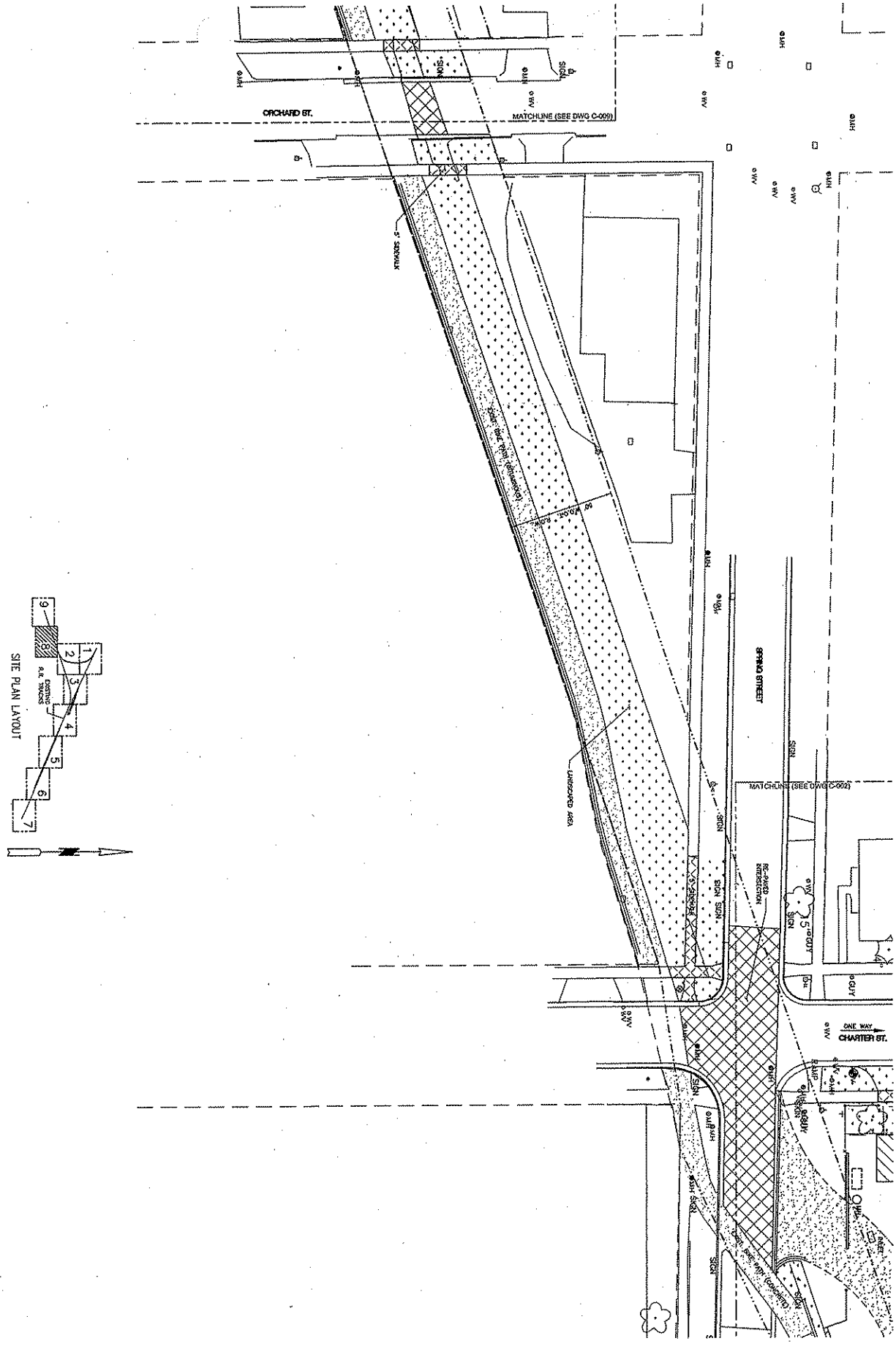
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-007



CHARTER ST.
ONE WAY

Sheet Number	Set Type	GDP Number	Graphic Scale
C-008	PR	09A2L	

Date Issued
03-10-10

Revisions

No.	Date	By	Description
1	03-10-10	MD	GDP SUBMITTAL

Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP SITE PLAN

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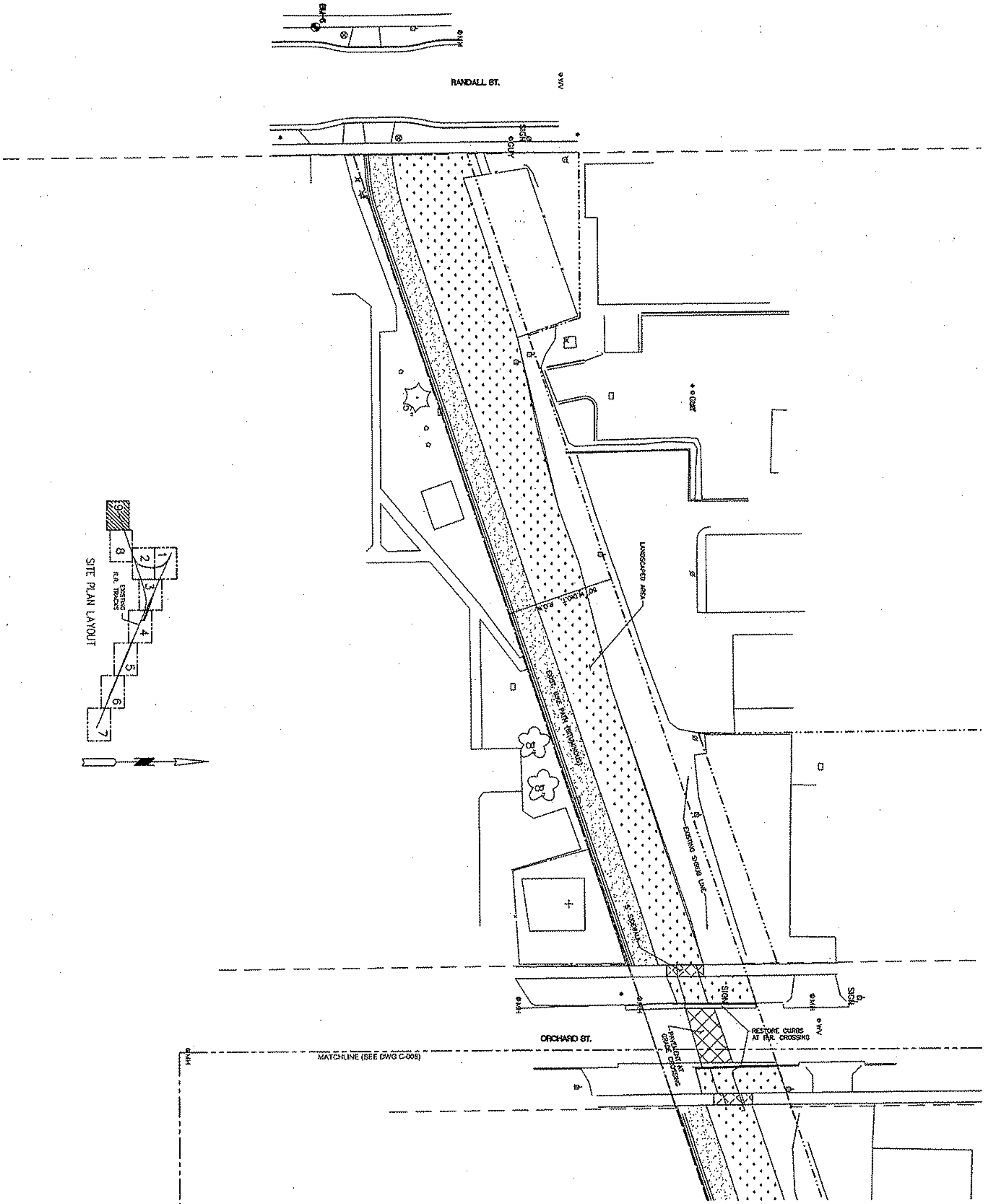

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP SITE PLAN

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Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

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△	03-10-10	MCI	GDP SUBMITTAL

Graphic Scale	
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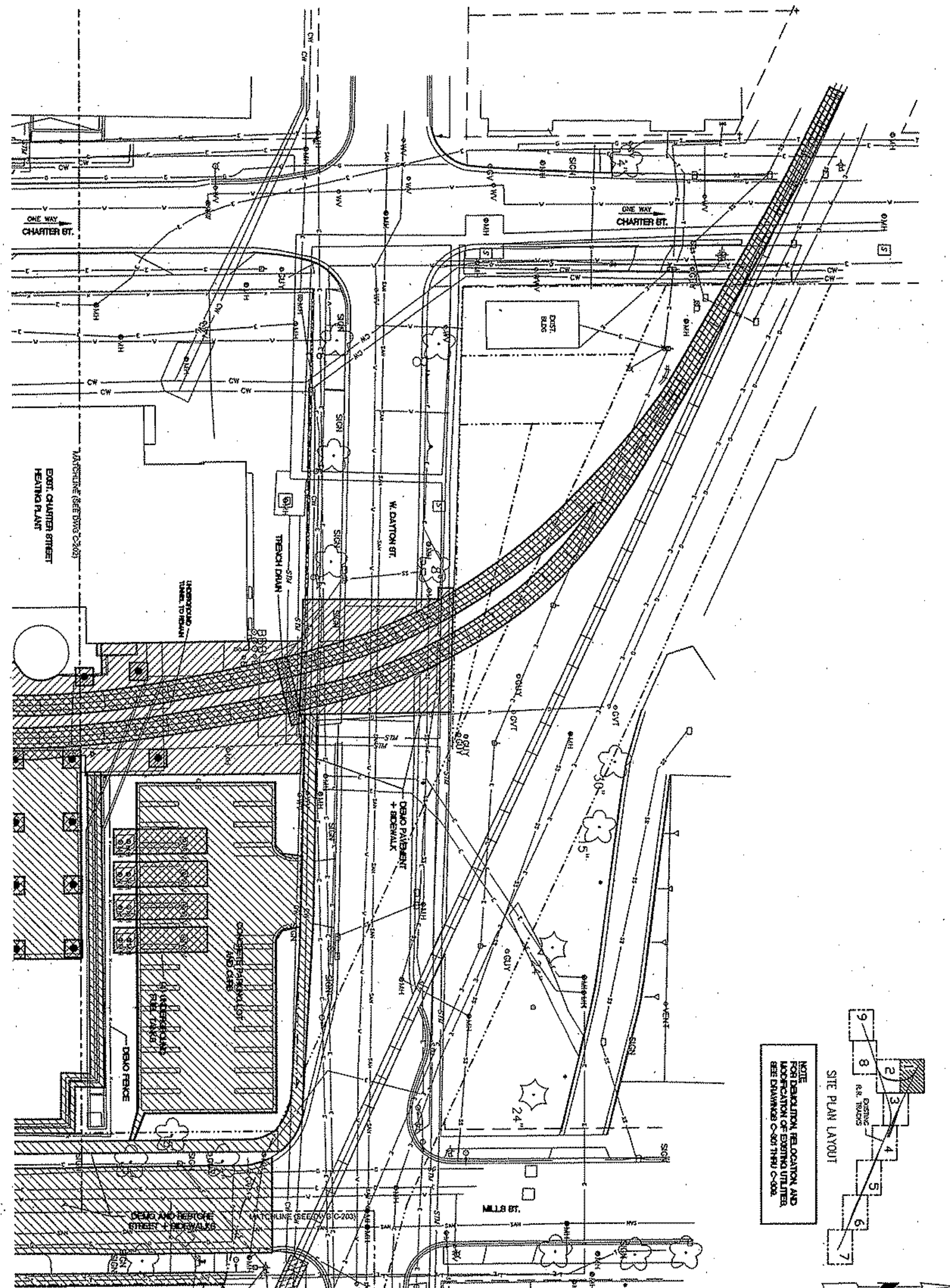
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-009



Project Title:	CHARTER STREET REBUILD
Project Location:	MADISON, WI.
Sheet Title:	GDP DEMOLITION PLAN

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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

Revisions: No.	Date	By	Description
1	01-20-10	MG	FOR REVIEW
2	03-10-10	MG	GDP SUBMITTAL

DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-201

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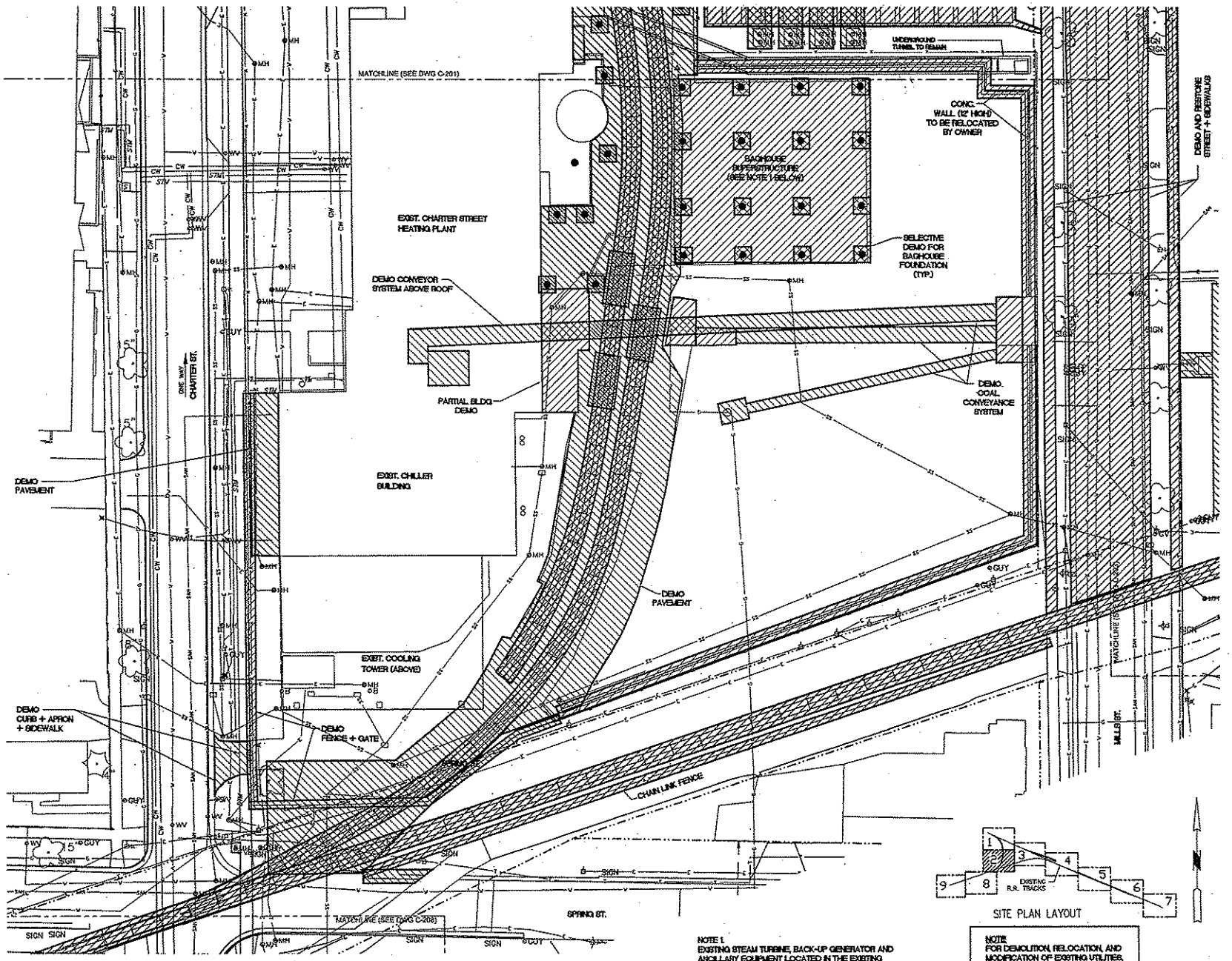

NOTE 1
EXISTING STEAM TURBINE, BACK-UP GENERATOR AND ANCILLARY EQUIPMENT LOCATED IN THE EXISTING BAGHOUSE TO BE SALVAGED AND RELOCATED.

NOTE
FOR DEMOLITION, RELOCATION, AND MODIFICATION OF EXISTING UTILITIES, SEE DRAWINGS C-301 THRU C-309.

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Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP DEMOLITION PLAN

Revisions			
No.	Date:	By:	Description:
1	01-20-10	MD	FOR REVIEW
2	03-10-10	MD	GDP SUBMITAL

Graphic Scale	10 0 20
OSF Number	09A2L
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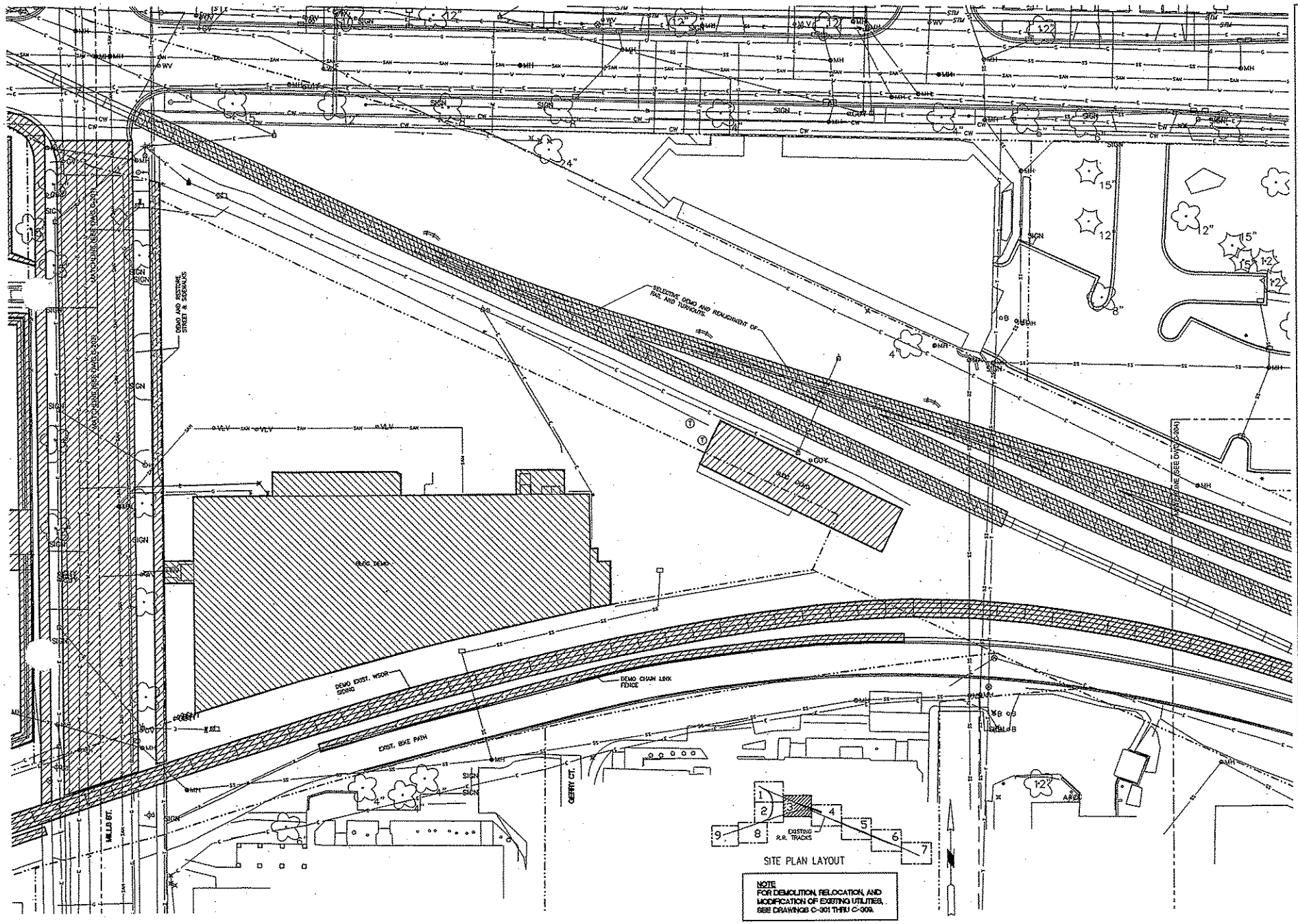
Date Issued	03-10-10
Sheet Number	C-202



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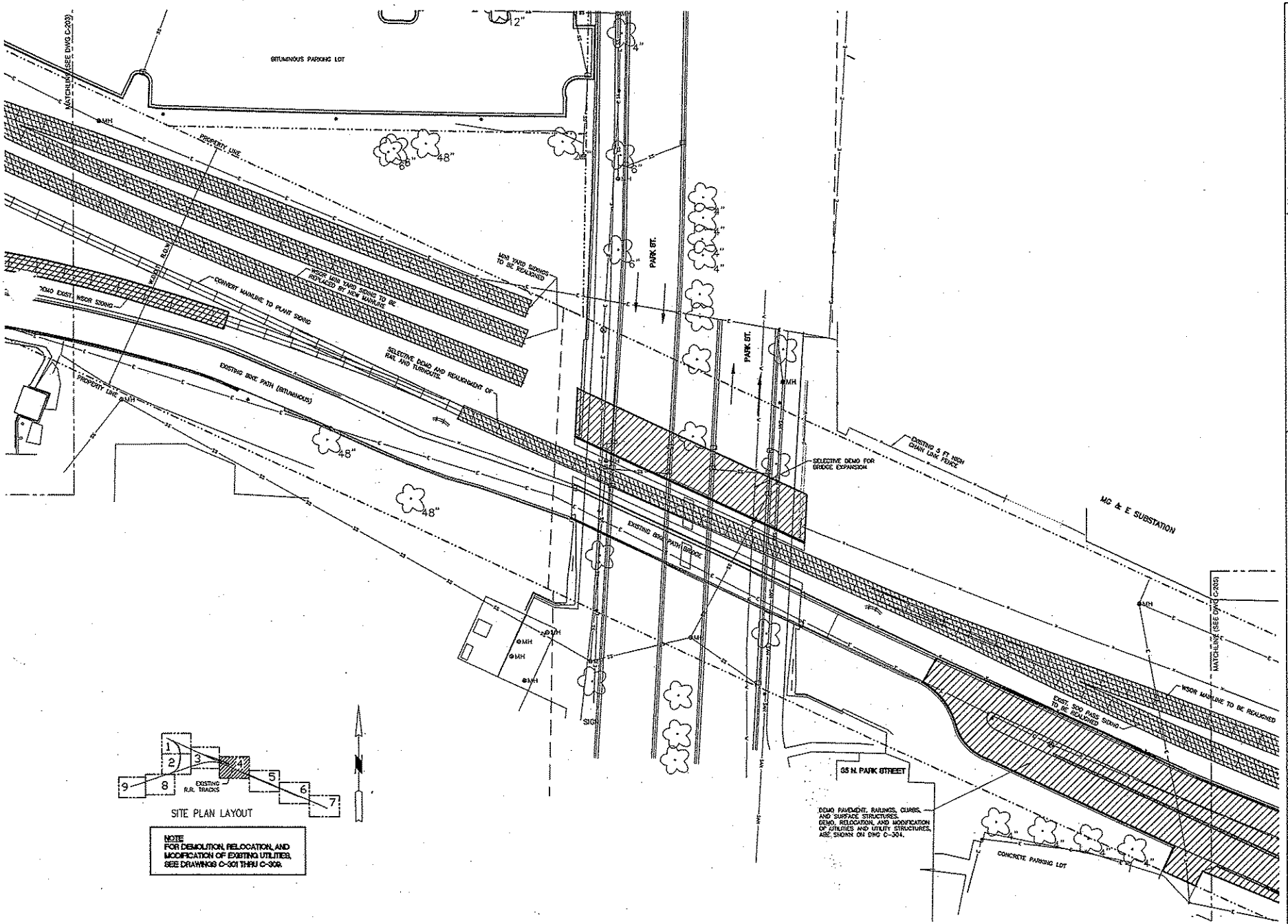
Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP DEMOLITION PLAN

Revisions:			
No.	Date:	By:	Description:
1	03-10-10	MS	GDP SUBMITTAL

Graphic Scale	
OSF Number	09A2L
SH Type	PR
Date Issued	03-10-10
Sheet Number	C-203



SITE PLAN LAYOUT

NOTE
FOR DEMOLITION, RELOCATION, AND MODIFICATION OF EXISTING UTILITIES, SEE DRAWINGS C-301 THRU C-309.

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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP DEMOLITION PLAN

Revisions:			
No.	Date:	By:	Description:
1	03-10-10	MG	GDP SUBMITTAL

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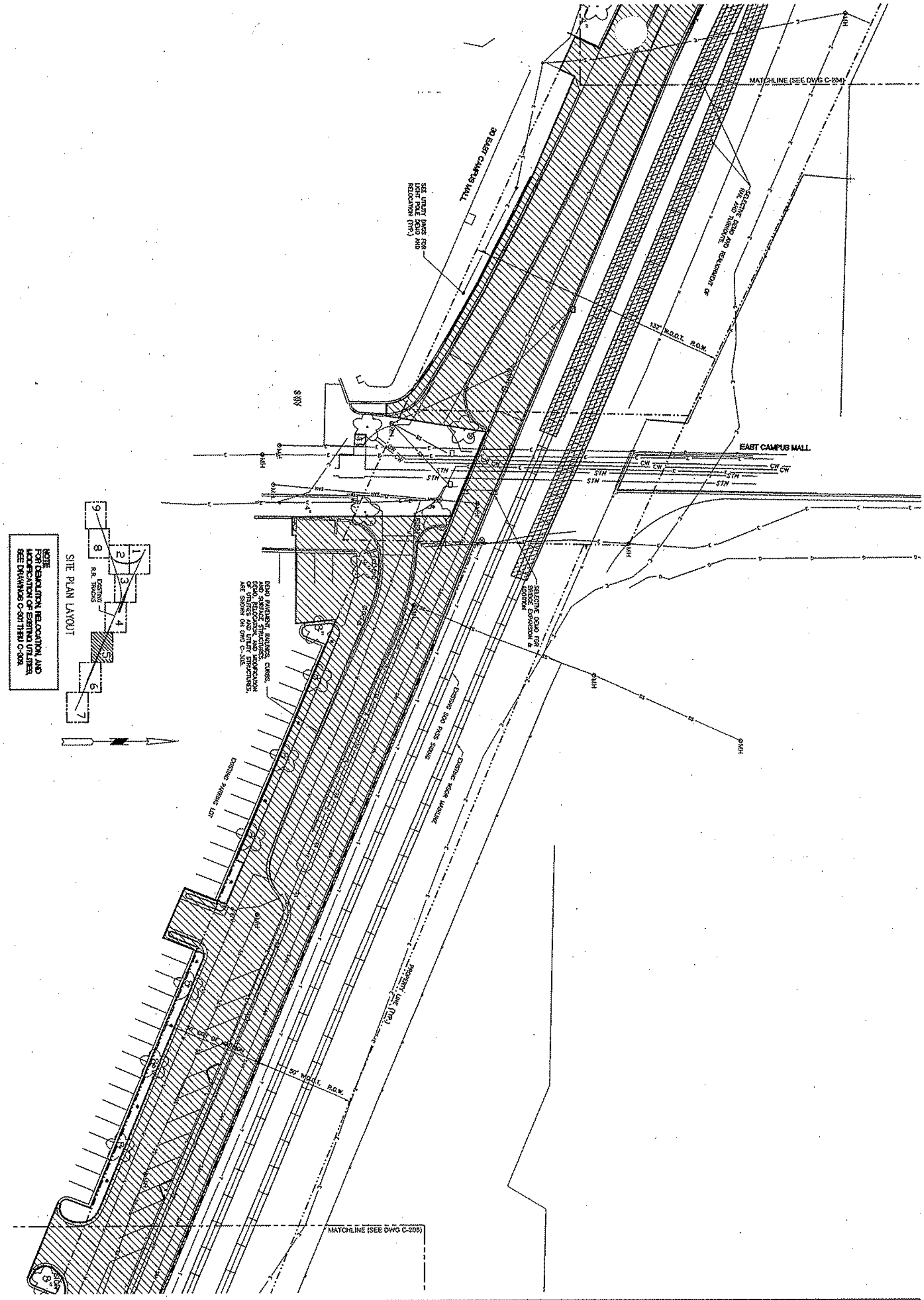

Project Title:	CHARTER STREET REBUILD
Project Location:	MADISON, WI.
Sheet Title:	GDP DEMOLITION PLAN
Agency / Institution:	UNIVERSITY OF WISCONSIN, MADISON

State of Wisconsin
Department of Administration
Division of State Facilities

Revisions:

No.	Date	By	Description
1	03-10-10	MG	GDP SUBMITTAL

DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-205

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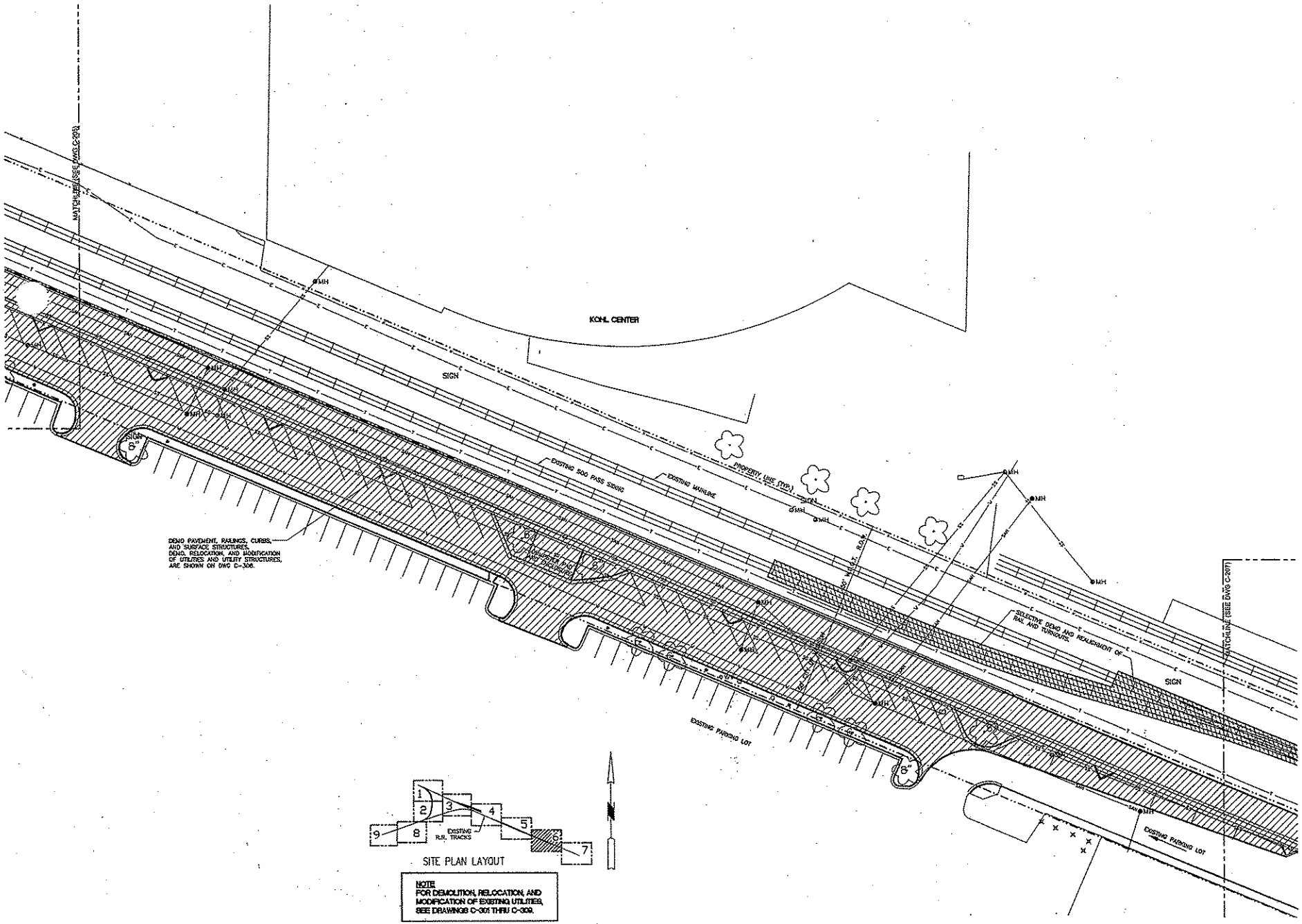

SITE PLAN LAYOUT

NOTE
FOR DEMOLITION, RELOCATION, AND MODIFICATION OF EXISTING UTILITIES, SEE DRAWINGS C-301 THRU C-309.

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Agency / Institution:
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Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP DEMOLITION PLAN

Revisions:

No.	Date:	By:	Description:
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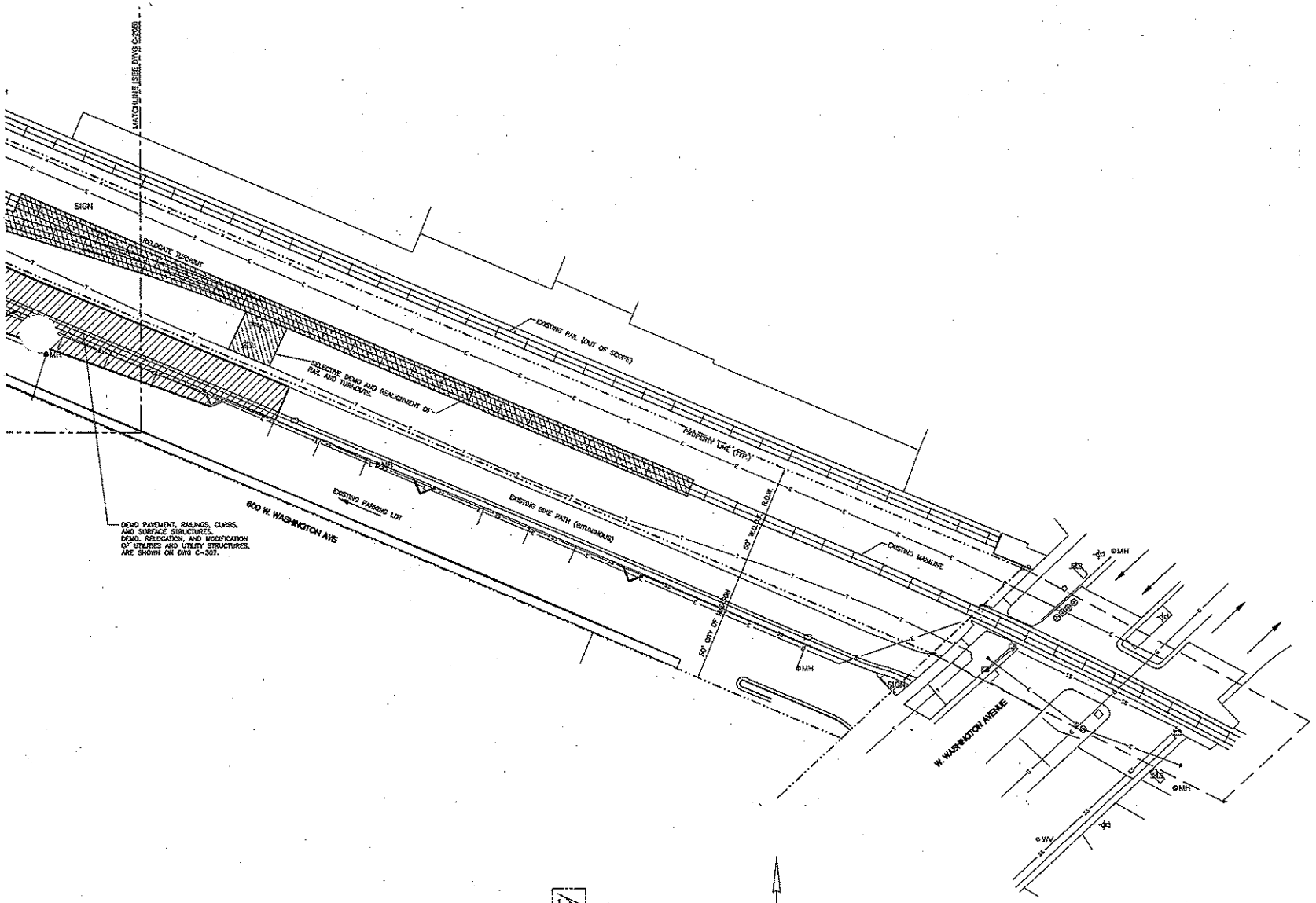
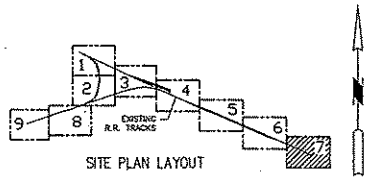
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-206





SITE PLAN LAYOUT

NOTE
FOR DEMOLITION, RELOCATION, AND MODIFICATION OF EXISTING UTILITIES, SEE DRAWINGS C-301 THRU C-309.

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Department of Administration
Division of State Facilities

Agency / Institution:
UNIVERSITY OF WISCONSIN, MADISON

Project Title:
CHARTER STREET REBUILD

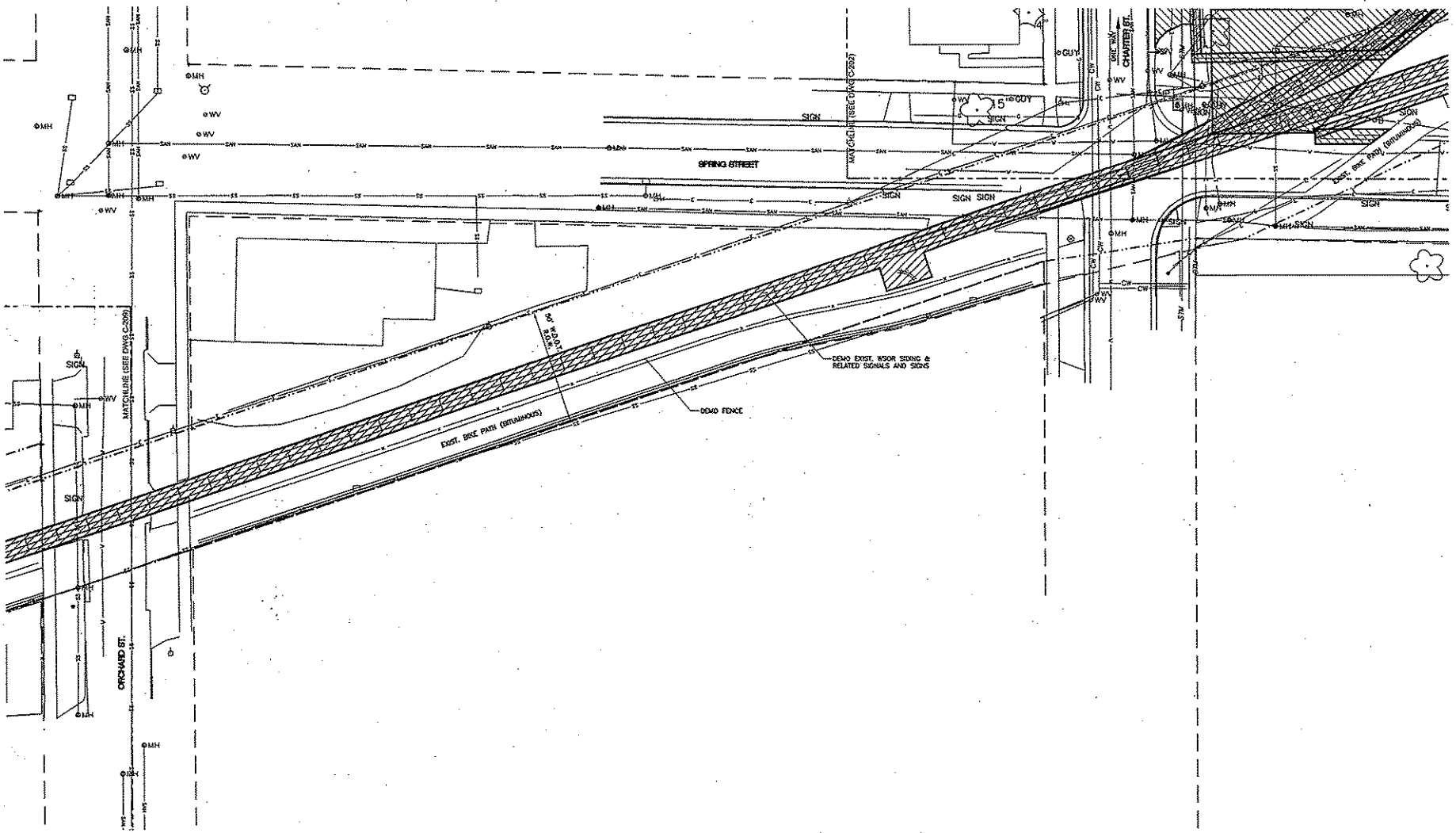
Project Location:
MADISON, WI

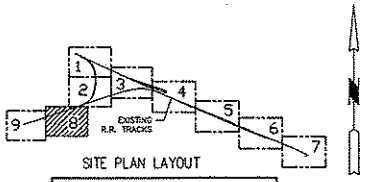
Sheet Title:
GDP DEMOLITION PLAN

Revisions:

No.	Date	By:	Description
1	03-10-10	MS	GDP SUBMITTAL

Graphic Scale	10 0 20
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-207





SITE PLAN LAYOUT

NOTE
FOR DEMOLITION, RELOCATION, AND MODIFICATION OF EXISTING UTILITIES, SEE DRAWINGS C-201 THRU C-209.

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Agency / Institution:
UNIVERSITY OF WISCONSIN, MADISON

Project Title:
CHARTER STREET REBUILD

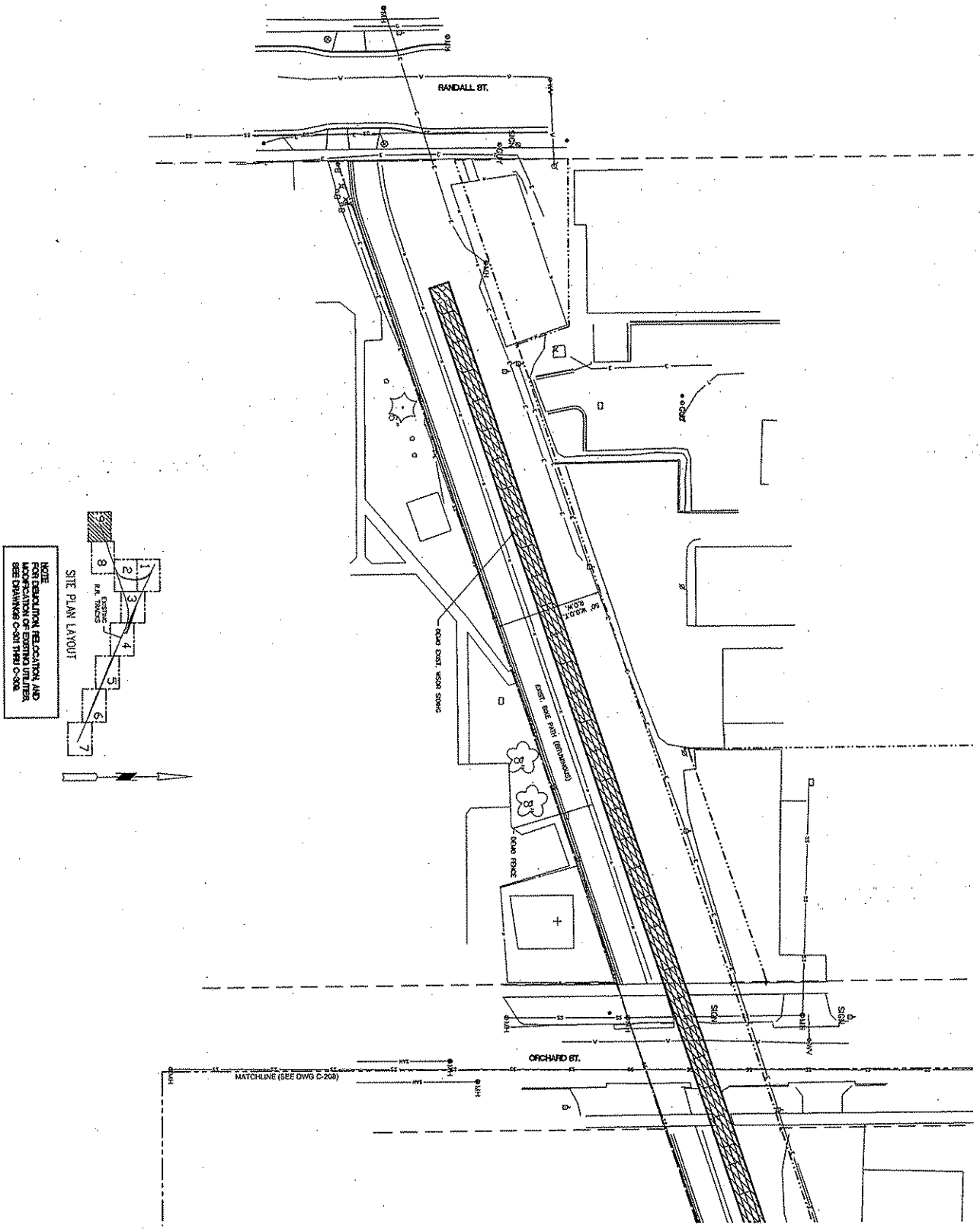
Project Location:
MADISON, WI

Sheet Title:
GDP DEMOLITION PLAN

Revisions:

No.	Date	By	Description
1	03-10-10	MCB	GDP SUBMITTAL

Graphic Scale	0 10 20
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-208



Project Title:	CHARTER STREET REBUILD
Project Location:	MADISON, WI.
Sheet Title:	GDP DEMOLITION PLAN
	State of Wisconsin Department of Administration Division of State Facilities
Agency / Institution:	UNIVERSITY OF WISCONSIN, MADISON
Sheet Number	C-209
Issue Date	03-10-10
Set Type	PR
Job Number	09A2L
Graphic Scale	
Revisions	1 03-10-10 MD GDP SUBMITTAL

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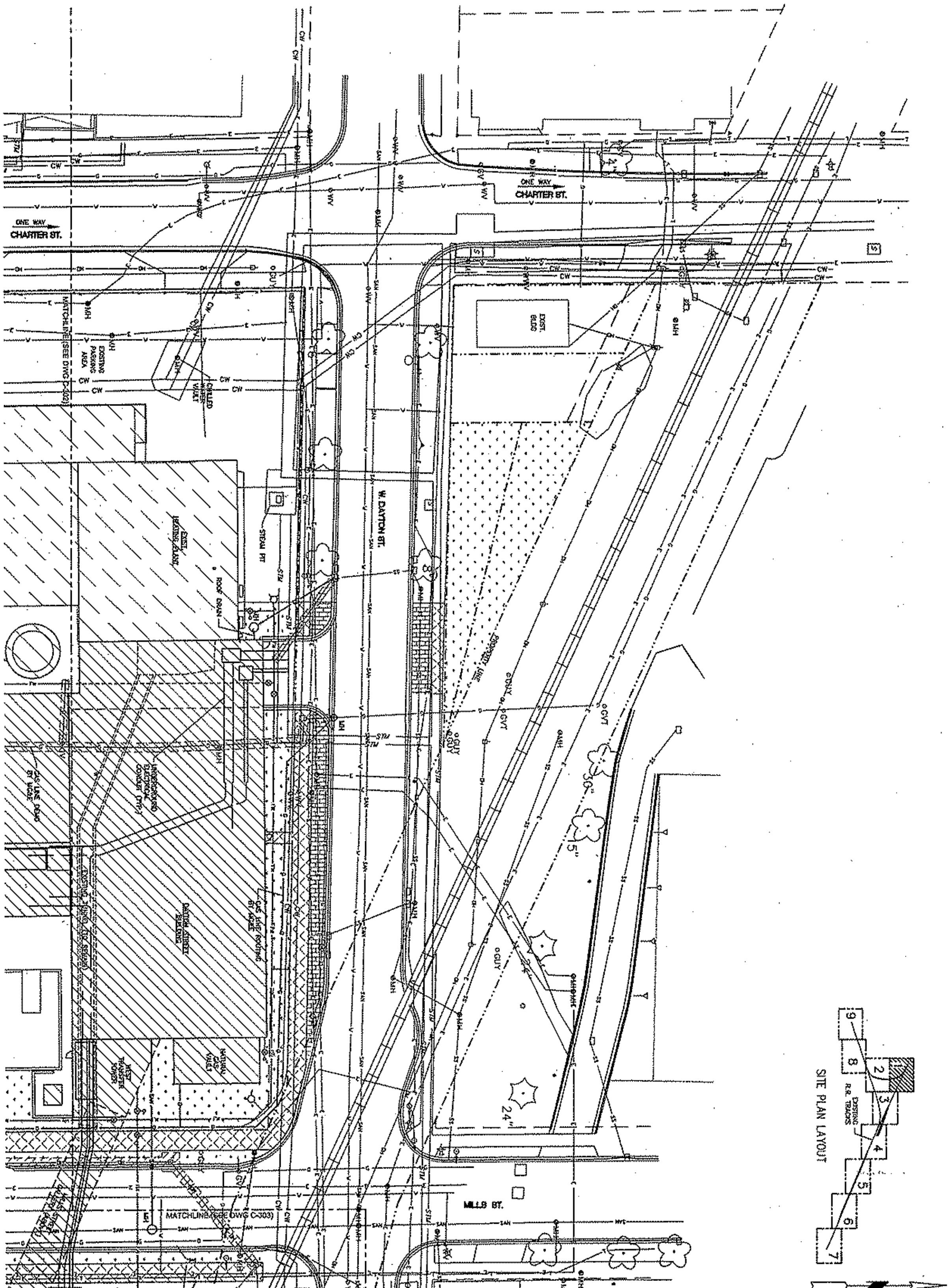

Sheet Number	C-301
Date Issued	03-10-10
SA Type	PR
DSF Number	09A2L
Graphic Scale	

Revisions:

No.	Date	By	Description
1	03-10-10	MO	GDP SUBMITTAL

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP UTILITIES PLAN

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Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

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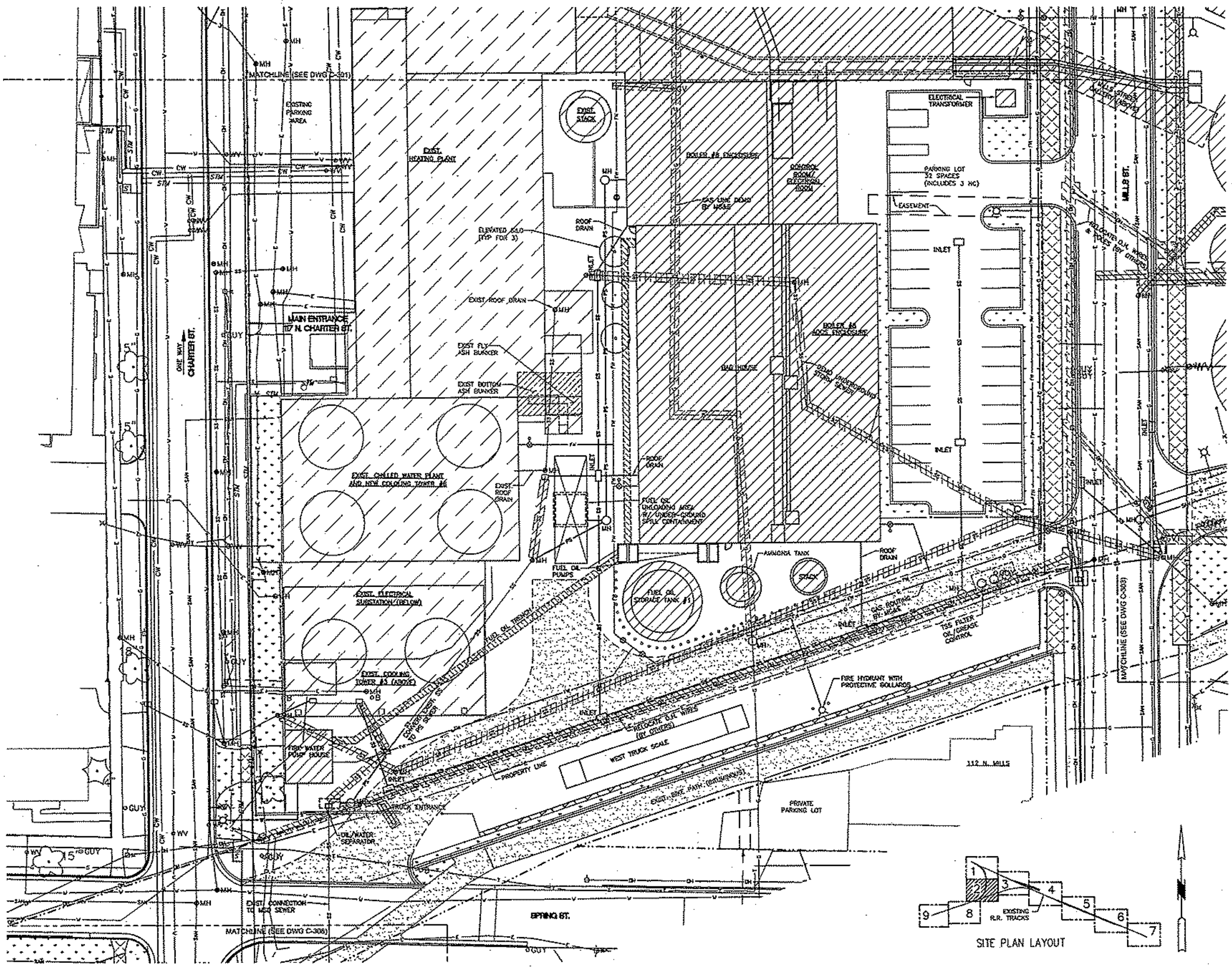

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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

Project Title: CHARTER STREET REBUILD

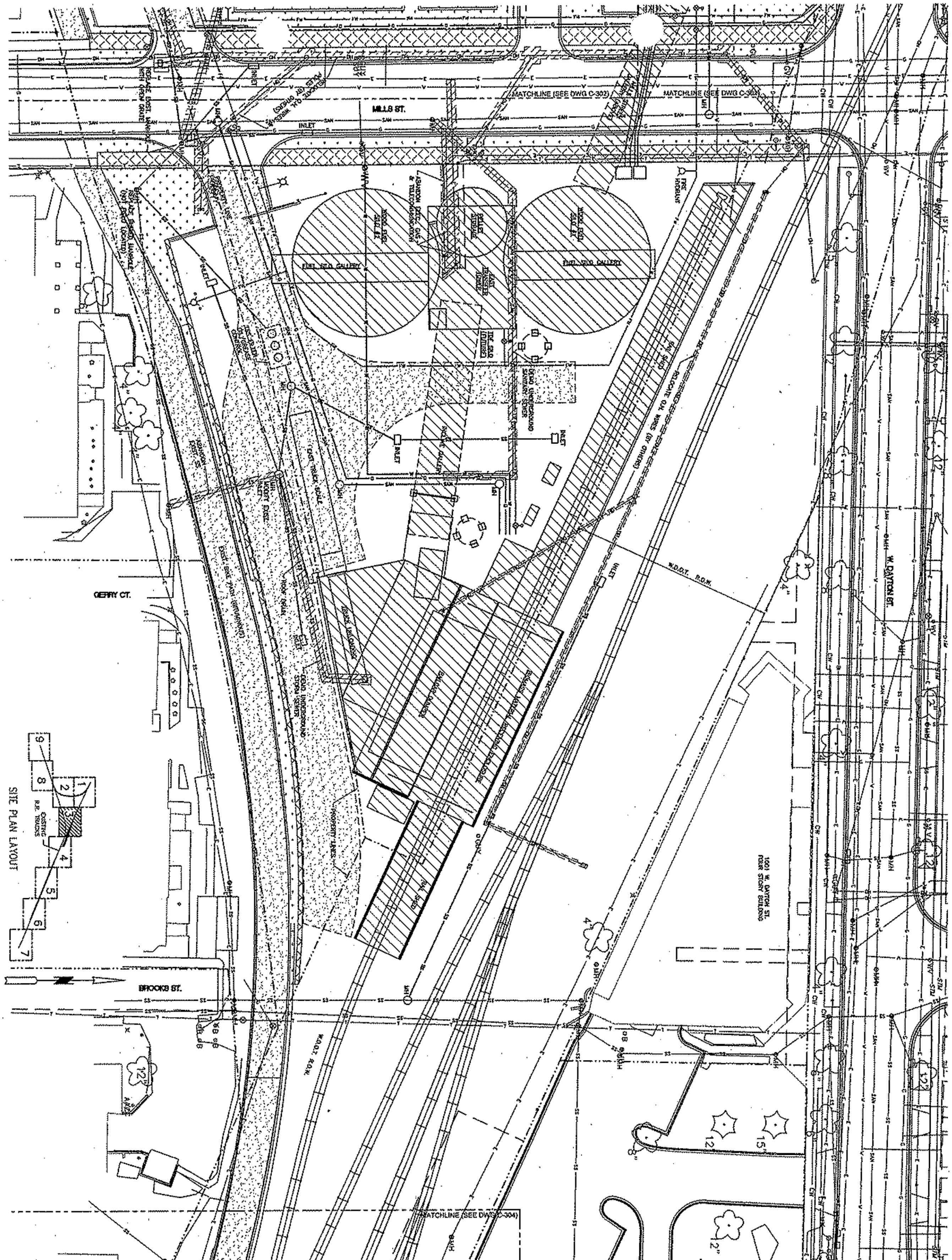
Project Location: MADISON, WI.

Sheet Title: GDP UTILITIES PLAN

Revisions:

No.	Date:	By:	Description:
△	03-10-10	MG	GDP SUBMITTAL

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-302



Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP UTILITIES PLAN

State of Wisconsin
Department of Administration
Division of State Facilities

Agency / Institution:
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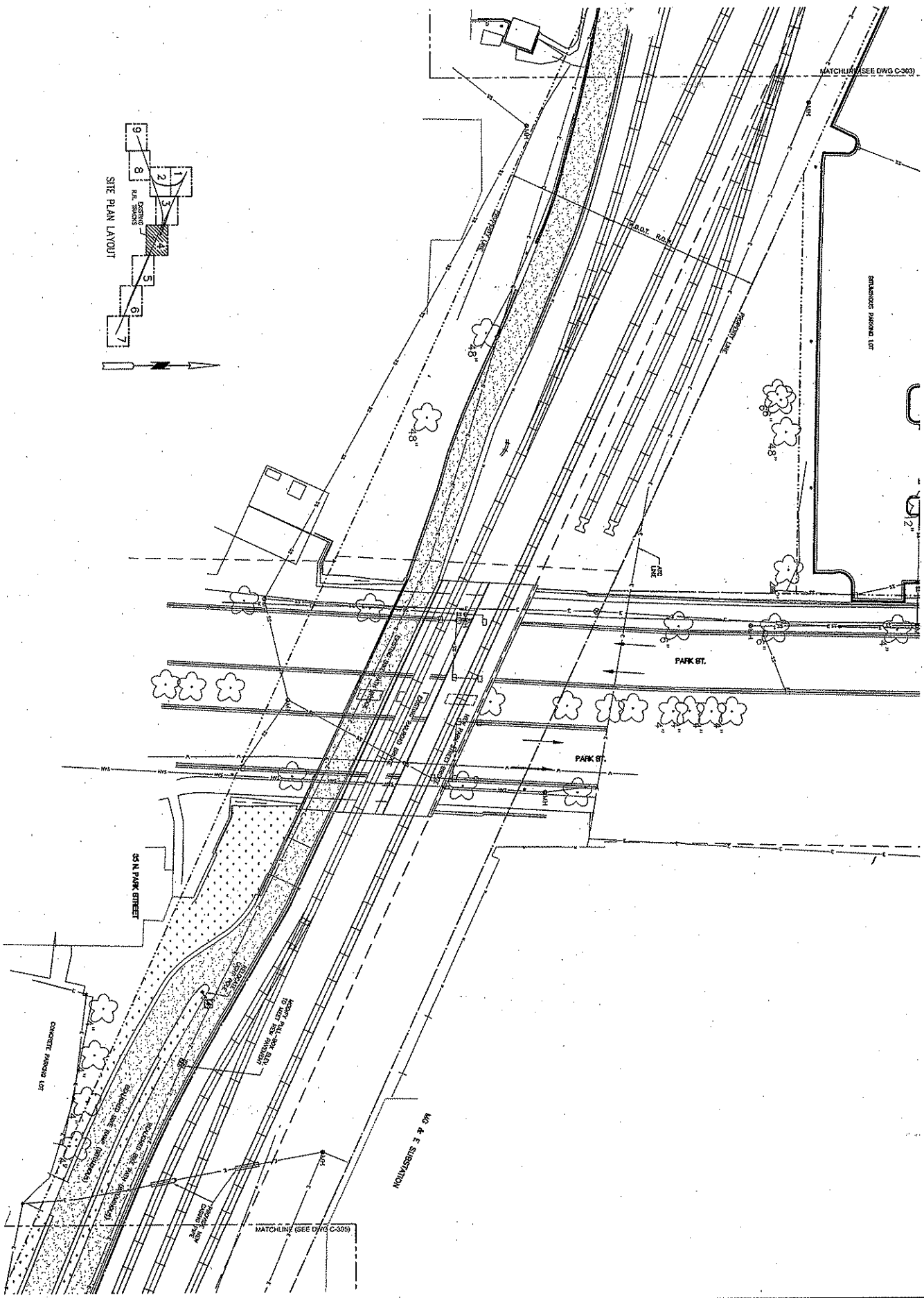
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-303

6



Sheet Number	Date Issued	Set Type	IDP Number	Graphic Scale
C-304	03-10-10	PR	09ACL	

No.	Date	By	Description
1	02-15-10		

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP UTILITIES PLAN

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Department of Administration
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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

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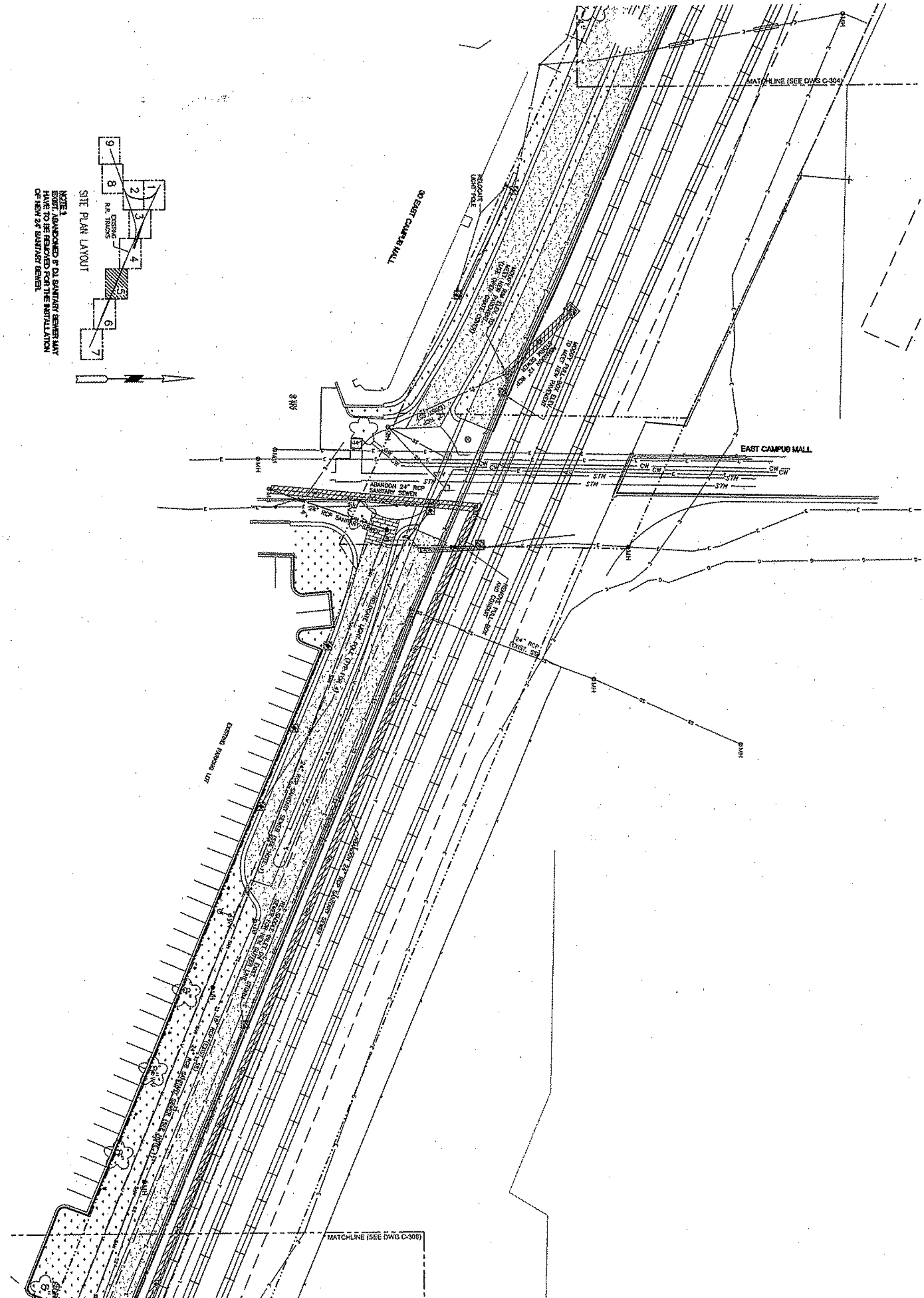

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP UTILITIES PLAN

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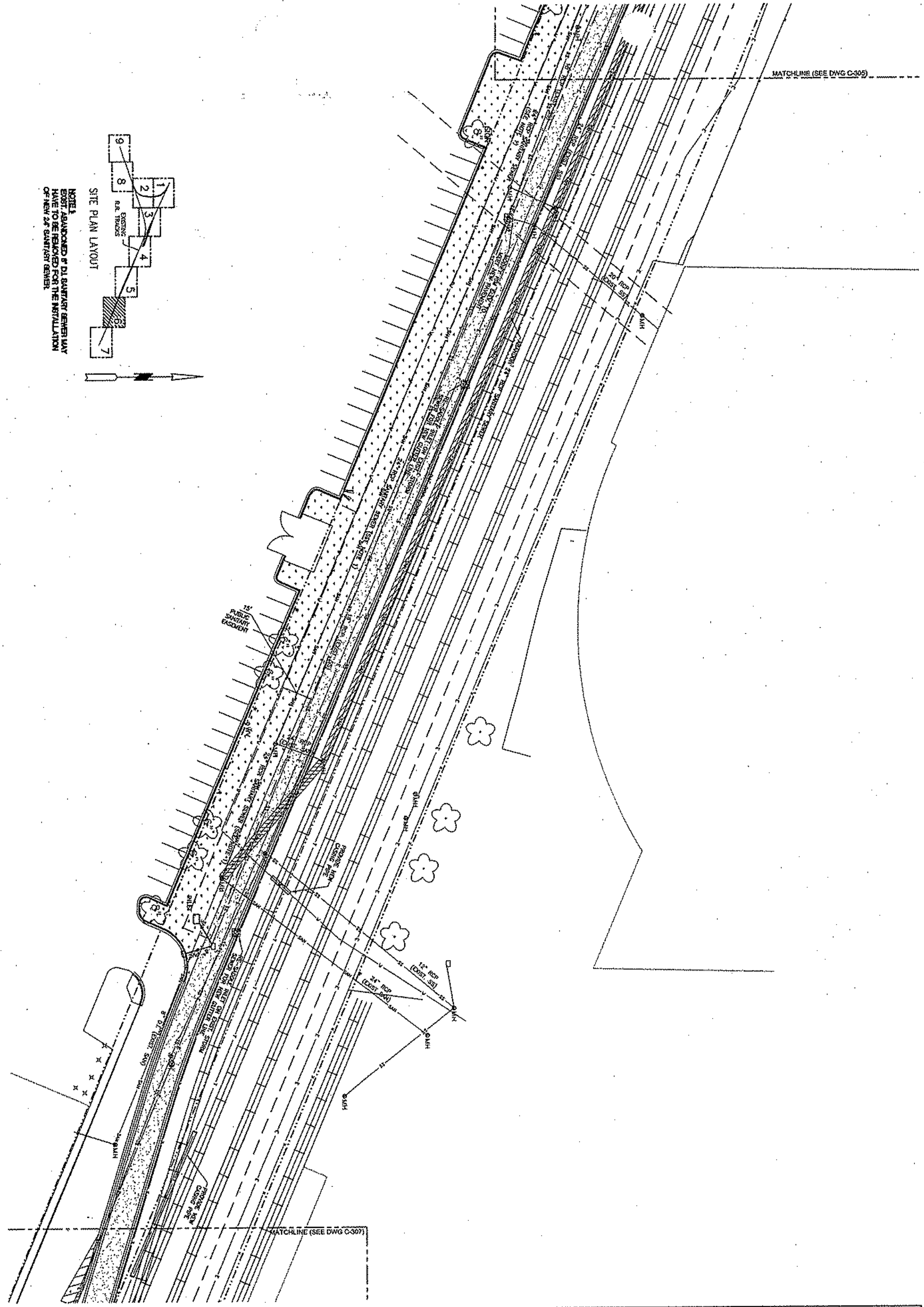
Sheet Number	Date Issued	Set Type	DSF Number
C-305	03-10-10	PR	09A2L

9



Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP UTILITIES PLAN

State of Wisconsin
Department of Administration
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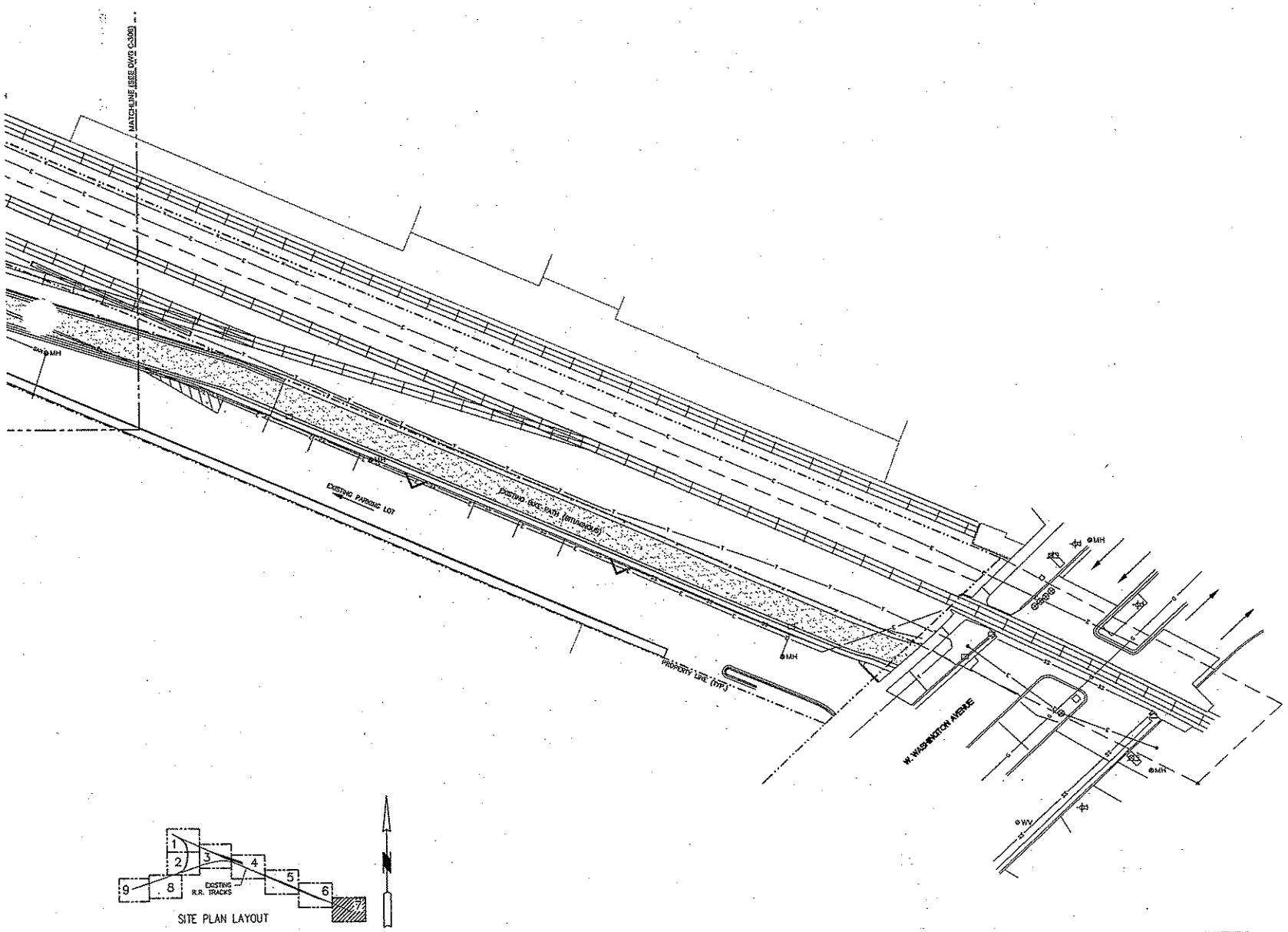
Revisions: No.	Date	By	Description
1	03-10-10	MD	GDP SUBMITTAL

Sheet Number	C-306
Date Issued	03-10-10
Set Type	PR
DSF Number	09A2L



NOTE
NO UTILITY MODIFICATIONS REQUIRED ON THIS SHEET. ISSUED FOR REFERENCE ONLY.

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Agency / Institution:
UNIVERSITY OF WISCONSIN, MADISON

Project Title:
CHARTER STREET REBUILD

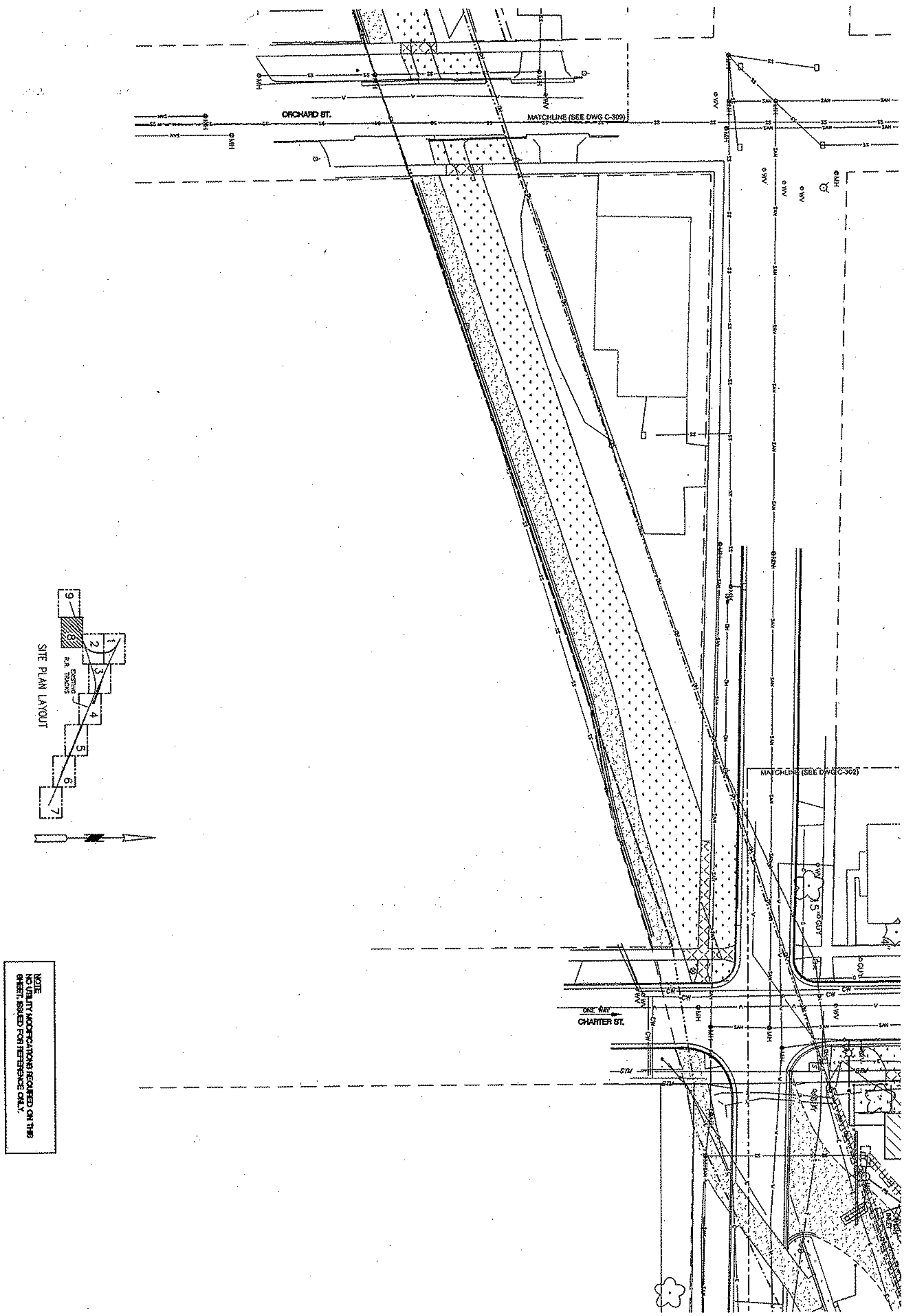
Project Location:
MADISON, WI.

Sheet Title:
GDP UTILITIES PLAN

Revisions:

No.	Date:	By:	Description:
1	03-10-10	MD	GDP SUBMITTAL

Graphic Scale	
OSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-307



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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP UTILITIES PLAN

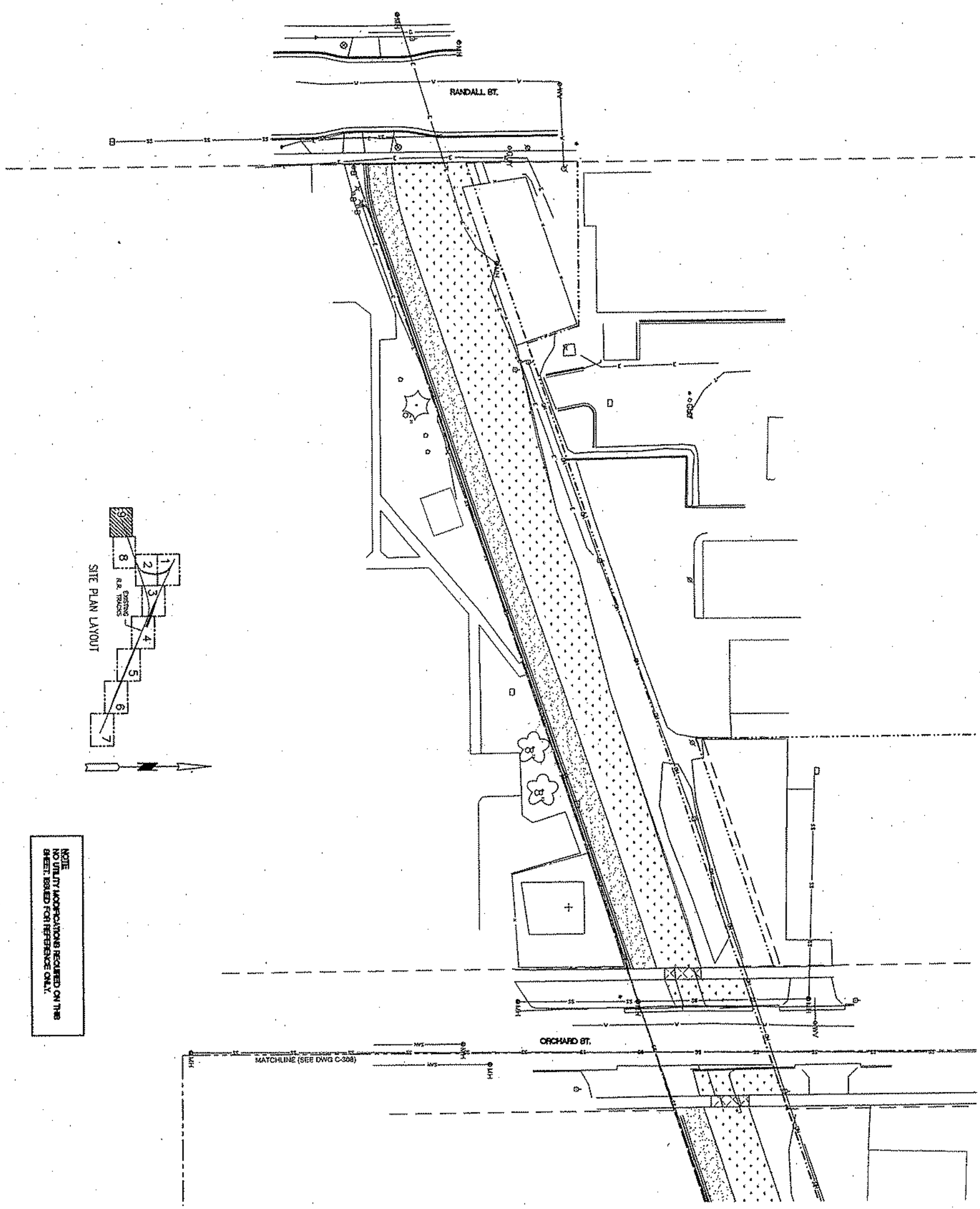
Revisions: No.	Date	By	Description
1	03-10-10		GDP SUBMITTAL

DSF Number: 09A2L

Set Type: PR

Date Issued: 03-10-10

Sheet Number: C-308



Project Title:	CHARTER STREET REBUILD
Project Location:	MADISON, WI.
Sheet Title:	GDP UTILITIES PLAN
	State of Wisconsin Department of Administration Division of State Facilities
Agency / Institution:	UNIVERSITY OF WISCONSIN, MADISON
Revisions: No. / Date / By / Description	03-10-10 / MG / GDP SUBMITTAL
Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-309

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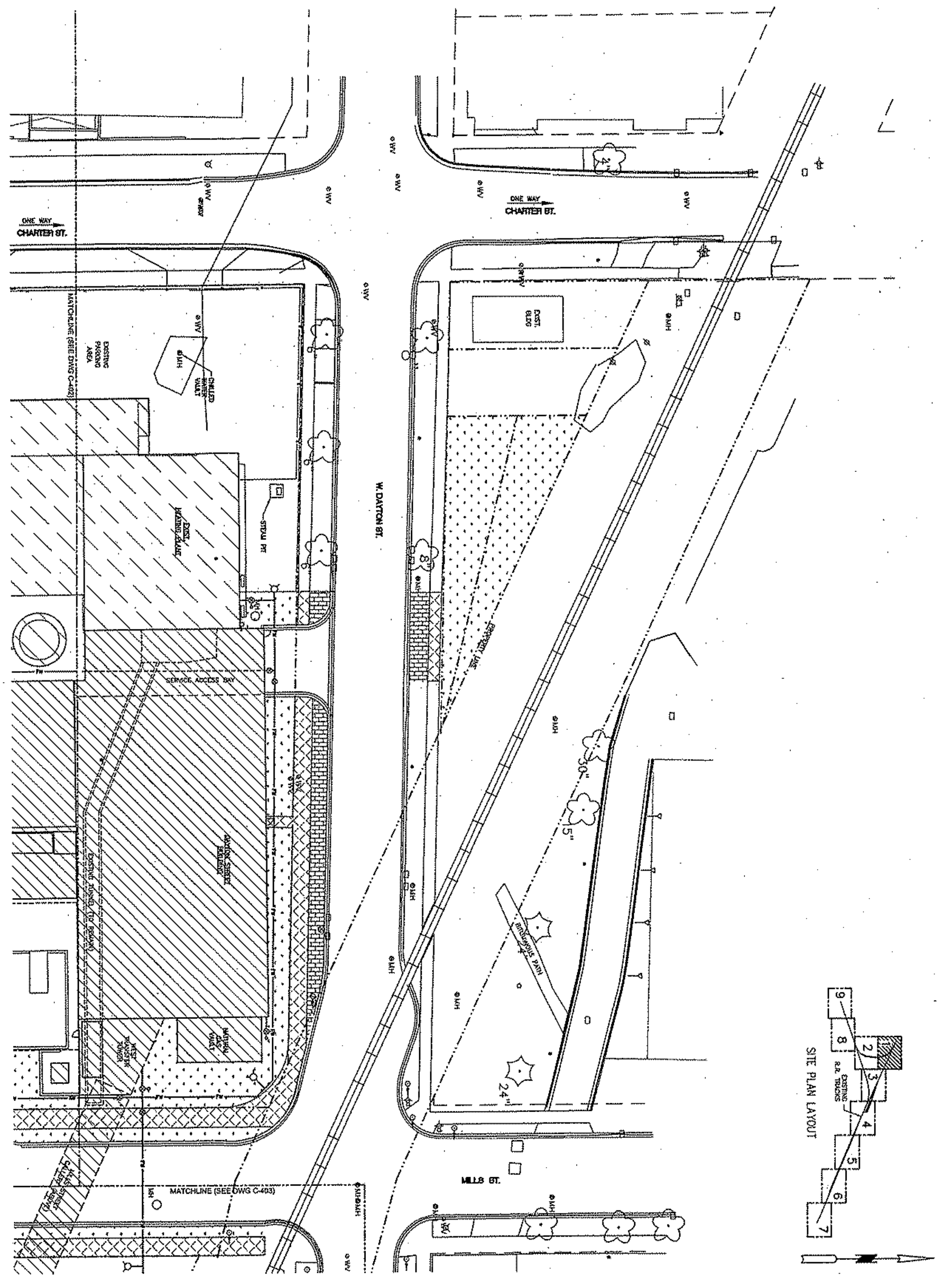

Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP FIRE WATER PLAN

State of Wisconsin
Department of Administration
Division of State Facilities

Agency / Institution:
UNIVERSITY OF WISCONSIN, MADISON

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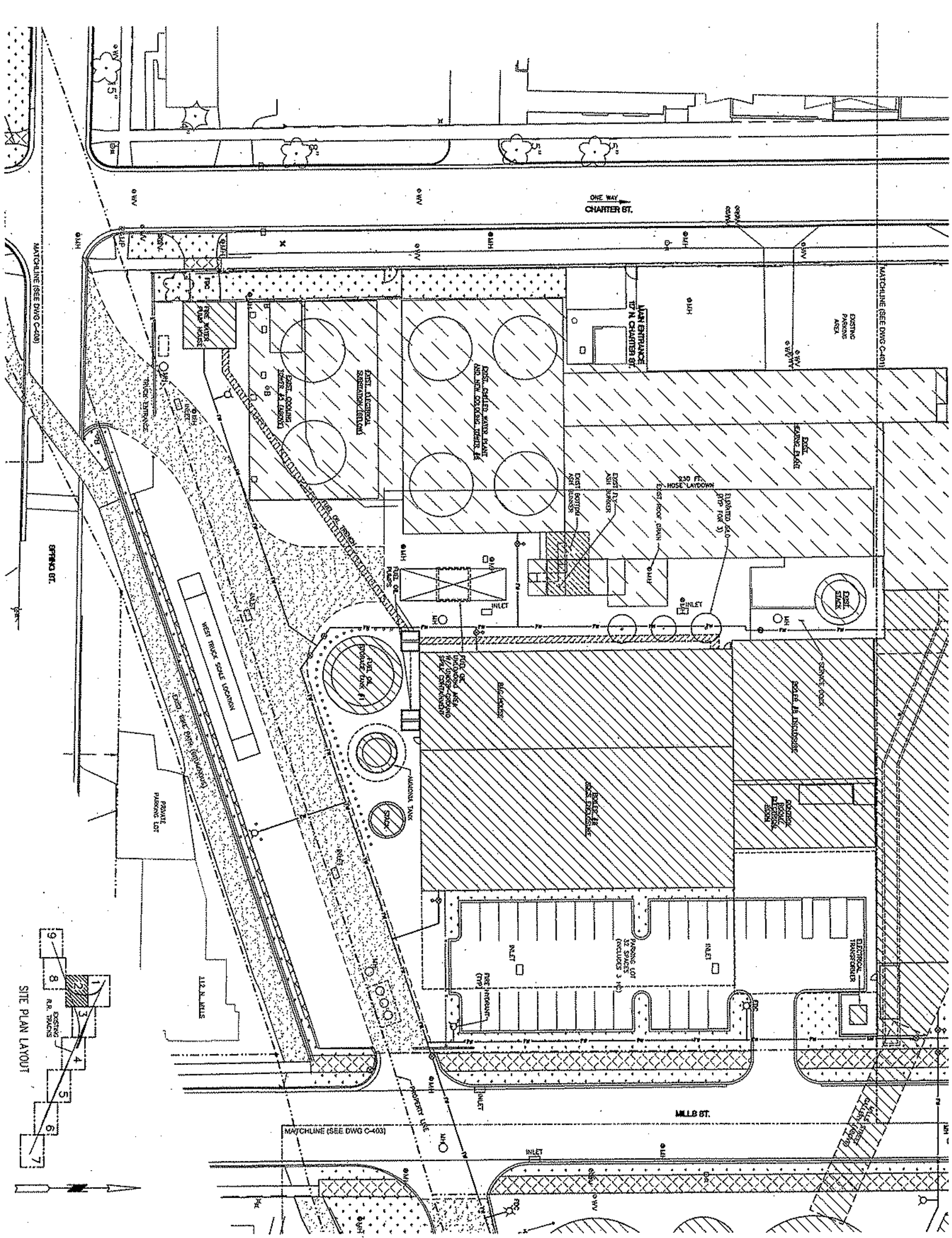
Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-401

No.	Date	By	Description
	03-10-10	MG	GDP SUBMITTAL

5



Sheet Number	Date Issued	Set Type	DSF Number	Graphic Scale
C-402	03-10-10	PR	09A2L	

No.	Date	By	Description
	01-20-10	KO	FOR REVIEW
	03-10-10	KO	GDP SUBMITTAL

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP FIRE WATER PLAN

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Department of Administration
Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

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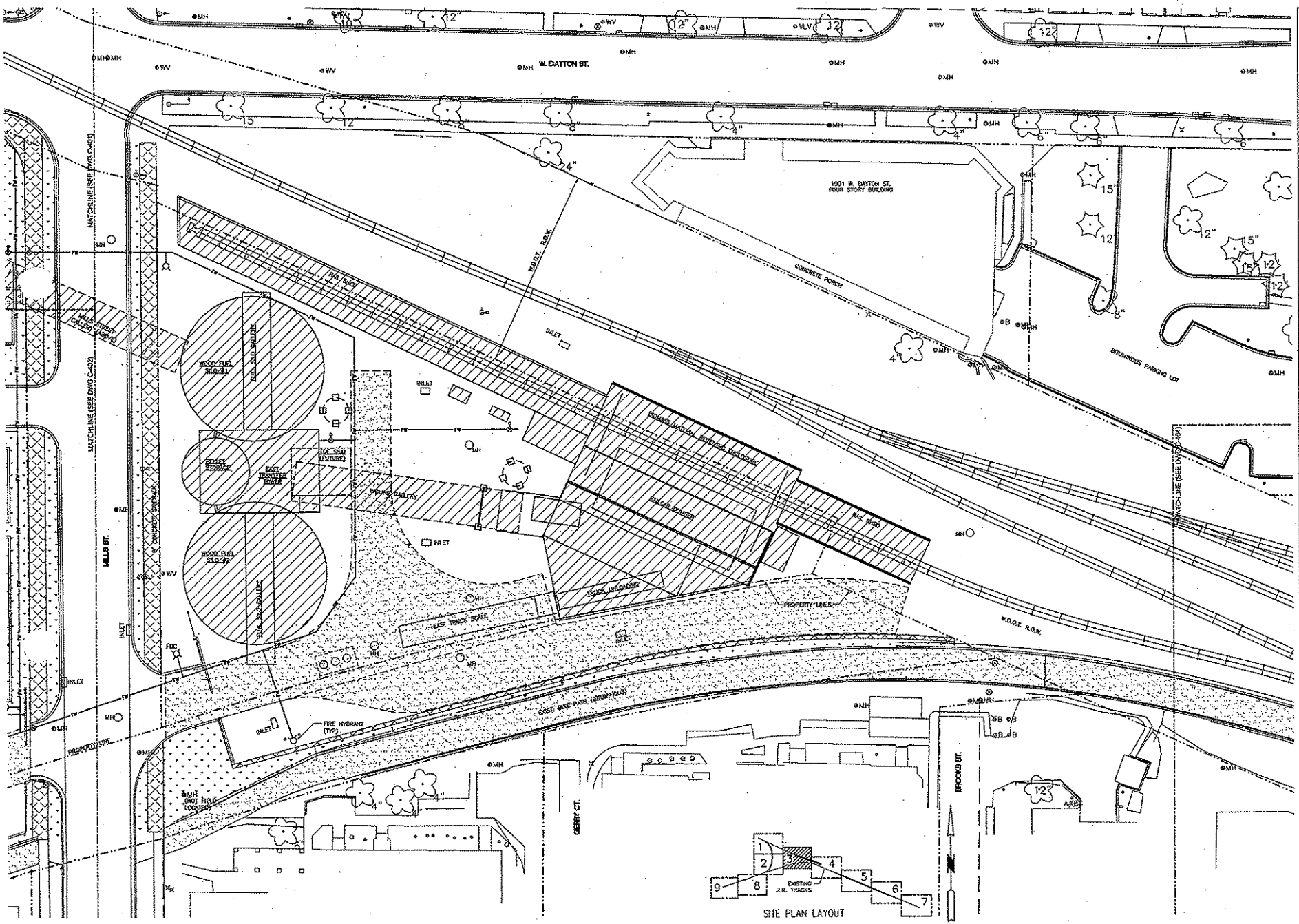

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Agency / Institution
UNIVERSITY OF WISCONSIN, MADISON

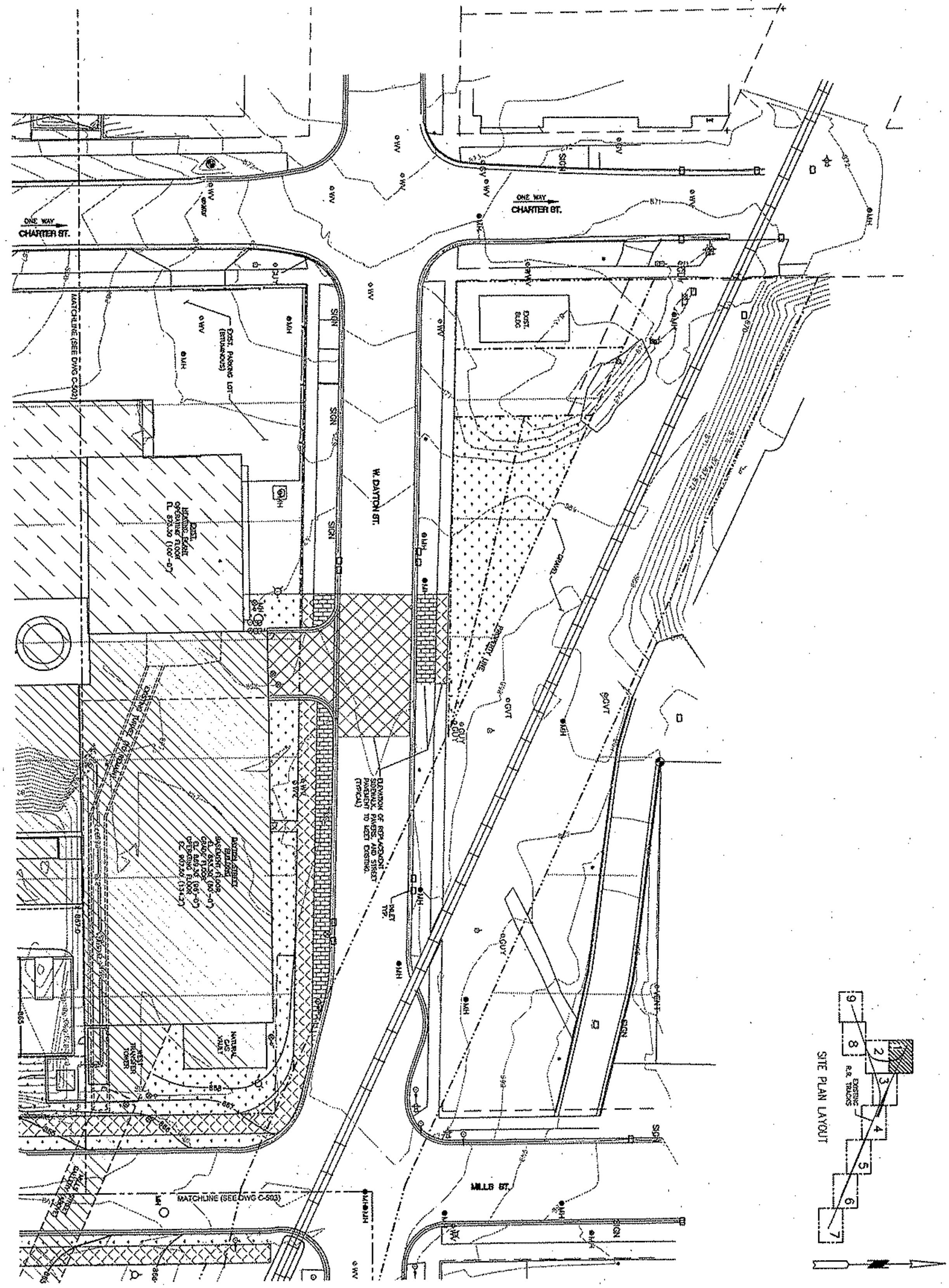
Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP FIRE WATER PLAN

Revisions:			
No.	Date:	By:	Description:
1	03-10-10	MS	GDP SUBMITTAL

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-403



Project Title:	CHARTER STREET REBUILD
Project Location:	MADISON, WI.
Sheet Title:	GDP GRADING AND DRAINAGE PLAN

State of Wisconsin
Department of Administration
Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

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Revisions No.	Date	By	Description
△	03-10-10	MCE	GDP SUBMITTAL

Graphic Scale	0 10 20
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-501

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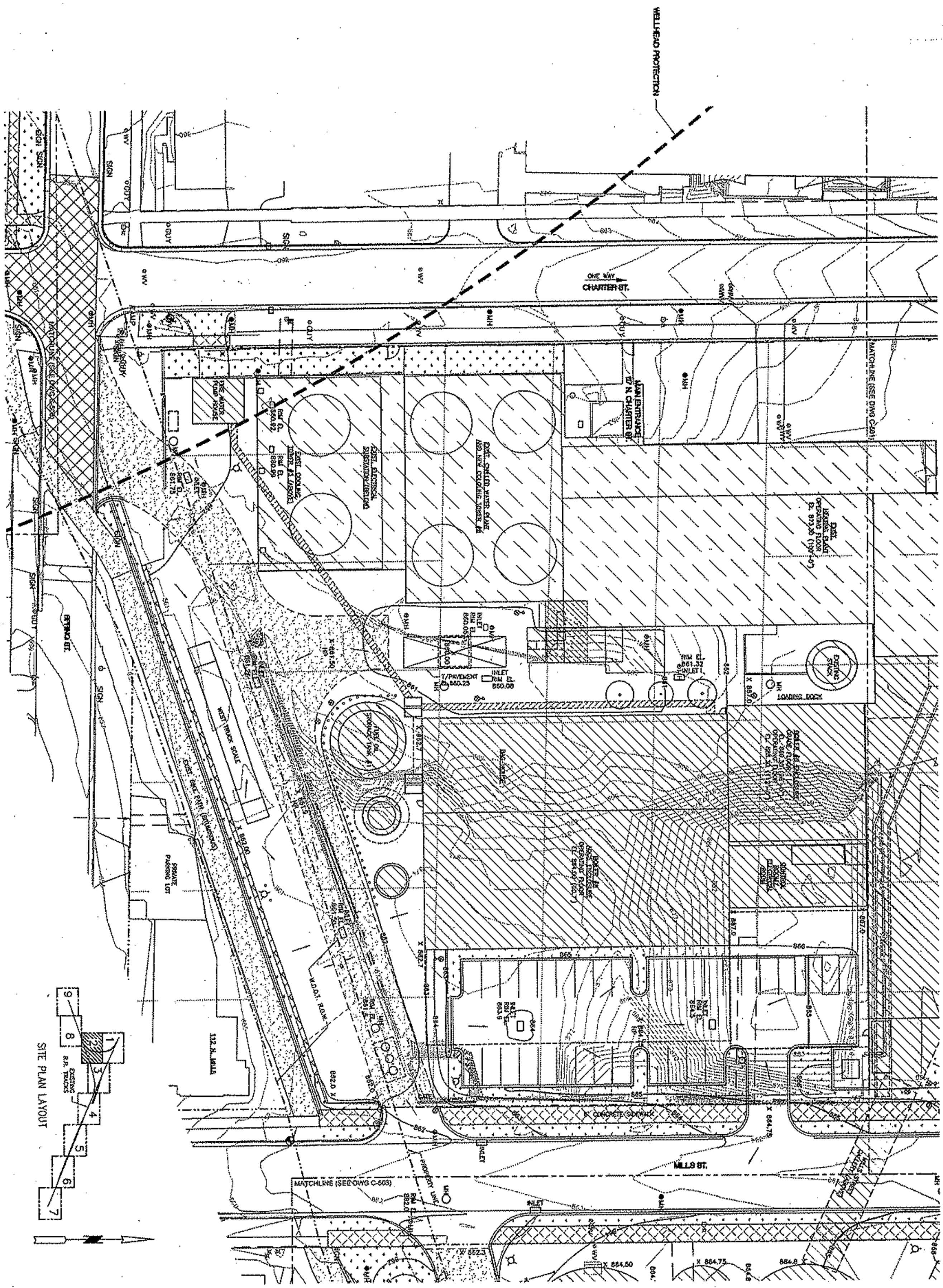

Project Title:	CHARTER STREET REBUILD
Project Location:	MADISON, WI.
Sheet Title:	GDP GRADING AND DRAINAGE PLAN

State of Wisconsin
Department of Administration
Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-502

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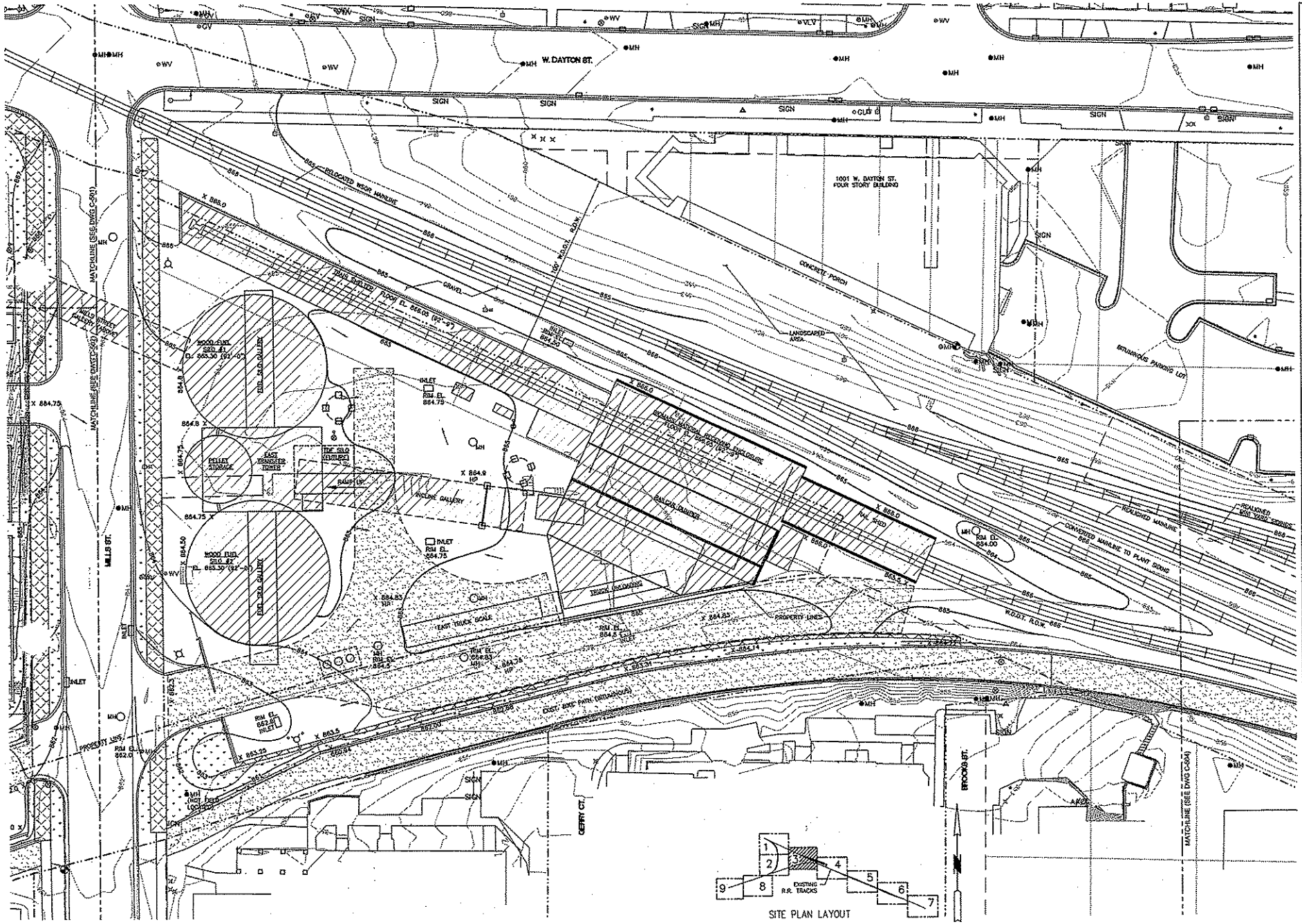

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Agency / Institution:
UNIVERSITY OF WISCONSIN, MADISON

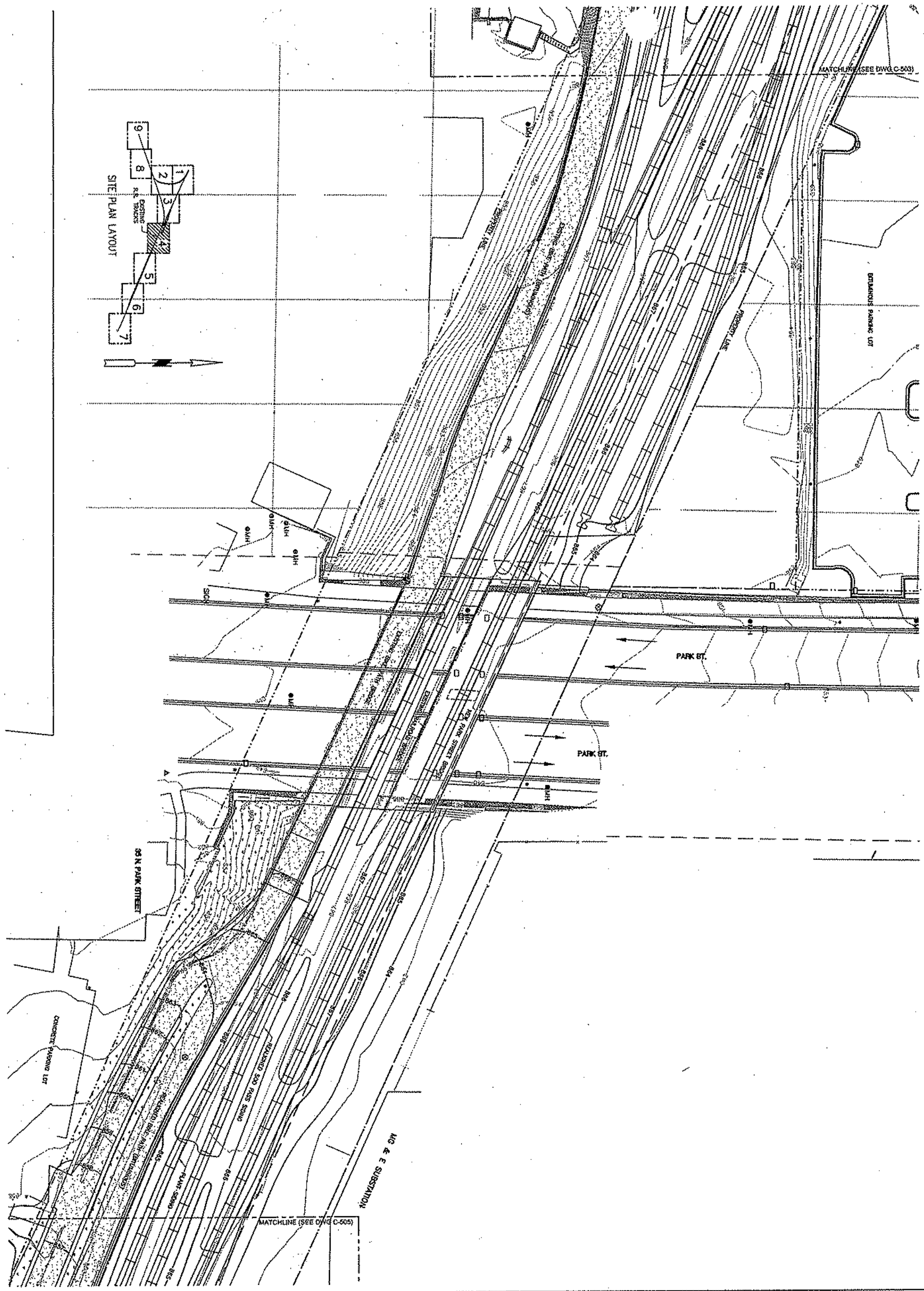
Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP GRADING AND DRAINAGE PLAN

Revisions:			
No.	Date:	By:	Description:
1	03-10-10	MD	GDP SUBMITTAL

Graphic Scale	10 0 20
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-503



Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI

Sheet Title: GDP GRADING AND DRAINAGE PLAN

State of Wisconsin
Department of Administration
Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

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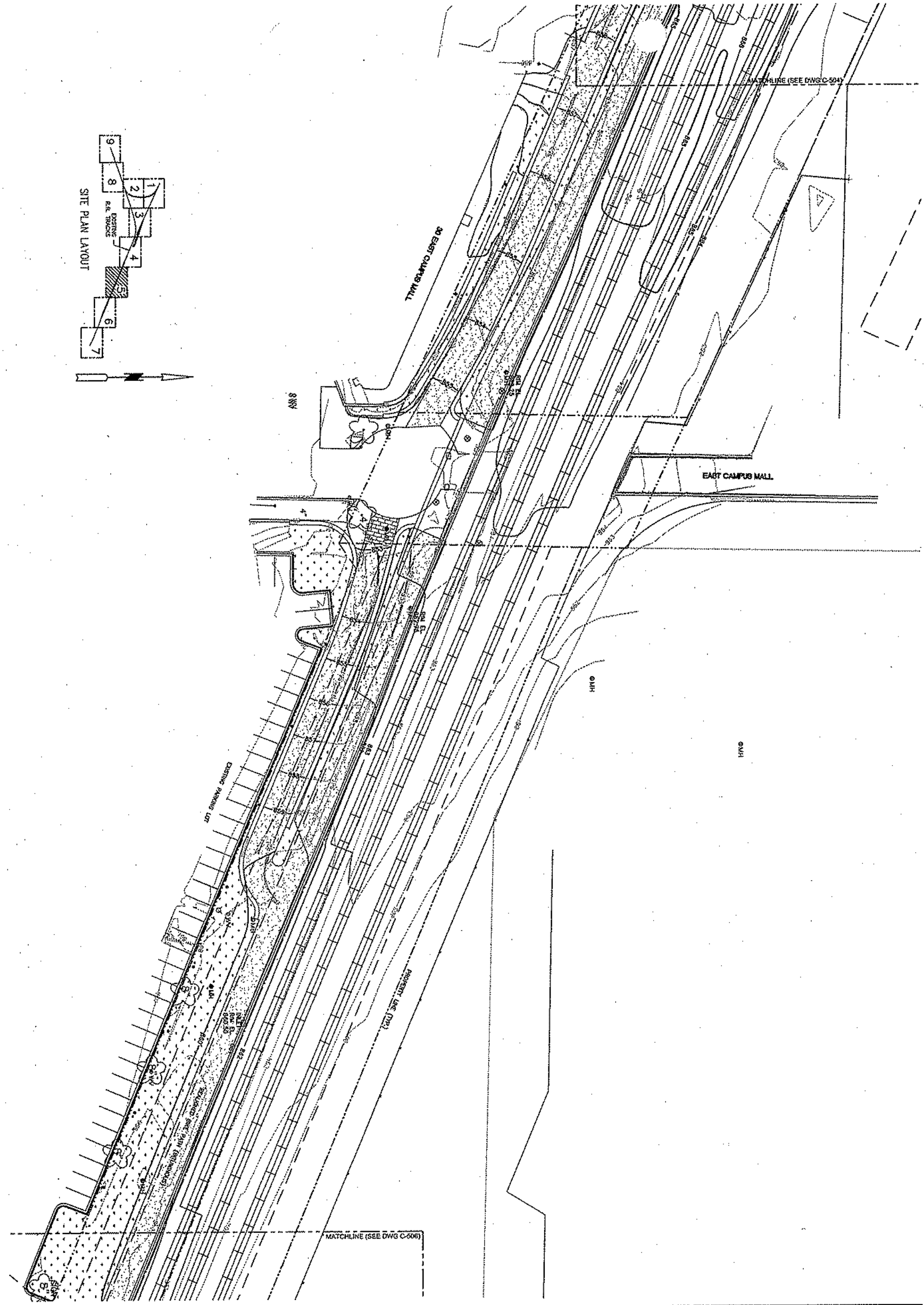
DSF Number	09I2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-504



Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP GRADING AND DRAINAGE PLAN

State of Wisconsin
Department of Administration
Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

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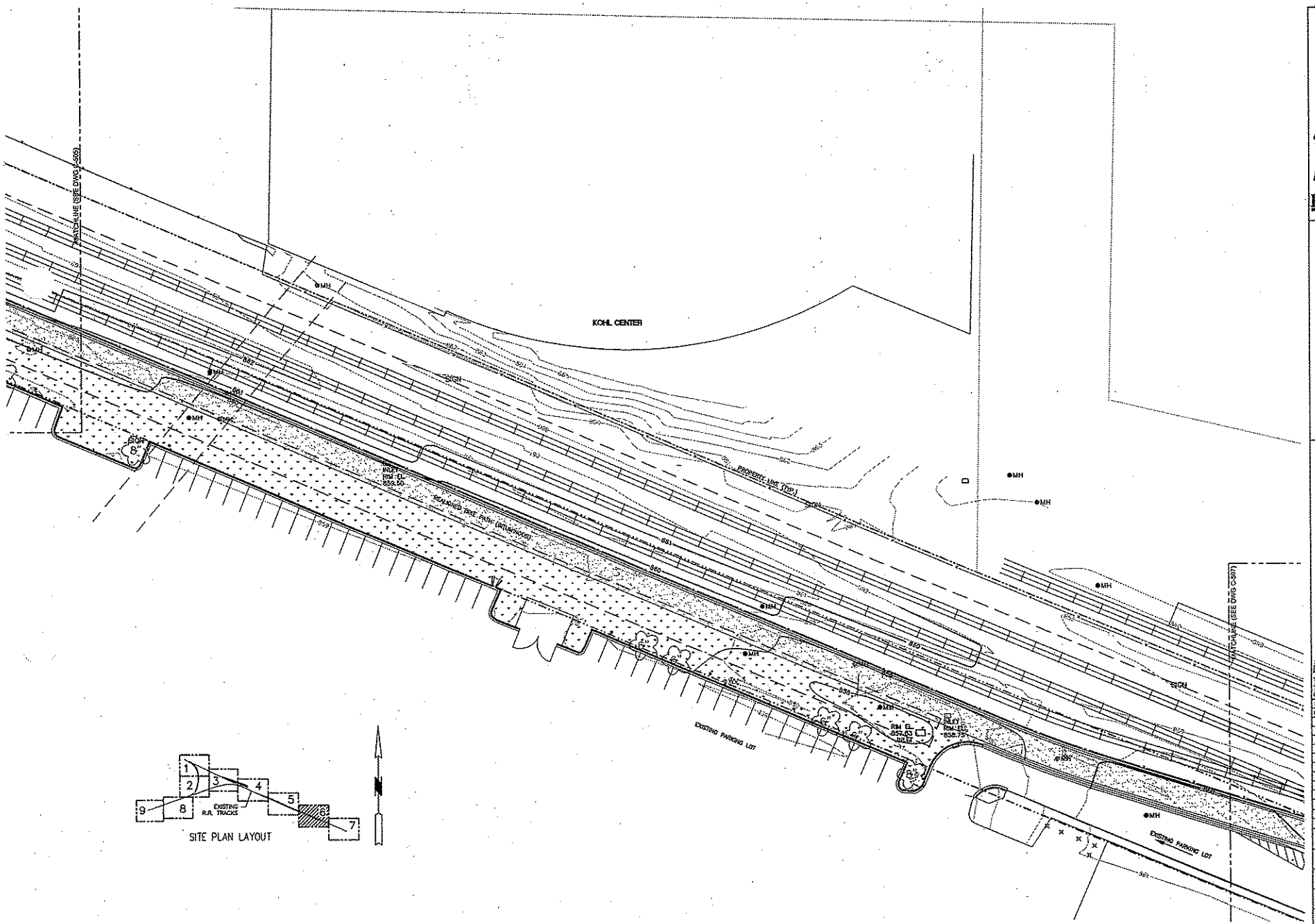
Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-505

9



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Agency / Institution:
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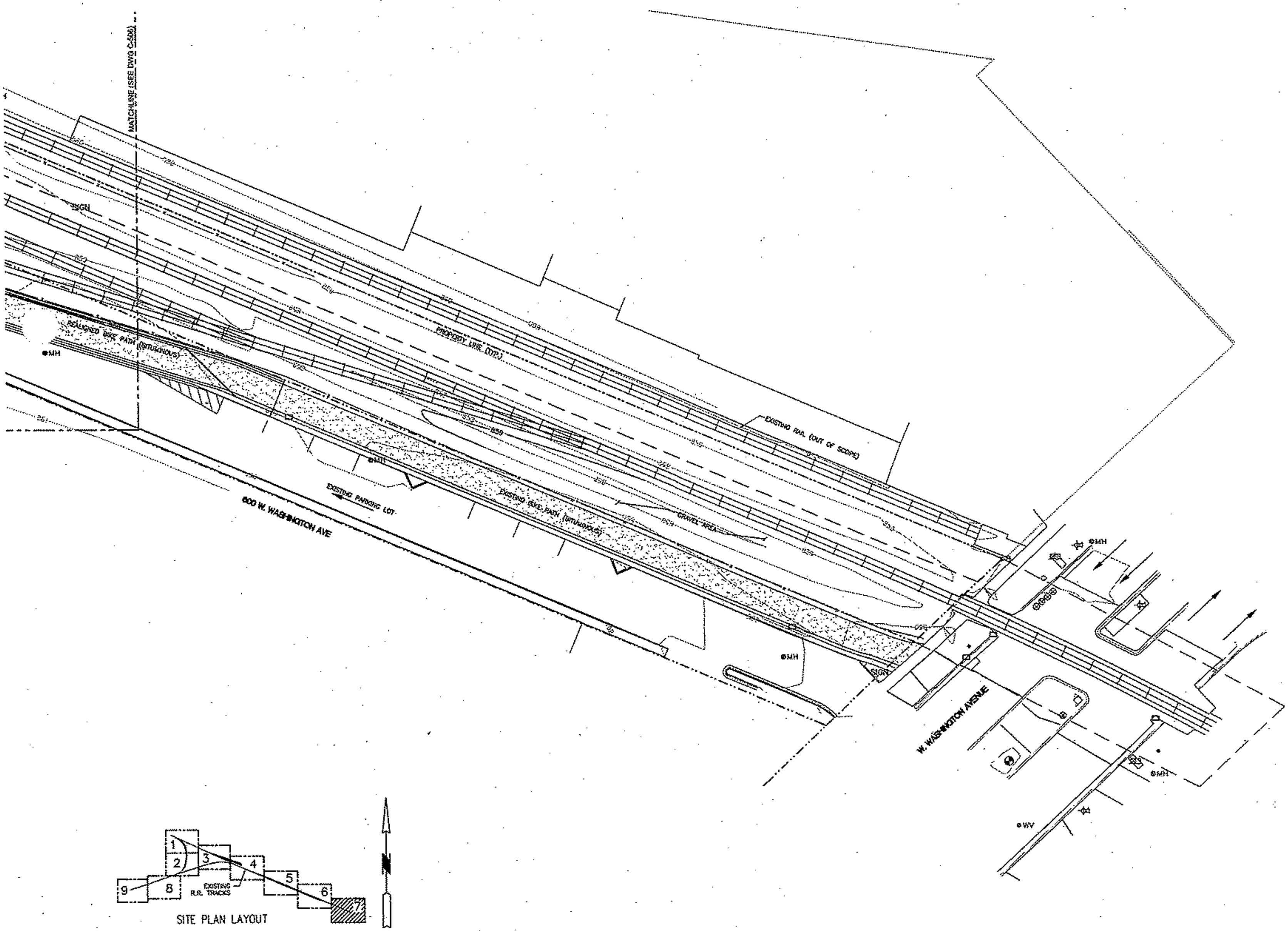
Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP GRADING AND DRAINAGE PLAN

Revisions:			
No.	Date:	By:	Description:
1	03-10-10	MD	GDP SUBMITTAL

Graphic Scale	15 0 30
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-506



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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

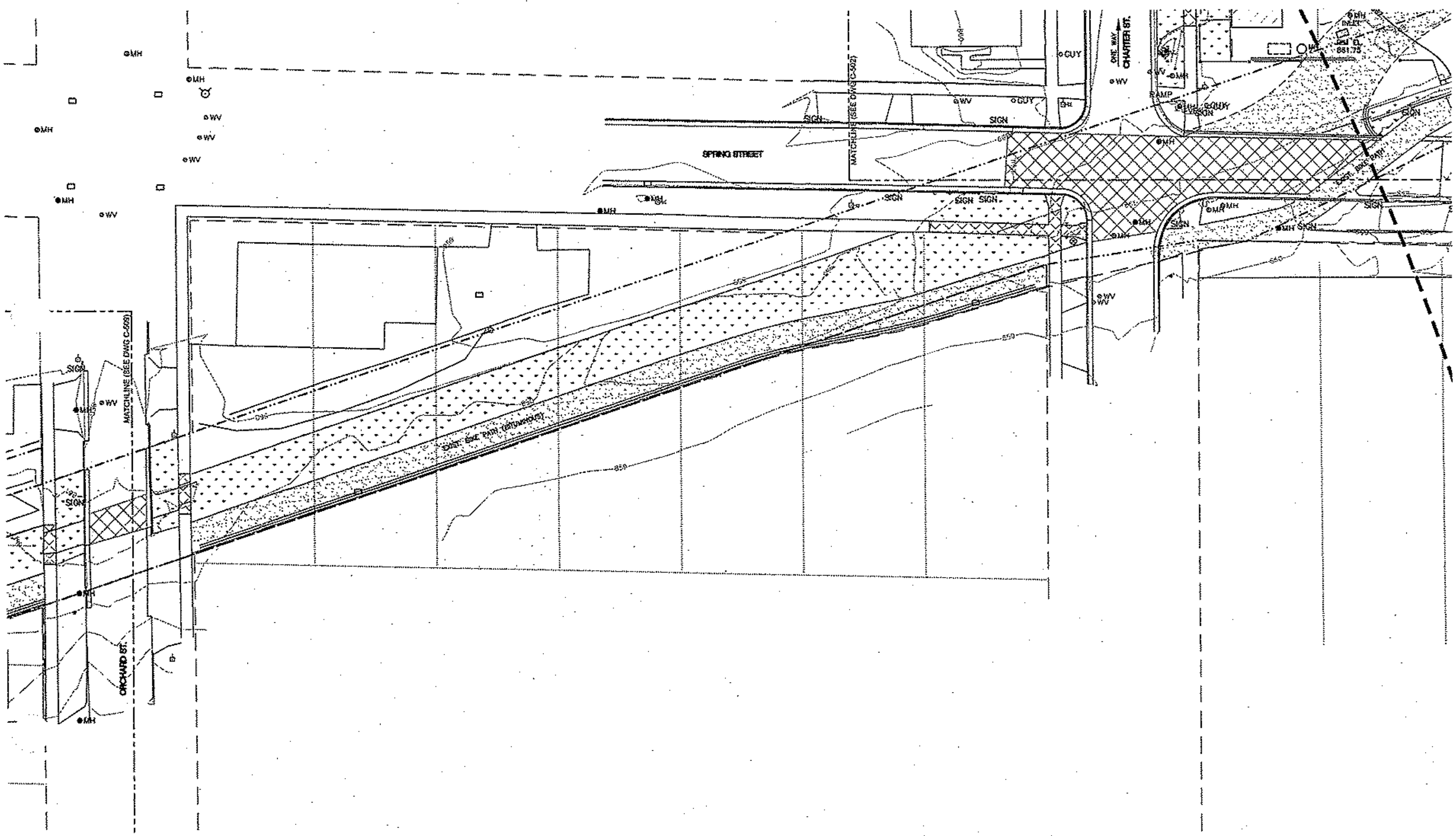
Project Title: CHARTER STREET REBUILD

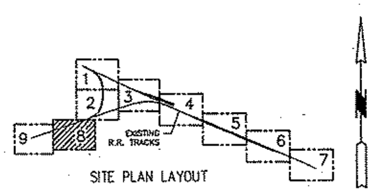
Project Location: MADISON, WI.

Sheet Title: GDP GRADING AND DRAINAGE PLAN

Revisions:			
No.	Date:	By:	Description:
△	03-10-10	MJ	GDP SUBMITTAL

Graphic Scale	10 0 20
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-507





SITE PLAN LAYOUT

NOTE
GRADING AND DRAINAGE SUBJECT TO WISCONSIN DEPARTMENT OF TRANSPORTATION REQUIREMENTS.

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Agency / Institution:
UNIVERSITY OF WISCONSIN, MADISON

Project Title:
CHARTER STREET REBUILD

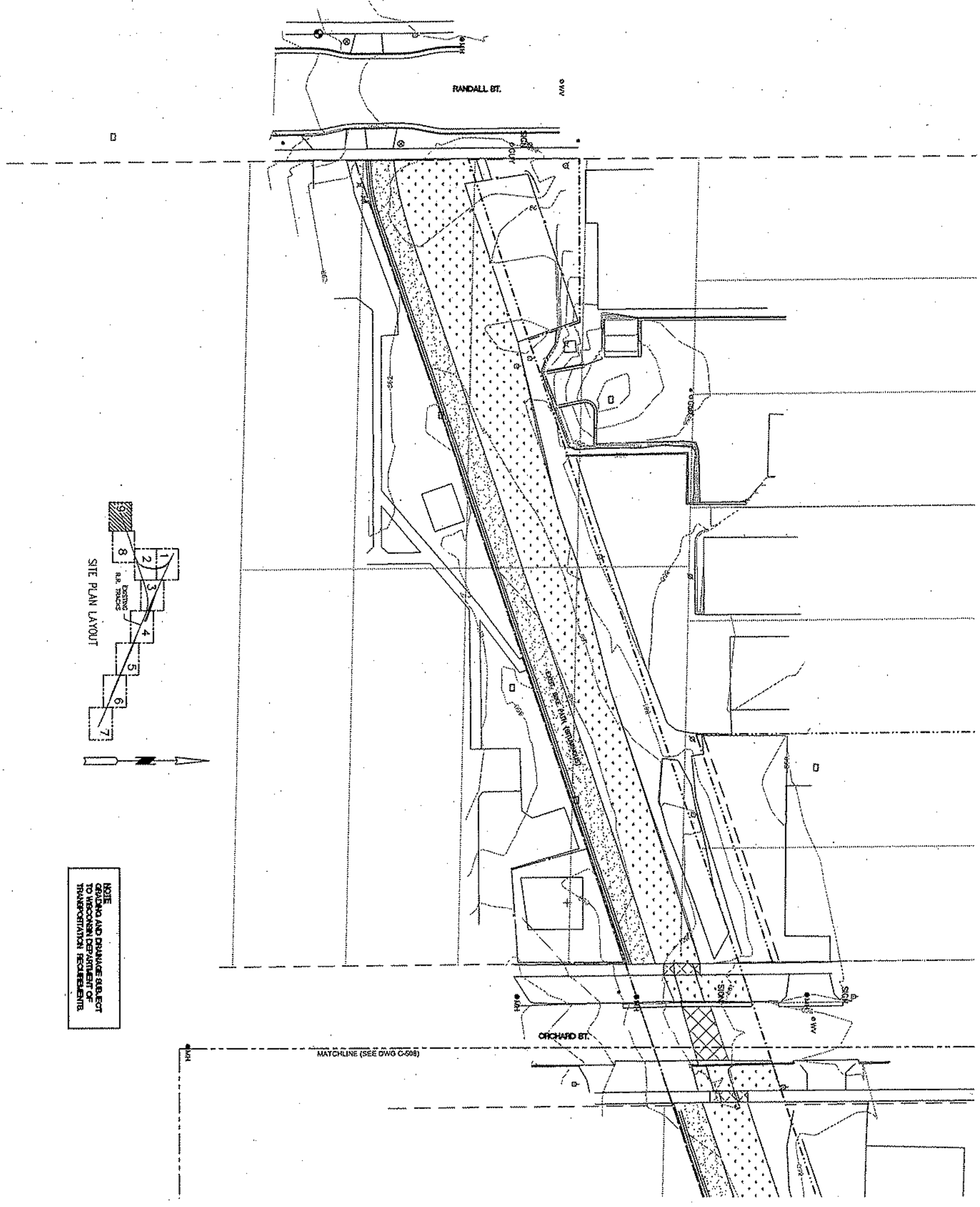
Project Location:
MADISON, WI.

Sheet Title:
GDP GRADING AND DRAINAGE PLAN

Revisions:

No.	Date:	By:	Description
△	03-10-10	MO	GDP SUBMITTAL

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-508



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Project Title:
CHARTER STREET REBUILD

Project Location:
MADISON, WI.

Sheet Title:
GDP GRADING AND DRAINAGE PLAN

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Agency / Institution:
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Revisions: No.	Date	Dr.	Description
1	03-10-10	MD	GDP SUBMITTAL

Graphic Scale	0 10 20
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	C-509

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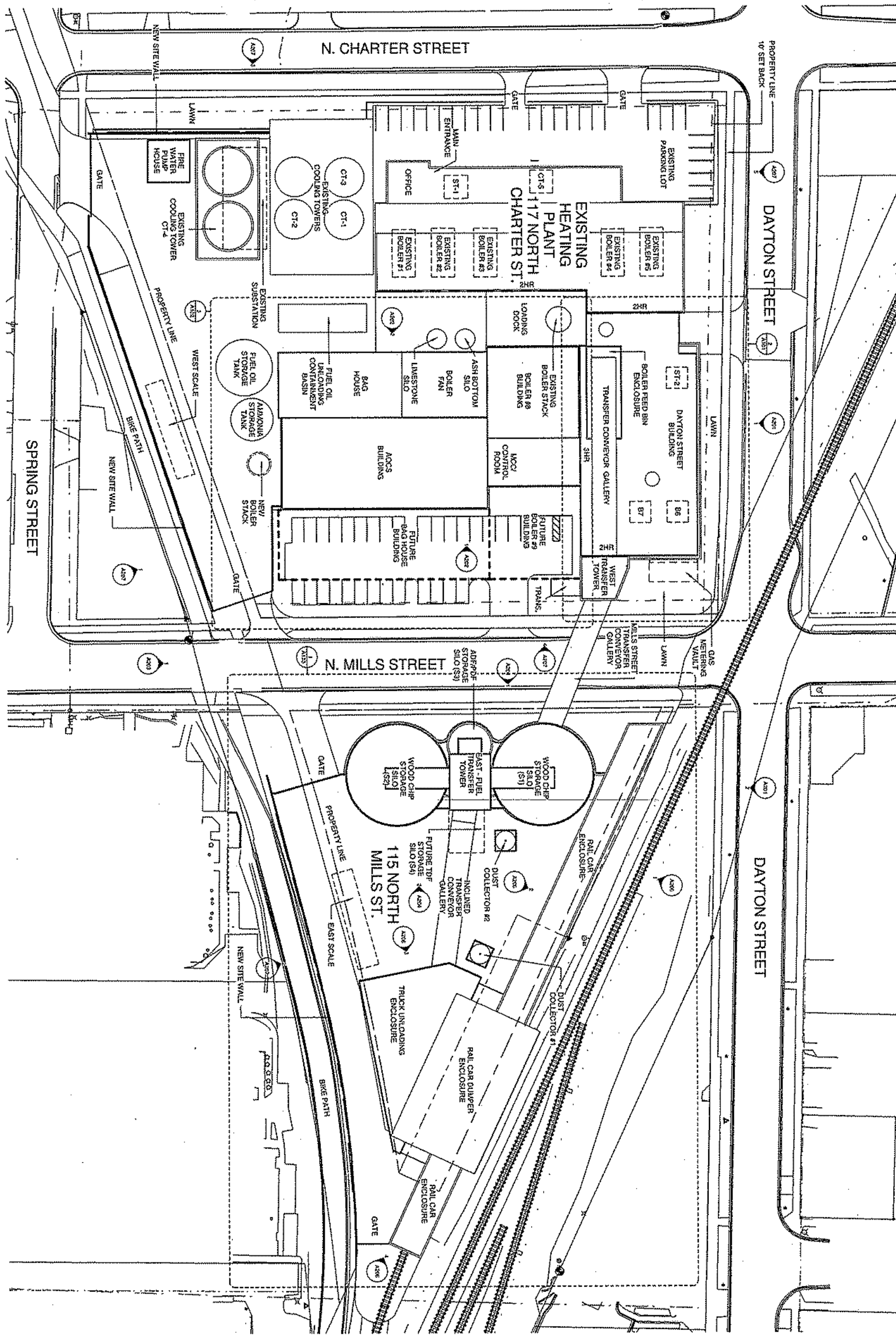

1 SITE REFERENCE PLAN - ARCHITECTURAL
A100 1" = 30'-0"

Project Title:	CHARTER STREET HEATING PLANT REBUILD
Project Location:	MADISON, WI
Sheet Title:	GDP SITE REFERENCE PLAN
	State of Wisconsin Department of Administration Division of State Facilities
Agency/Institution:	UNIVERSITY OF WISCONSIN SYSTEM
DSF Project No:	2009.07.30
Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	A100

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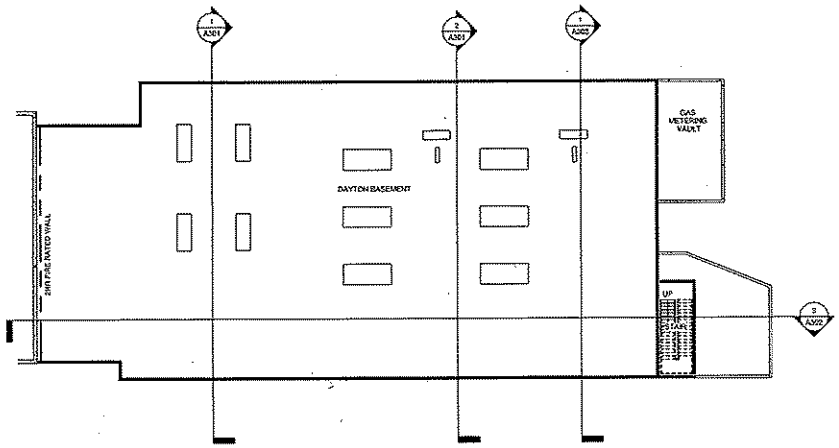
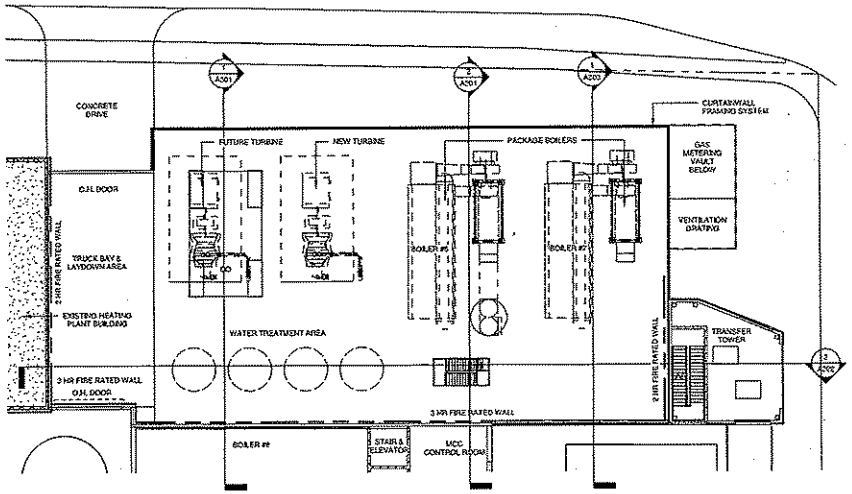
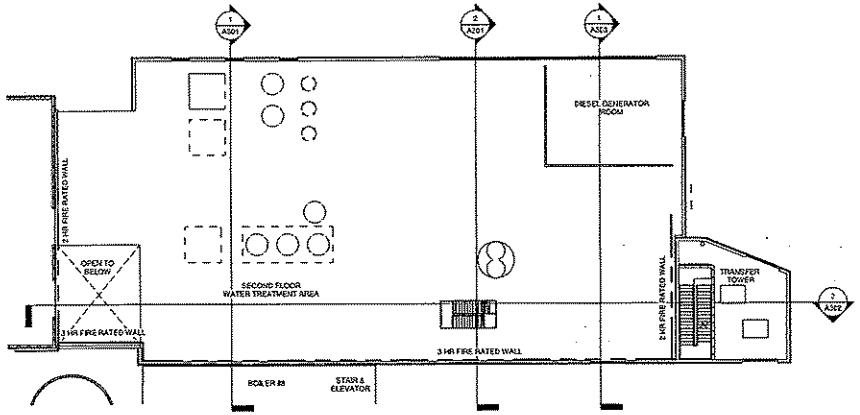


1 A101 DAYTON STREET BUILDING BASEMENT PLAN
1/16" = 1'-0"



2 A101 DAYTON STREET BUILDING - FIRST FLOOR PLAN
1/16" = 1'-0"



3 A101 DAYTON STREET BUILDING SECOND FLOOR PLAN
1/16" = 1'-0"

3/8/2010 11:11:22 AM

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Agency Information: UNIVERSITY OF WISCONSIN SYSTEM

Project Title: CHARTER STREET HEATING PLANT REBUILD

Project Location: MADISON, WI

Sheet Title: GDP FLOOR PLANS - DAYTON STREET BUILDING BASEMENT, FIRST AND OPERATING FLOOR PLANS

Revisions:

No.	Date:	By:	Description:

Graphic Scale	
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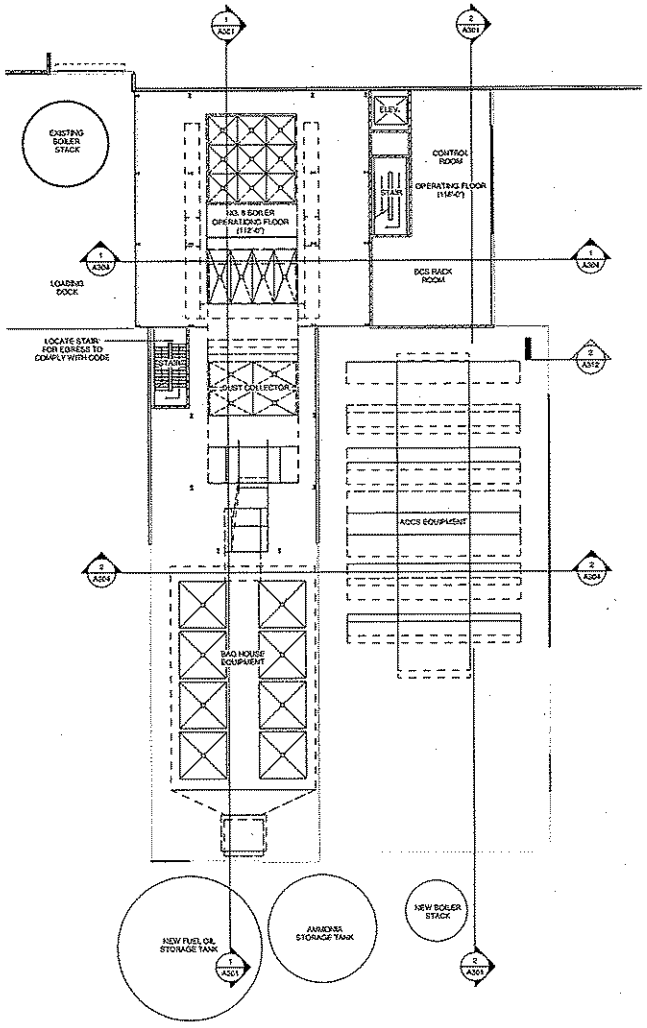
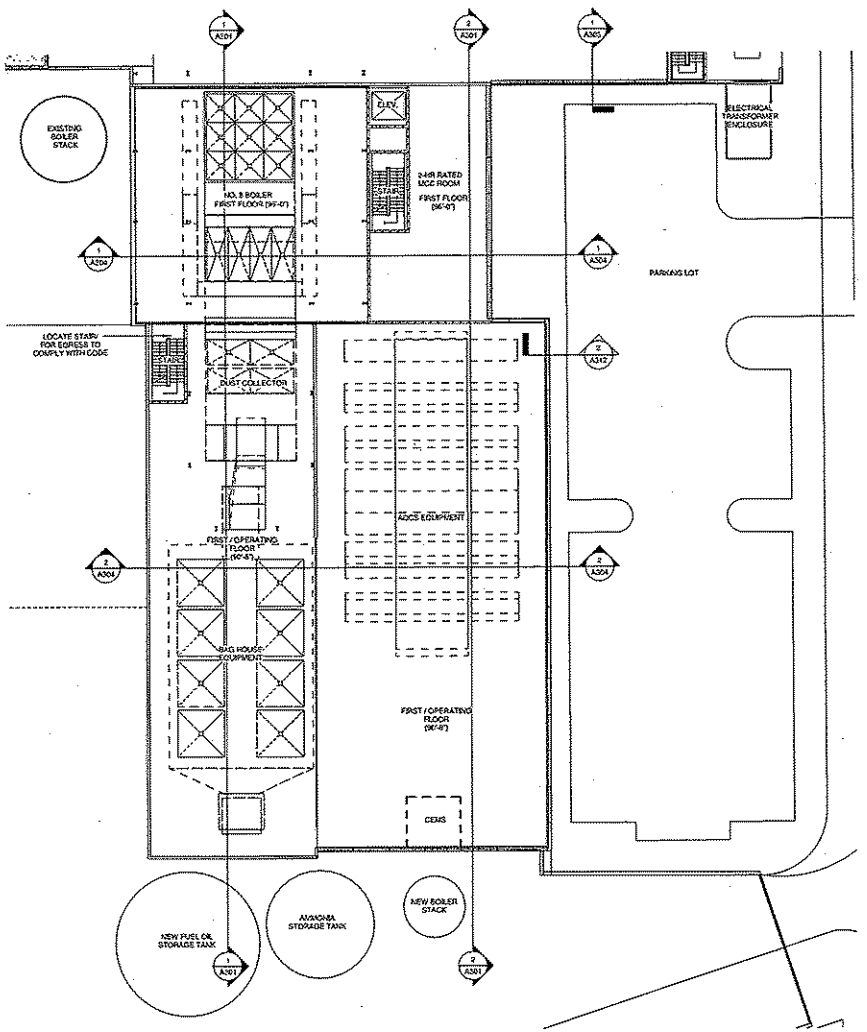
Sheet Number	A101



4 A102 BOILER OPERATING FLOOR PLAN
1/16" = 1'-0"



3 A102 BOILER, BAG HOUSE & SCR BUILDINGS - FIRST FLOOR PLAN
1/16" = 1'-0"

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Agency Information: UNIVERSITY OF WISCONSIN SYSTEM

Project Title: CHARTER STREET HEATING PLANT REBUILD

Project Location: MADISON, WI

Sheet Title: GDP FLOOR PLANS - HEATING PLANT - FIRST AND OPERATING FLOORS

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Set Type	PR
Date Issued	03-10-10
Sheet Number	A102

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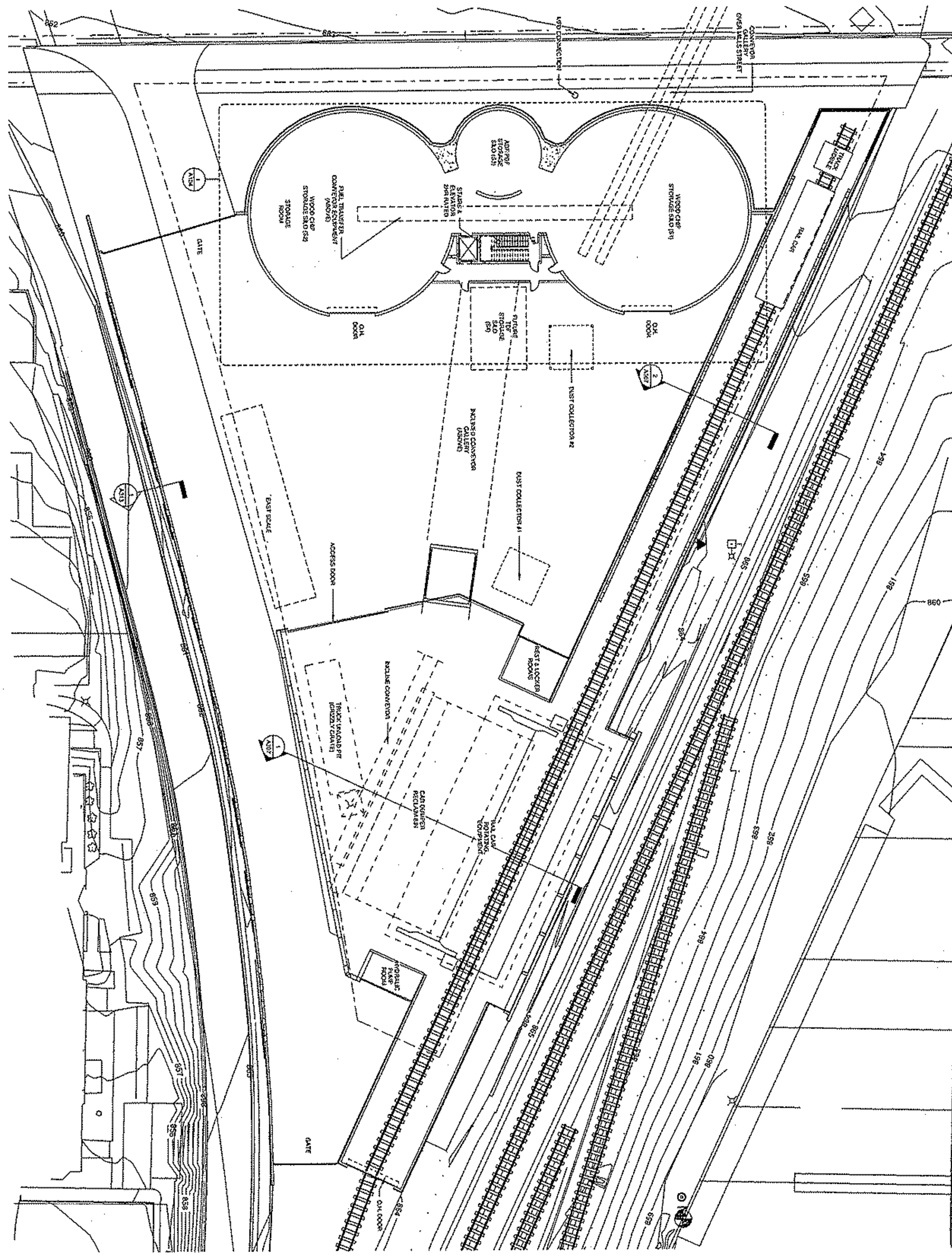

RAIL SHED, HOPPER & FUEL STORAGE - FIRST FLOOR PLAN
1/16" = 1'-0"

Project Title: **CHARTER STREET HEATING PLANT REBUILD**

Project Location: MADISON, WI

Sheet Title: GDP FLOOR PLANS - FUEL HANDLING

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Sheet Number	Date Issued	Set Type	DSF Number	Graphic Scale
A103	03-10-10	PR	09A2L	

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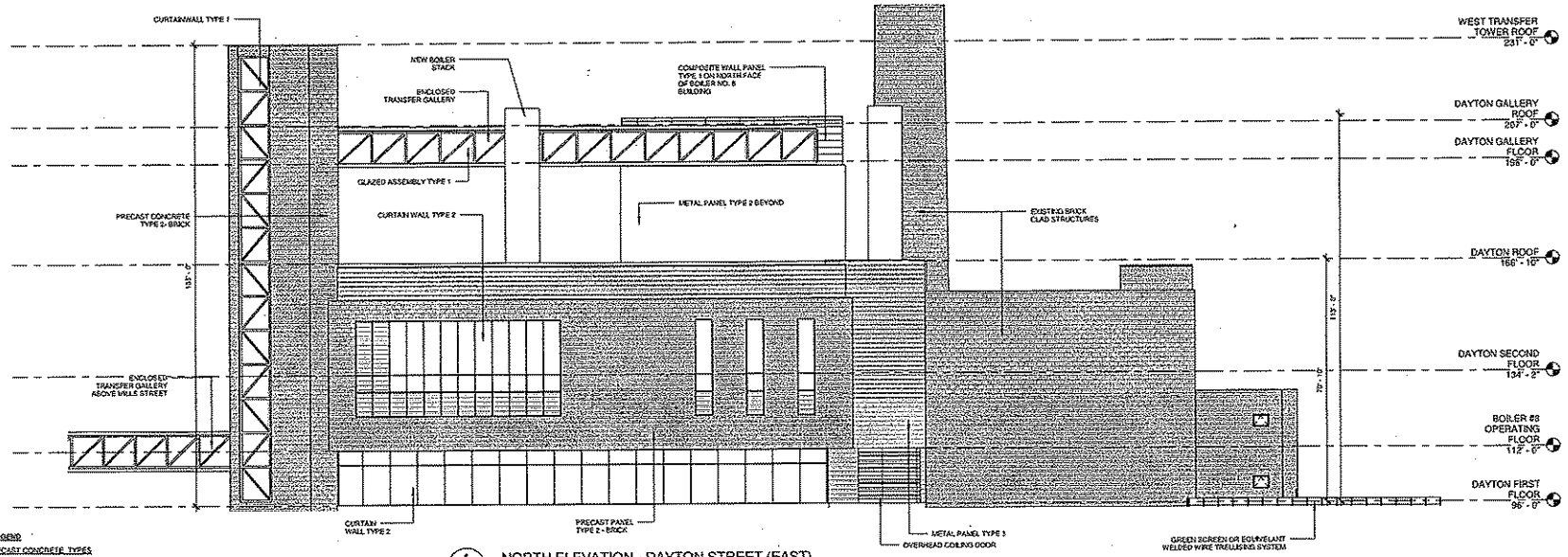


1 A201 NORTH ELEVATION - DAYTON STREET (EAST)
1/16" = 1'-0"

MATERIAL LEGEND

03.40.00 PRECAST CONCRETE TYPES

TYPE 1 - HOLLOWCORE INSULATED WALL PANEL WITH 2" EXTERIOR ARCHITECTURAL WYTHAND 2" RIGID INSULATION

TYPE 2 - ARCHITECTURAL PRECAST CONCRETE PANELS W/ BRICK VENEER

TYPE 3 - ARCHITECTURAL PRECAST CONCRETE PANELS W./ HORIZONTAL 4X16" REVEAL PATTERN

07.42.12 METAL WALL PANEL TYPES

TYPE 1 - NOT USED

TYPE 2 - VERTICAL - B.O.D. CENTRIA EXPOSED FASTENER PROFILE SERIES BRS-36 "GRAY VELVET" FINISH OR BLACK OVER COMPOSITE WALL PANEL TYPE 3 OR EQUAL - ABOVE DAYTON ST.

TYPE 2.1 - NOT USED

TYPE 3 - HORIZONTAL - B.O.D. CENTRIA EXPOSED FASTENER PROFILE SERIES BRS-36 "GRAY VELVET" FINISH OR BLACK OVER COMPOSITE WALL PANEL TYPE 3 OR EQUAL

TYPE 3.1 - HORIZONTAL - B.O.D. CENTRIA EXPOSED FASTENER PROFILE SERIES SMALL PROFILE OVER COMPOSITE WALL PANEL TYPE 3 OR EQUAL - NOT USED

07.42.93 COMPOSITE WALL PANEL TYPES

TYPE 1 - 2X10" HORIZONTAL BROWN- B.O.D. CENTRIA FORMAWALL DIMENSION SERIES 3" THICK NOMINAL FLAT - NOT USED

TYPE 1.2 - 2X10" HORIZONTAL GRAY- B.O.D. CENTRIA FORMAWALL DIMENSION SERIES 3" THICK NOMINAL FLAT

TYPE 2 - 3X16" VERTICAL - B.O.D. CENTRIA FORMAWALL DIMENSION SERIES 3" THICK NOMINAL FLAT - NOT USED

TYPE 3 - B.O.D. CENTRIA VERSAWALL 5" THICK NOMINAL FLAT PANEL OR EQUAL

08.44.00 STOREFRONT TYPES

TYPE 1

08.44.00 CURTAINWALL TYPES

TYPE 1 - WEST TRANSFER TOWER

TYPE 2 - DAYTON STREET BUILDING FIRST FLOOR

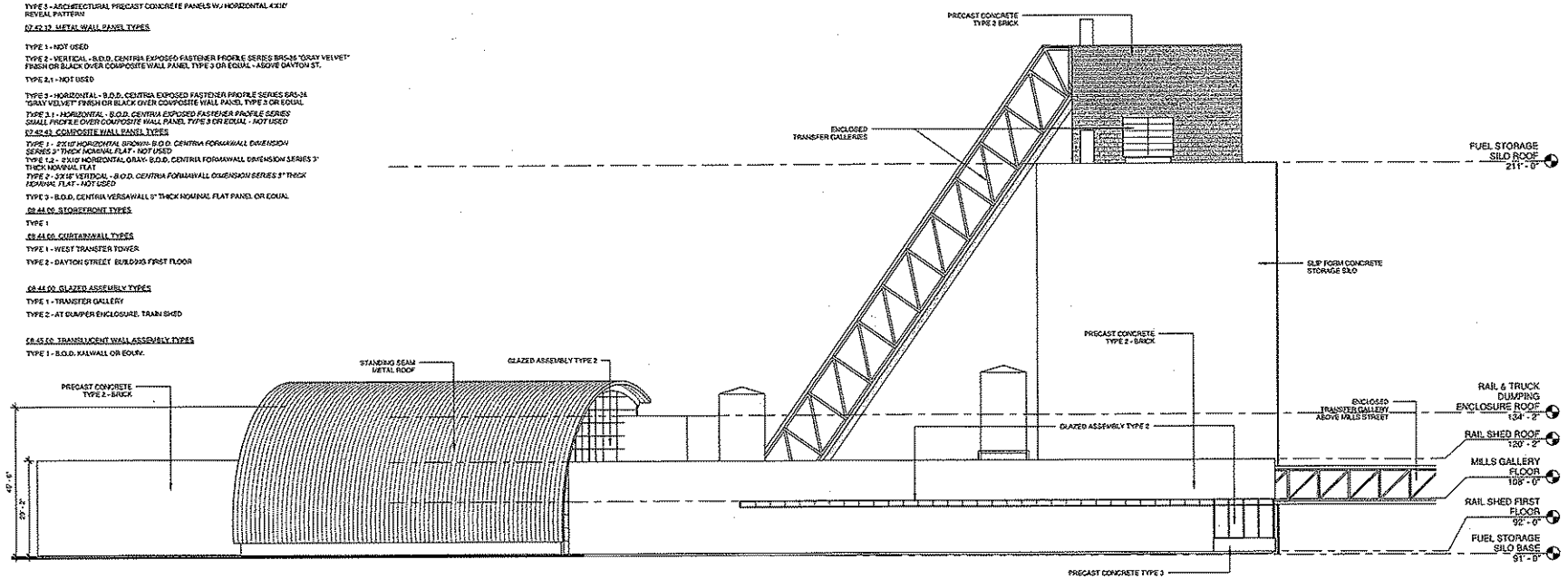
08.44.00 GLAZED ASSEMBLY TYPES

TYPE 1 - TRANSFER GALLERY

TYPE 2 - AT DUMPER ENCLOSURE, TRAIN SHED

08.45.00 TRANSLUCENT WALL ASSEMBLY TYPES

TYPE 1 - B.O.D. KALWALL OR EQUIV.



2 A201 NORTH ELEVATION - DAYTON STREET (WEST)
1/16" = 1'-0"

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Agency Instalation: UNIVERSITY OF WISCONSIN SYSTEM

Project Title: CHARTER STREET HEATING PLANT REBUILD

Project Location: MADISON, WI

Sheet Title: GDP BUILDING ELEVATIONS

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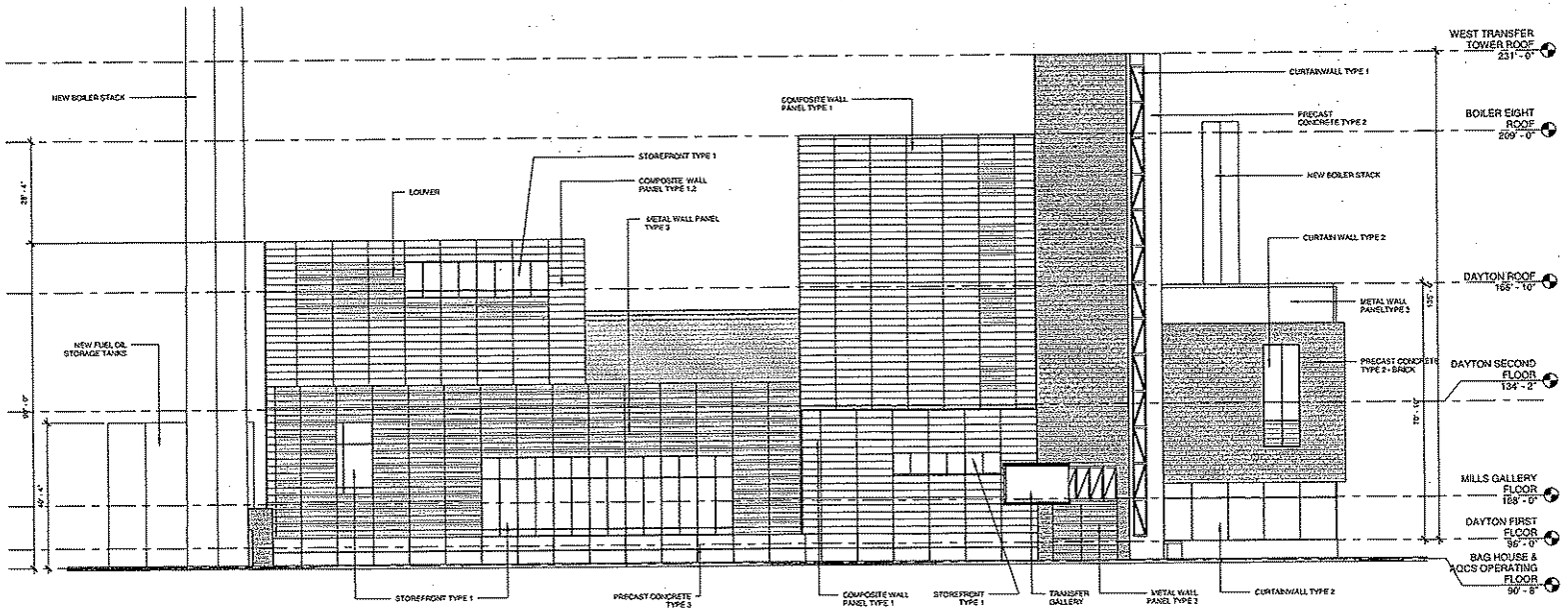
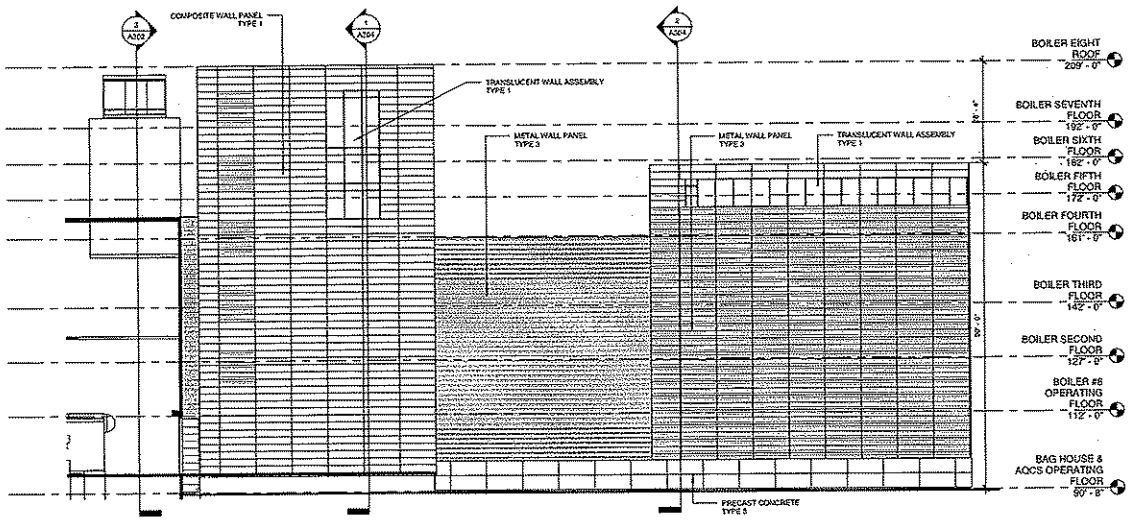


1 A202 EAST ELEVATION - HEATING PLANT
1/16" = 1'-0"



2 A202 WEST ELEVATION - HEATING PLANT
1/16" = 1'-0"

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Project Title: CHARTER STREET HEATING PLANT REBUILD

Project Location: MADISON, WI

Sheet Title: GBD BUILDING ELEVATIONS

Revisions: No.	Date:	By:	Description:

Graphic Scale	
DSF Number	09A2L
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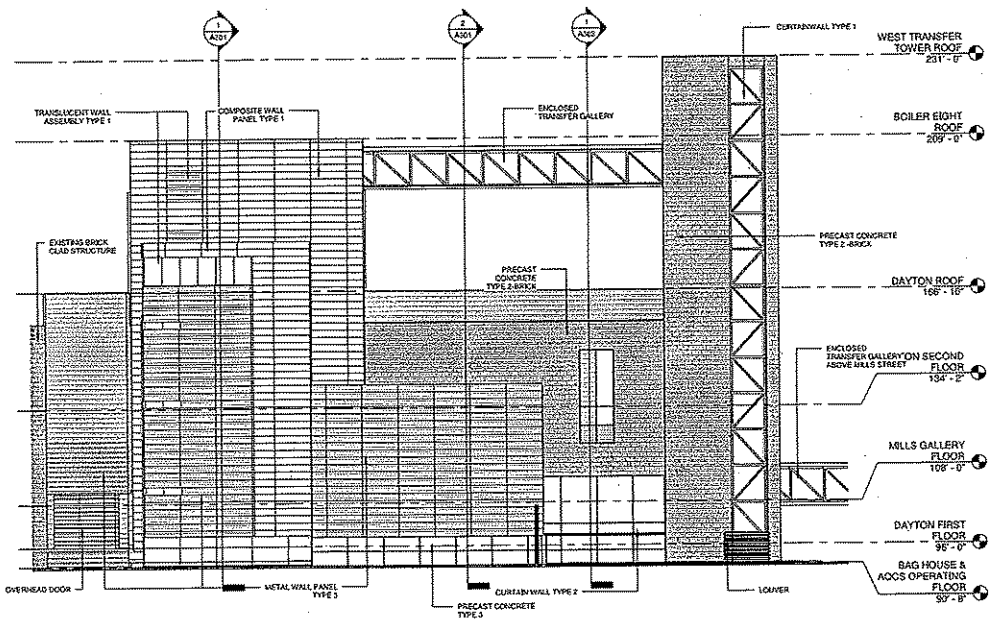

1 / A203 SOUTH ELEVATION - HEATING PLANT
1/16" = 1'-0"

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Agency Project(s): UNIVERSITY OF WISCONSIN SYSTEM

Project Title: CHARTER STREET HEATING PLANT REBUILD
Project Location: MADISON, WI
Sheet Title: GDP BUILDING ELEVATIONS

Revisions

No.	Date:	By:	Description:

Graphic Scale	
GSF Number	09A2L
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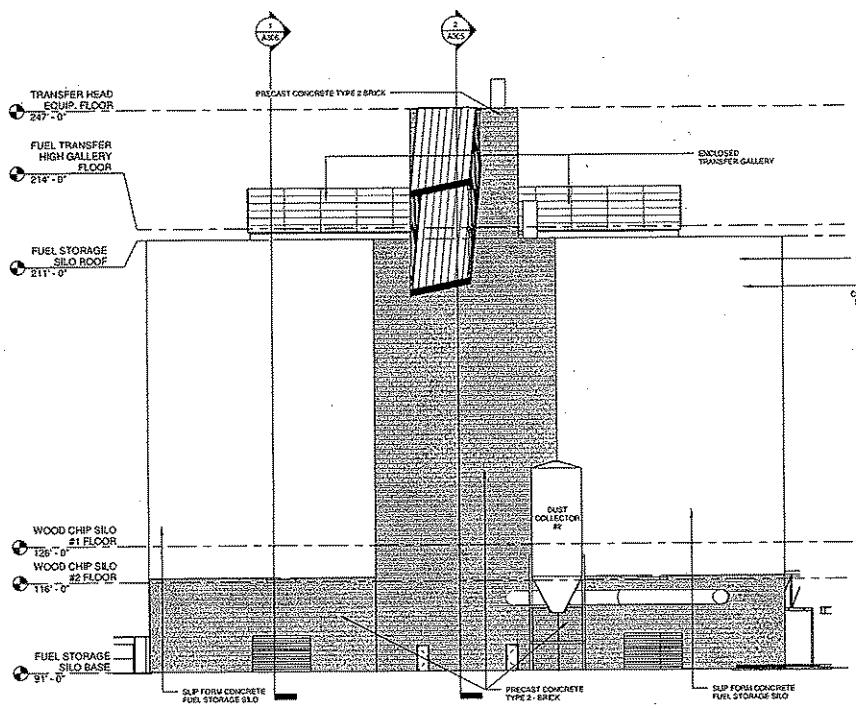
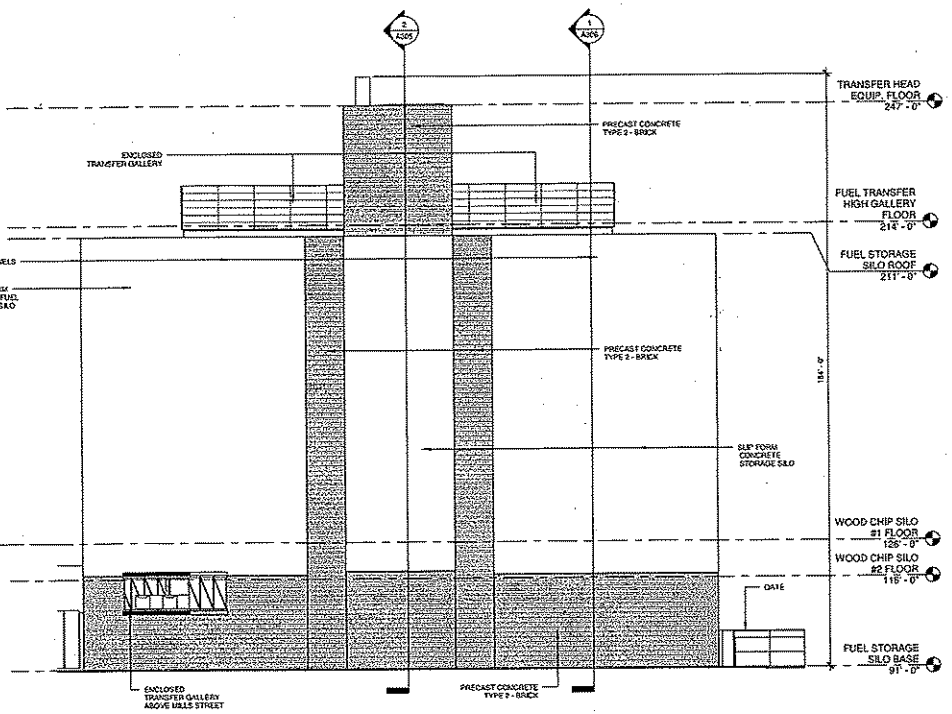
Sheet Number	A203



2 / A204 FUEL STORAGE - EAST ELEVATION
1/16" = 1'-0"



1 / A204 FUEL STORAGE - WEST ELEVATION (MILLS STREET)
1/16" = 1'-0"

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Project Title: CHARTER STREET HEATING PLANT REBUILD
Project Location: MADISON, WI

Sheet Title: GDP BUILDING ELEVATIONS

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Graphic Scale	
DFD Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	A204

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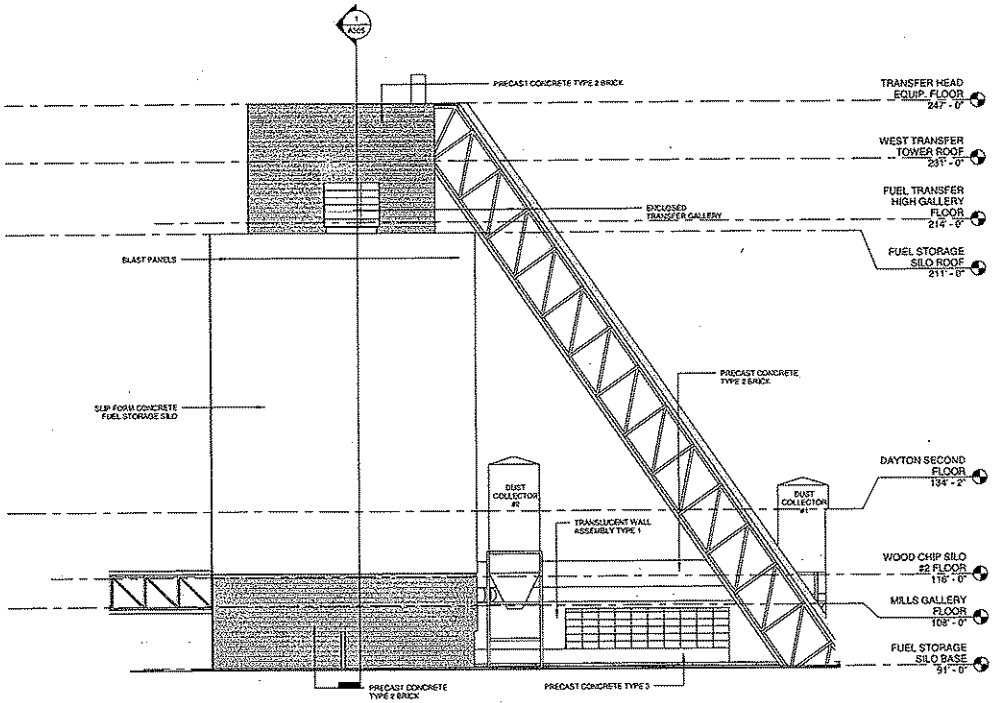

1 / A205 FUEL STORAGE - SOUTH ELEVATION
1/16" = 1'-0"

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Project Title: CHARTER STREET HEATING PLANT REBUILD

Project Location: MADISON, WI

Sheet Title: GDP BUILDING ELEVATIONS

Revisions			
No.	Date	By:	Description

Organic State	
OSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	A205

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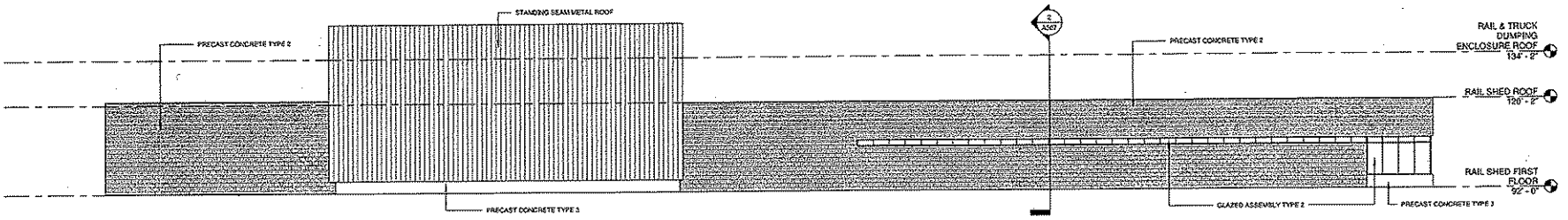
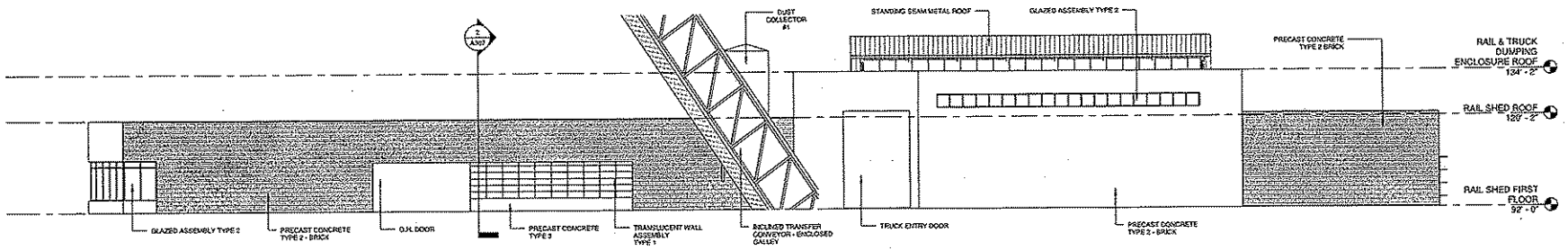
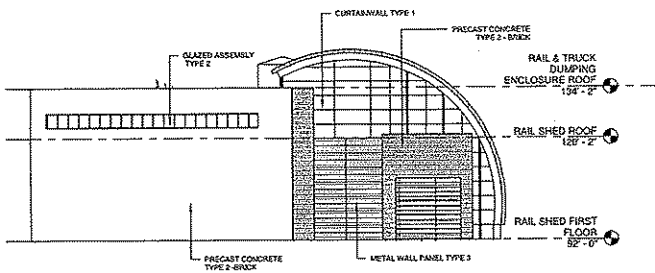


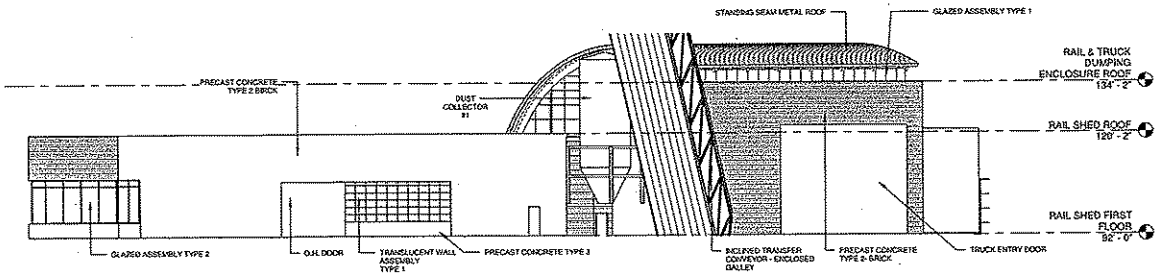
1 A206 RAIL SHED & HOPPER - NORTH ELEVATION
1/16" = 1'-0"



2 A206 RAIL SHED & HOPPER SOUTH ELEVATION
1/16" = 1'-0"



4 A205 RAIL SHED - EAST ELEVATION
1/16" = 1'-0"



3 A206 RAIL SHED WEST ELEVATION
1/16" = 1'-0"

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Project Title: CHARTER STREET HEATING PLANT REBUILD

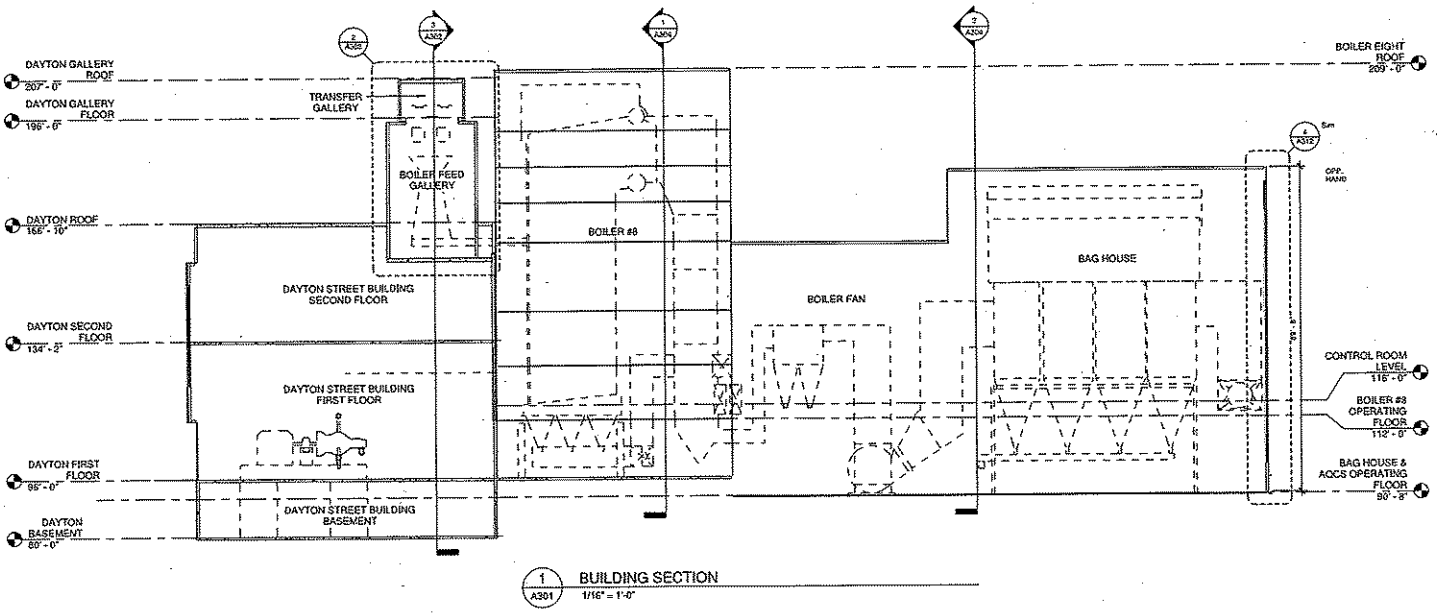
Project Location: MADISON, WI

Sheet Title: GDP BUILDING ELEVATIONS

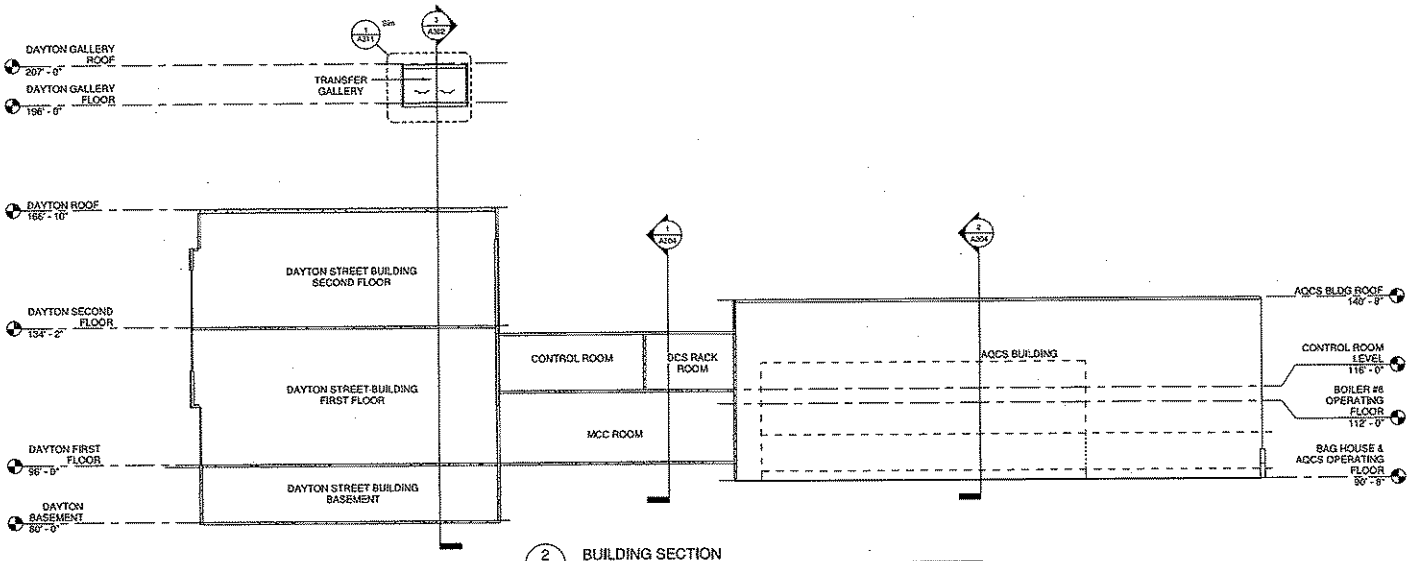
Plan Notes:

No.	Date:	By:	Description:

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	A206



1 A301 BUILDING SECTION
1/16" = 1'-0"



2 A301 BUILDING SECTION
1/16" = 1'-0"

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Project Title: CHARTER STREET HEATING PLANT REBUILD

Project Location: MADISON, WI

Sheet Title: GDP BUILDING SECTIONS

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Graphic Scale	
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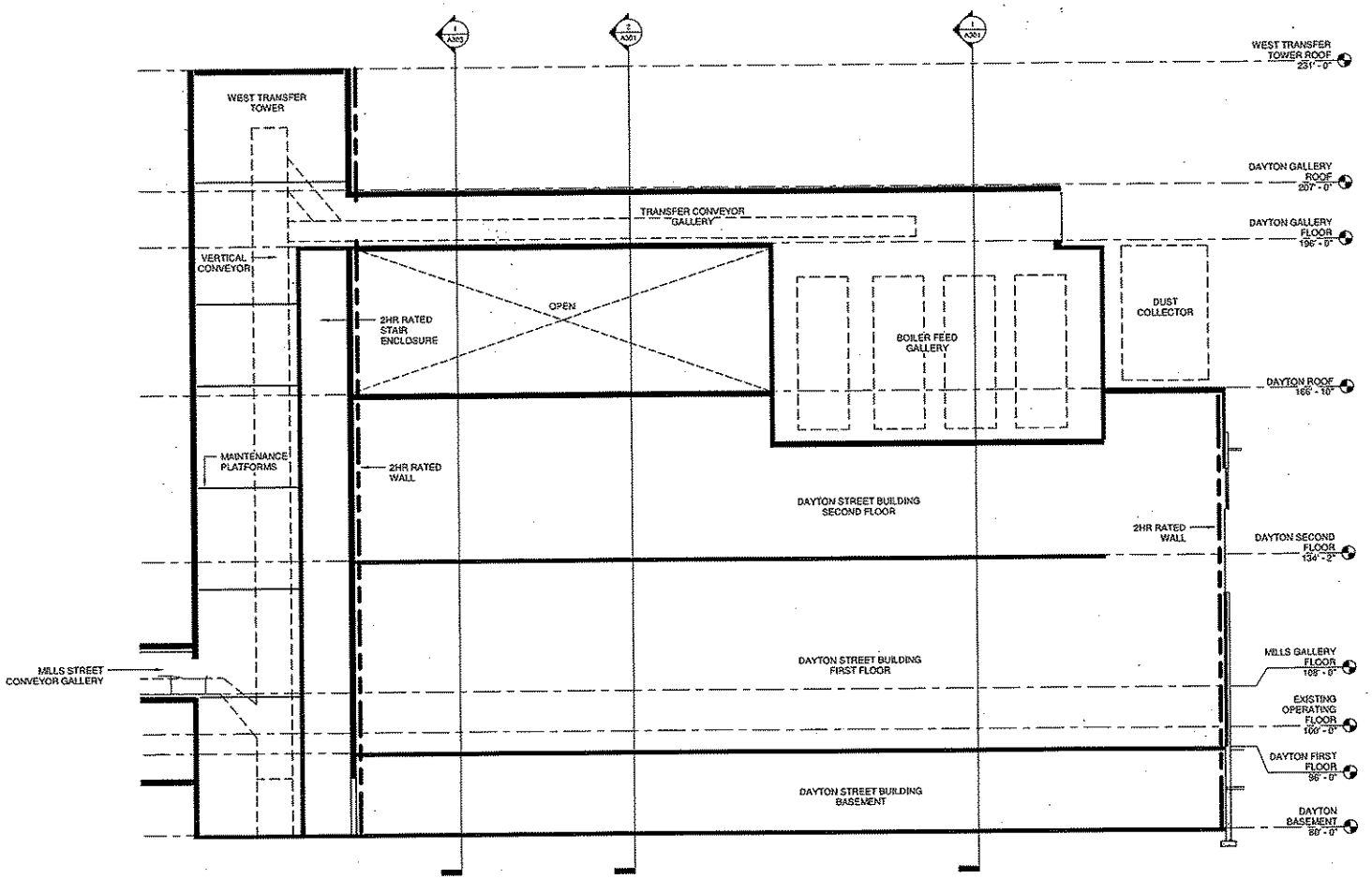

3 / A302 DAYTON STREET BUILDING SECTION
3/32" = 1'-0"

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Project Title: CHARTER STREET HEATING PLANT REBUILD
Project Location: MADISON, WI
Sheet Title: GDP BUILDING SECTIONS

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Drawing Scale	
DSF Number	09A2L
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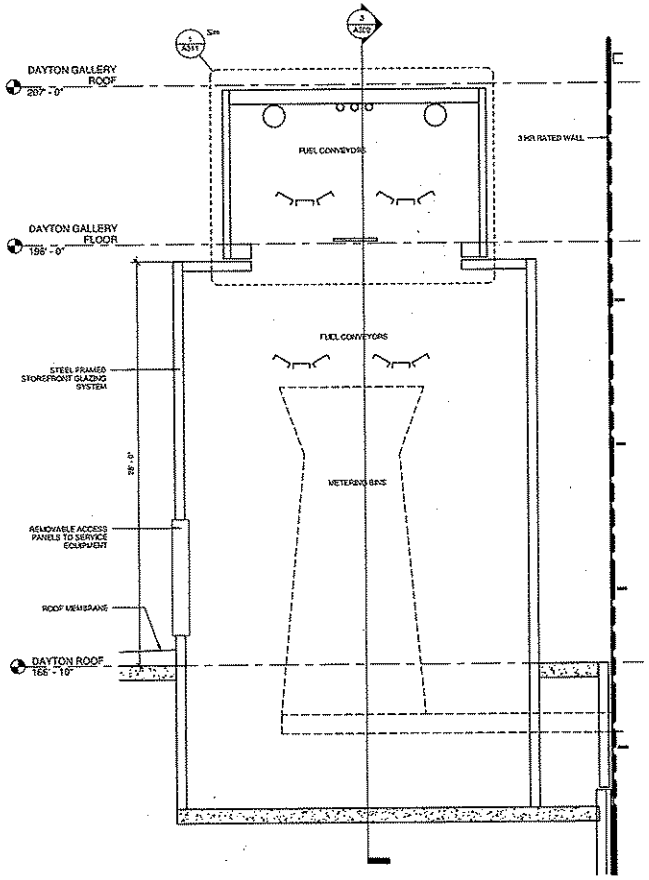
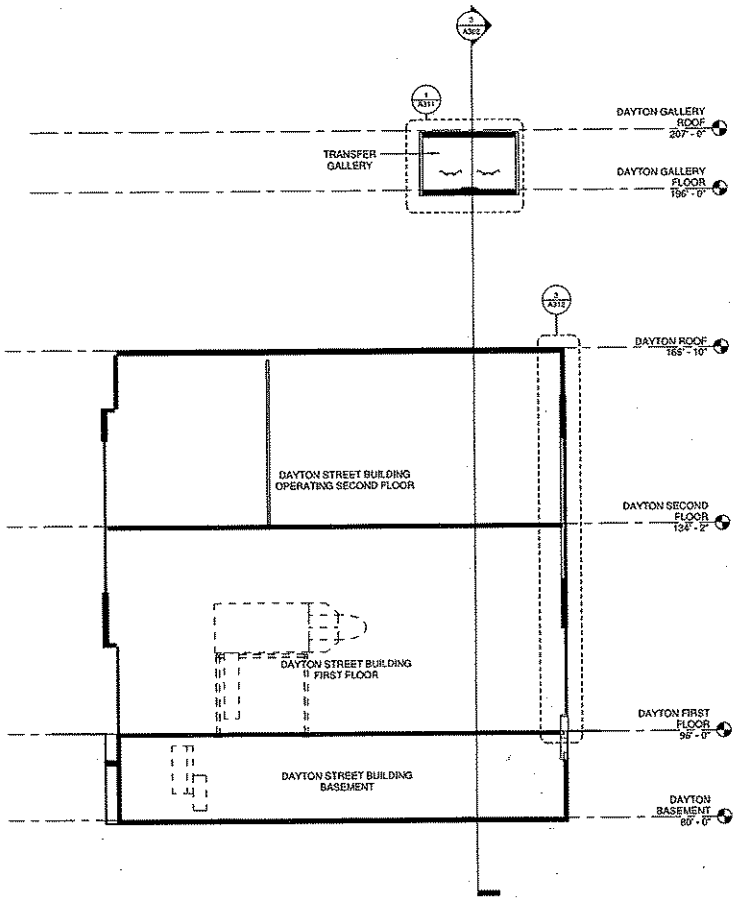


2 A303 DAYTON STREET FUEL BIN ENCLOSURE
1/4" = 1'-0"



1 A303 DAYTON STREET BUILDING SECTION
3/32" = 1'-0"

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Project Title: CHARTER STREET HEATING PLANT REBUILD

Project Location: MADISON, WI

Sheet Title: GDP BUILDING SECTIONS

Revisions:

No.	Date:	By:	Description

Graphic Scale	
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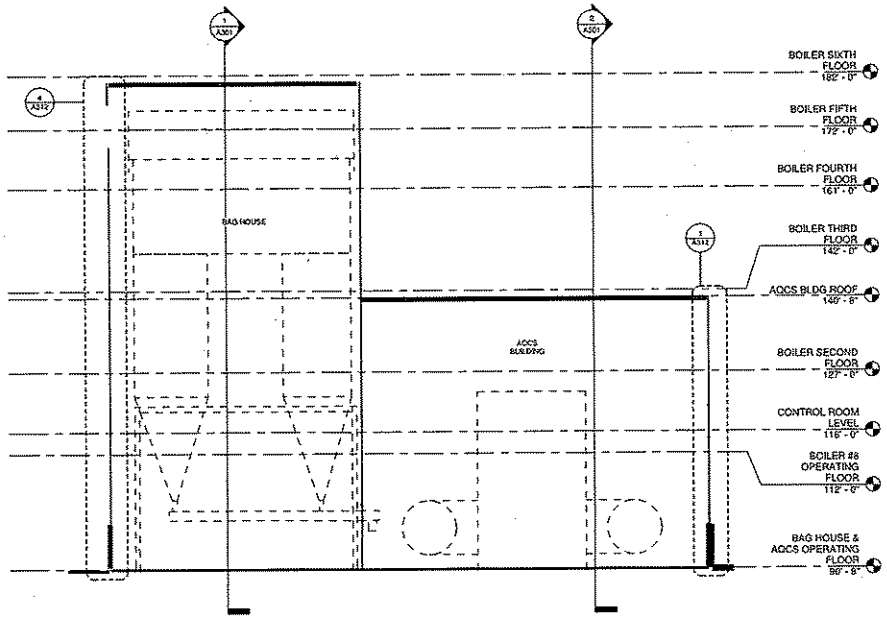
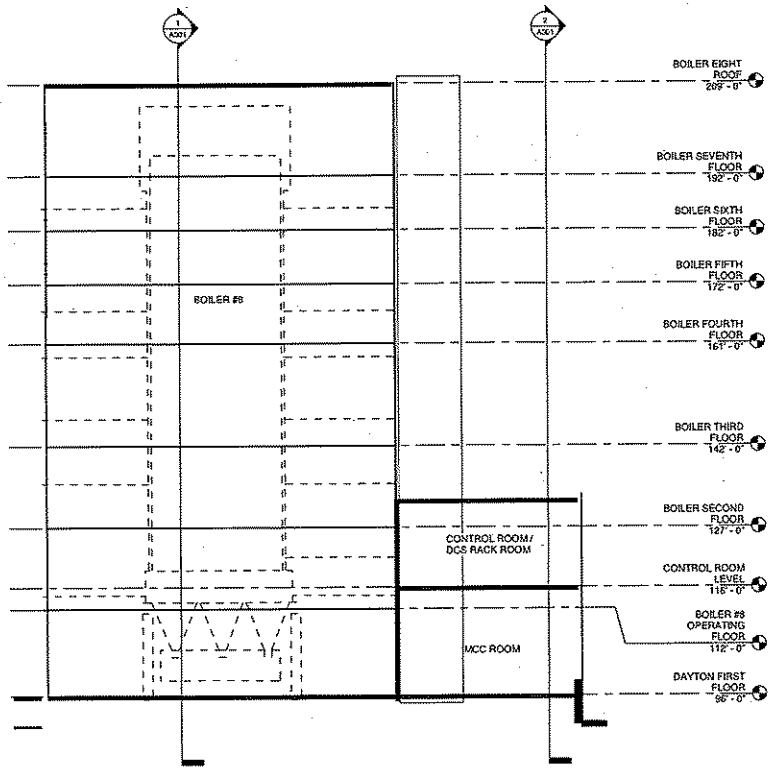
Sheet Number	A303



2 A304 BAG HOUSE, AIR POLLUTION CONTROL BUILDING SECTION
3/32" = 1'-0"



1 A304 BOILER NO. SIX / CONTROL ROOM SECTION
3/32" = 1'-0"

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Project Title: CHARTER STREET HEATING PLANT REBUILD

Project Location: MADISON, WI

Sheet Title: GDP BUILDING SECTIONS

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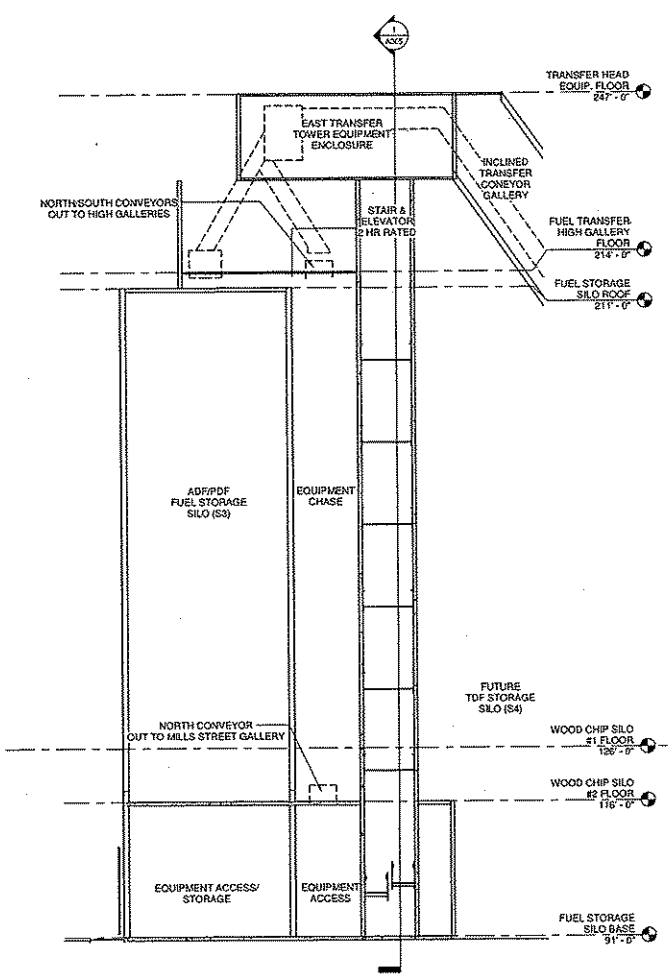
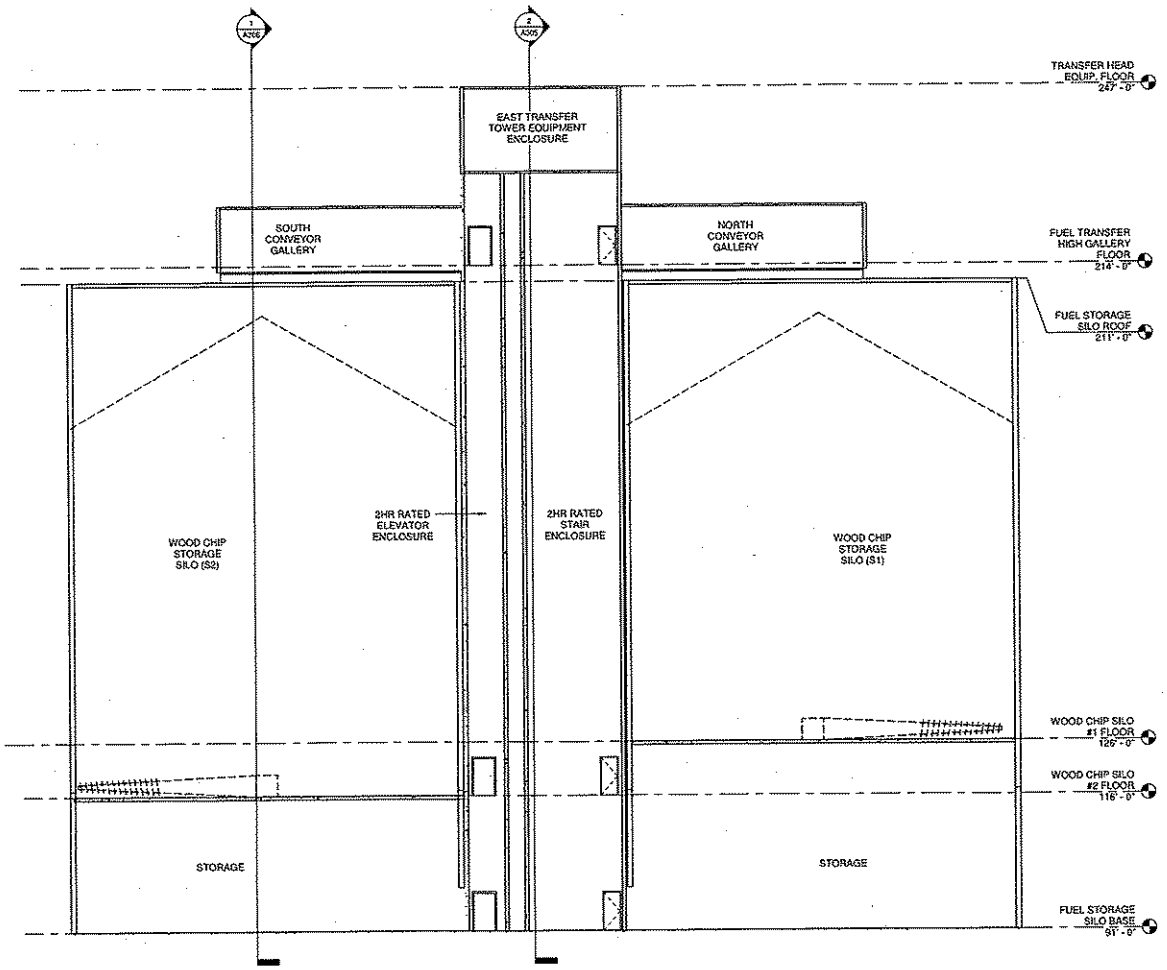


2 A305 FUEL STORAGE SILO SECTION
3/32" = 1'-0"



1 A305 FUEL STORAGE SILOS SECTION
3/32" = 1'-0"

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Project Title: CHARTER STREET HEATING PLANT REBUILD

Project Location: MADISON, WI

Sheet Title: GDP BUILDING SECTIONS

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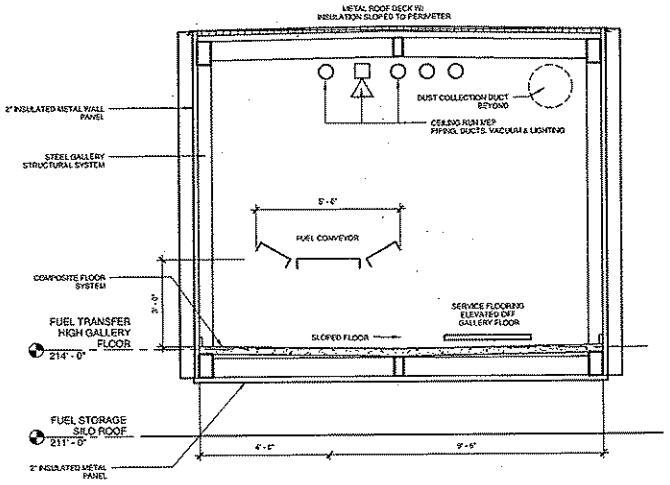
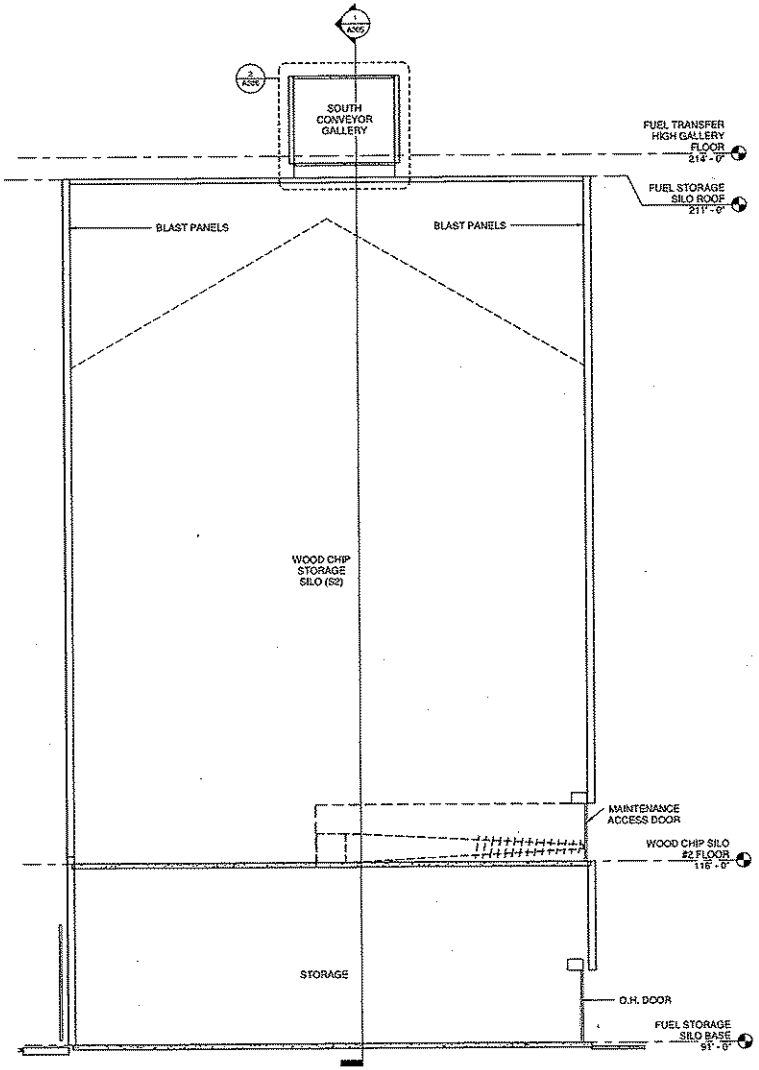


2 A306 FUEL STORAGE HIGH GALLERY SECTION
1/2" = 1'-0"



1 A306 FUEL STORAGE SILO SECTION
1/8" = 1'-0"

3/9/2010 11:09:41 AM

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PEC Project No: 2009.07.00

State of Wisconsin
Department of Administration
Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN SYSTEM

Project Title: CHARTER STREET HEATING PLANT REBUILD

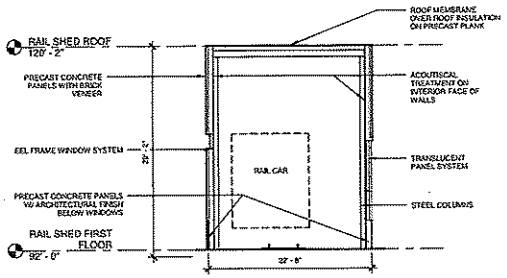
Project Location: MADISON, WI

Sheet Title: GDP BUILDING SECTIONS

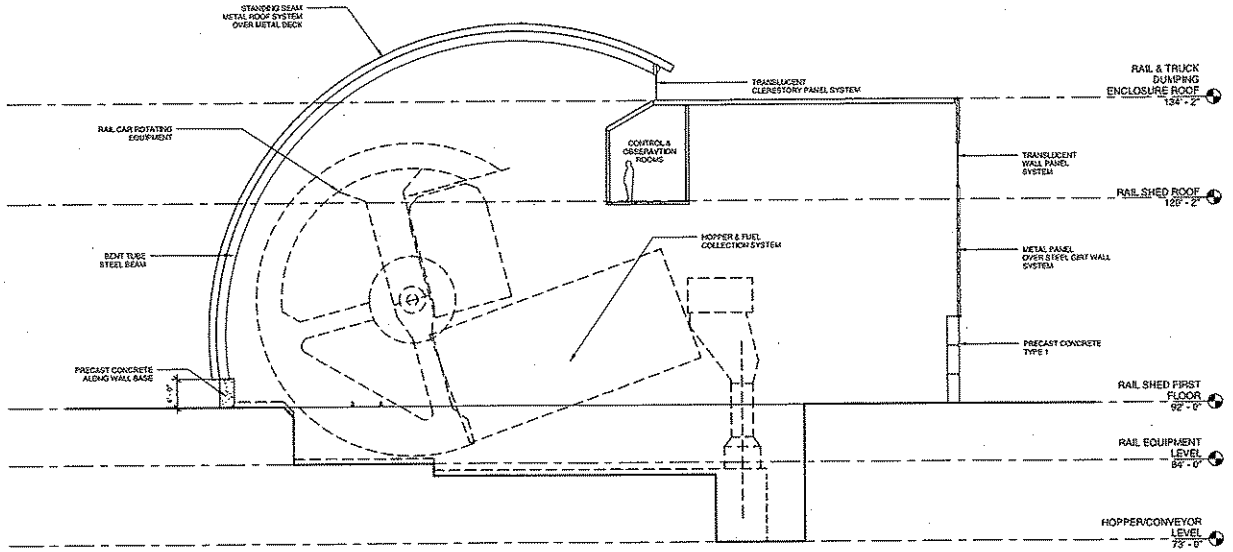
Revisions:

No.	Date:	By:	Description:

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	A306



2 A307 RAIL SHED SECTION
1/8" = 1'-0"



1 A307 ROTARY DUMPER SECTION
1/8" = 1'-0"

3/9/2010 11:09:32 AM

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Project Title: CHARTER STREET HEATING PLANT REBUILD
Project Location: MADISON, WI
Sheet Title: GDP BUILDING SECTIONS

Revisions:

No.	Date:	By:	Description:

Graphic Scale	
DSF Number	09A2L
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Date Issued	03-10-10
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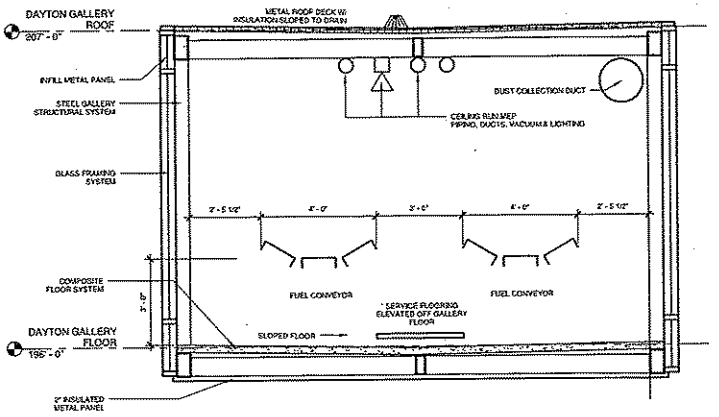
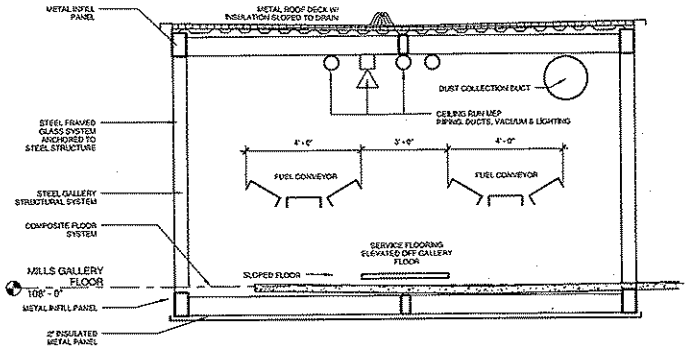


1 / A311 DAYTON STREET HIGH GALLERY
1/2" = 1'-0"



2 / A311 MILLS STREET GALLERY SECTION
1/2" = 1'-0"

3/9/2010 11:08:45 AM

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2009.07.00

State of Wisconsin
Department of Administration
Division of State Facilities

Agency Mission:
UNIVERSITY OF WISCONSIN SYSTEM

Project Title:
CHARTER STREET HEATING PLANT REBUILD

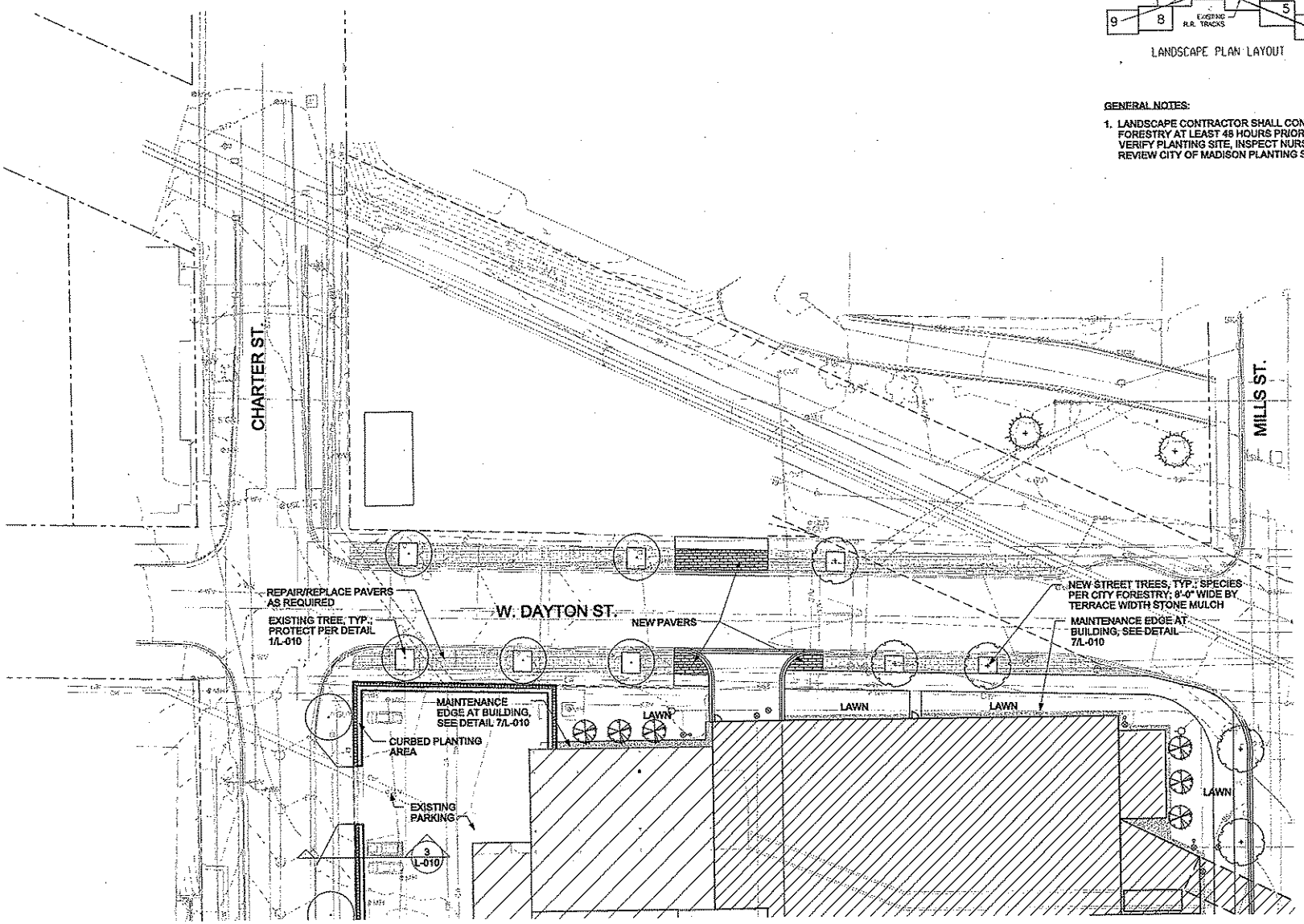
Project Location:
MADISON, WI

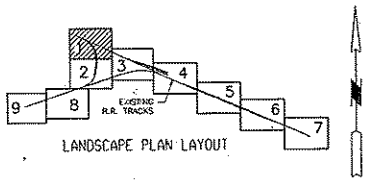
Sheet Title:
GBP WALL SECTIONS

Revisions:

No.	Date:	By:	Description:

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	A311





LANDSCAPE PLAN LAYOUT

GENERAL NOTES:

1. LANDSCAPE CONTRACTOR SHALL CONTACT CITY FORESTRY AT LEAST 48 HOURS PRIOR TO PLANTING TO VERIFY PLANTING SITE, INSPECT NURSURY STOCK, AND REVIEW CITY OF MADISON PLANTING SPEC.

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Agency / Institution
UNIVERSITY OF WISCONSIN, MADISON

Project Title:
CHARTER STREET REBUILD

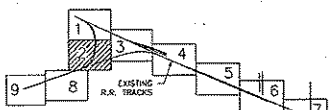
Project Location:
MADISON, WI.

Sheet Title:
GDP LANDSCAPE PLAN

Revisions:			
No.	Date:	By:	Description

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	L-001

KEN SAIKI DESIGN INC
LANDSCAPE ARCHITECTS



LANDSCAPE PLAN LAYOUT

GENERAL NOTES:

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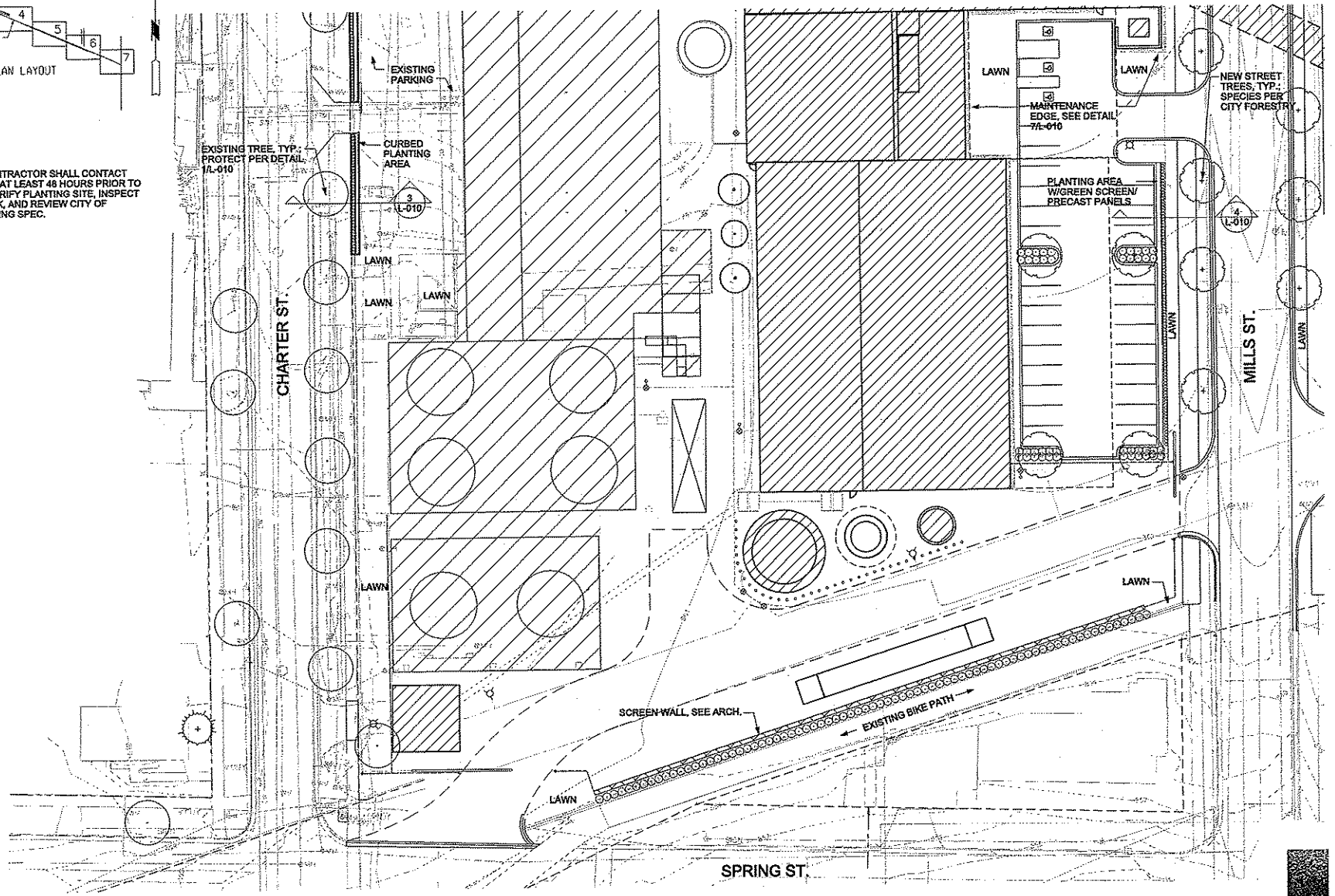

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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

Project Title: CHARTER STREET REBUILD

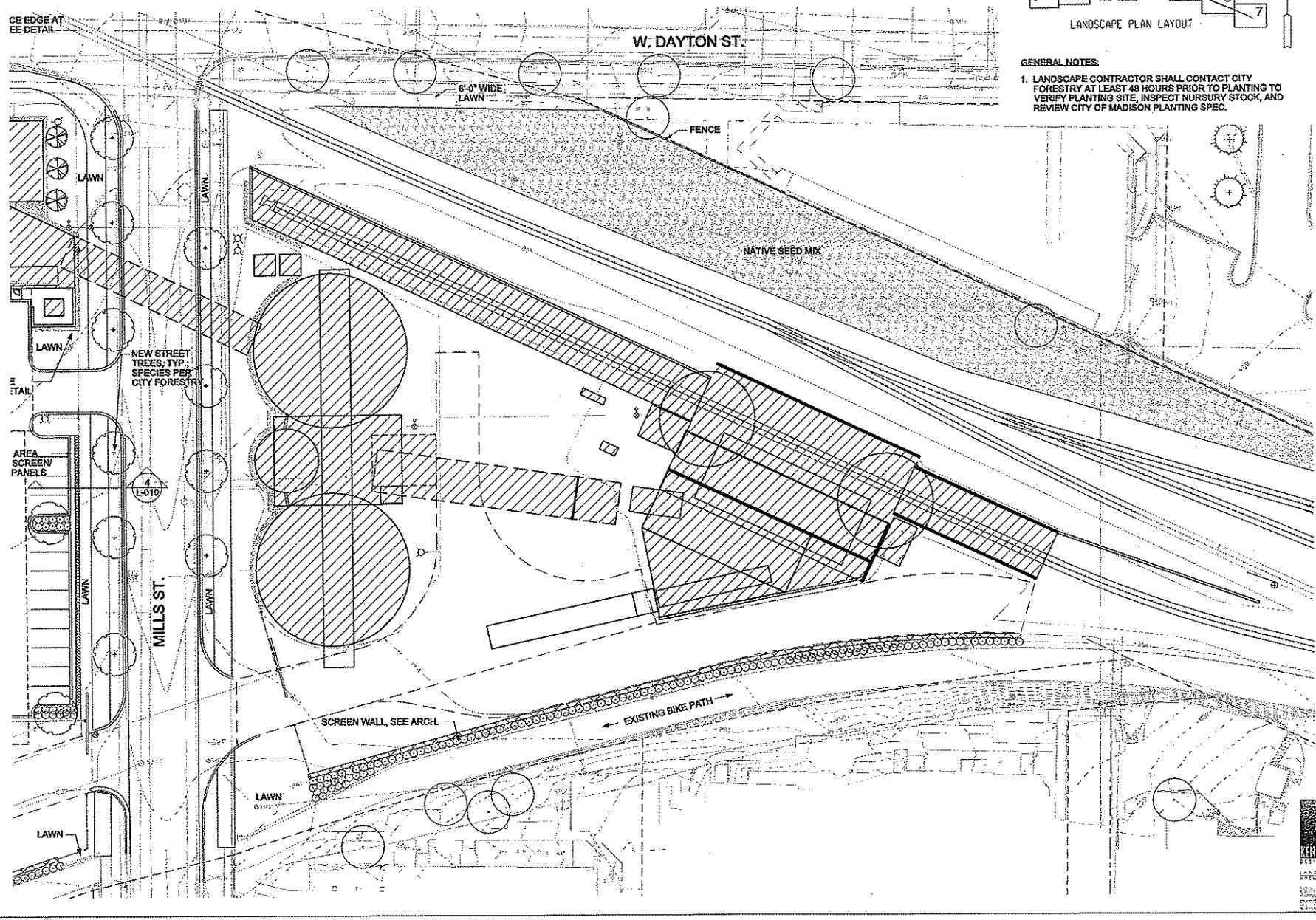
Project Location: MADISON, WI.

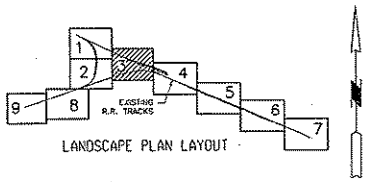
Sheet Title: GDP LANDSCAPE PLAN

Revisions:			
No.	Date:	By:	Description:

Graphic Scale	10 0 20
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	L-002

GREEN SAIL DESIGN INC
LANDSCAPE ARCHITECTURE





LANDSCAPE PLAN LAYOUT

GENERAL NOTES:

1. LANDSCAPE CONTRACTOR SHALL CONTACT CITY FORESTRY AT LEAST 48 HOURS PRIOR TO PLANTING TO VERIFY PLANTING SITE, INSPECT NURSURY STOCK, AND REVIEW CITY OF MADISON PLANTING SPEC.

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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

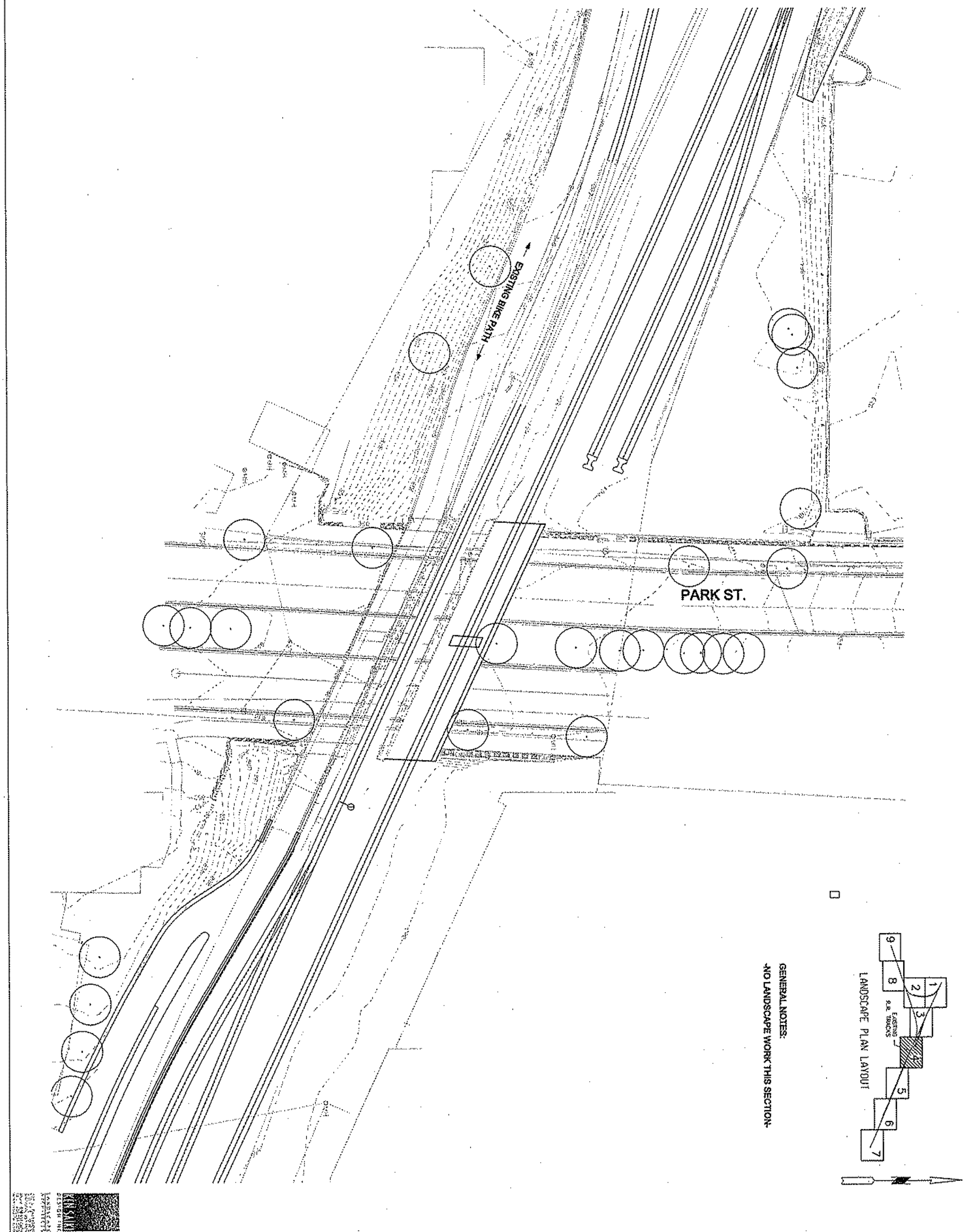
Sheet Title: GDP LANDSCAPE PLAN

Revisions:

No.	Date	By	Description

Graphic Scale	0 30
DST Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	L-003

KEN SAIKI DESIGN INC
Landscape Architects



Sheet Number	L-004
Date Issued	03-10-10
Set Type	PR
DSF Number	09A2L
Graphic Scale	

Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP LANDSCAPE PLAN

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Department of Administration
Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

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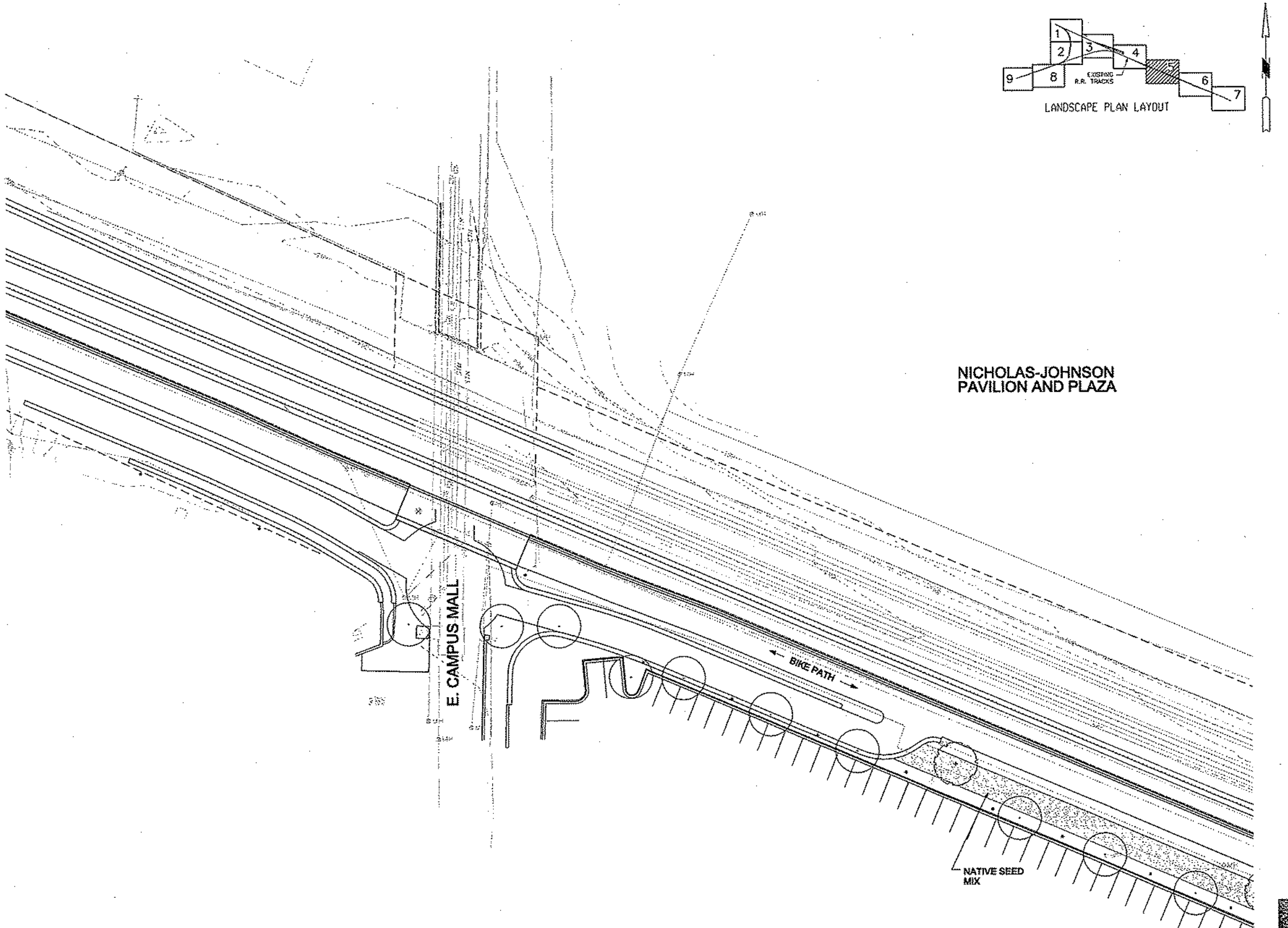
9



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KEN SAIKI DESIGN INC LANDSCAPE ARCHITECTS

State of Wisconsin
Department of Administration
Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

Project Title: CHARTER STREET REBUILD

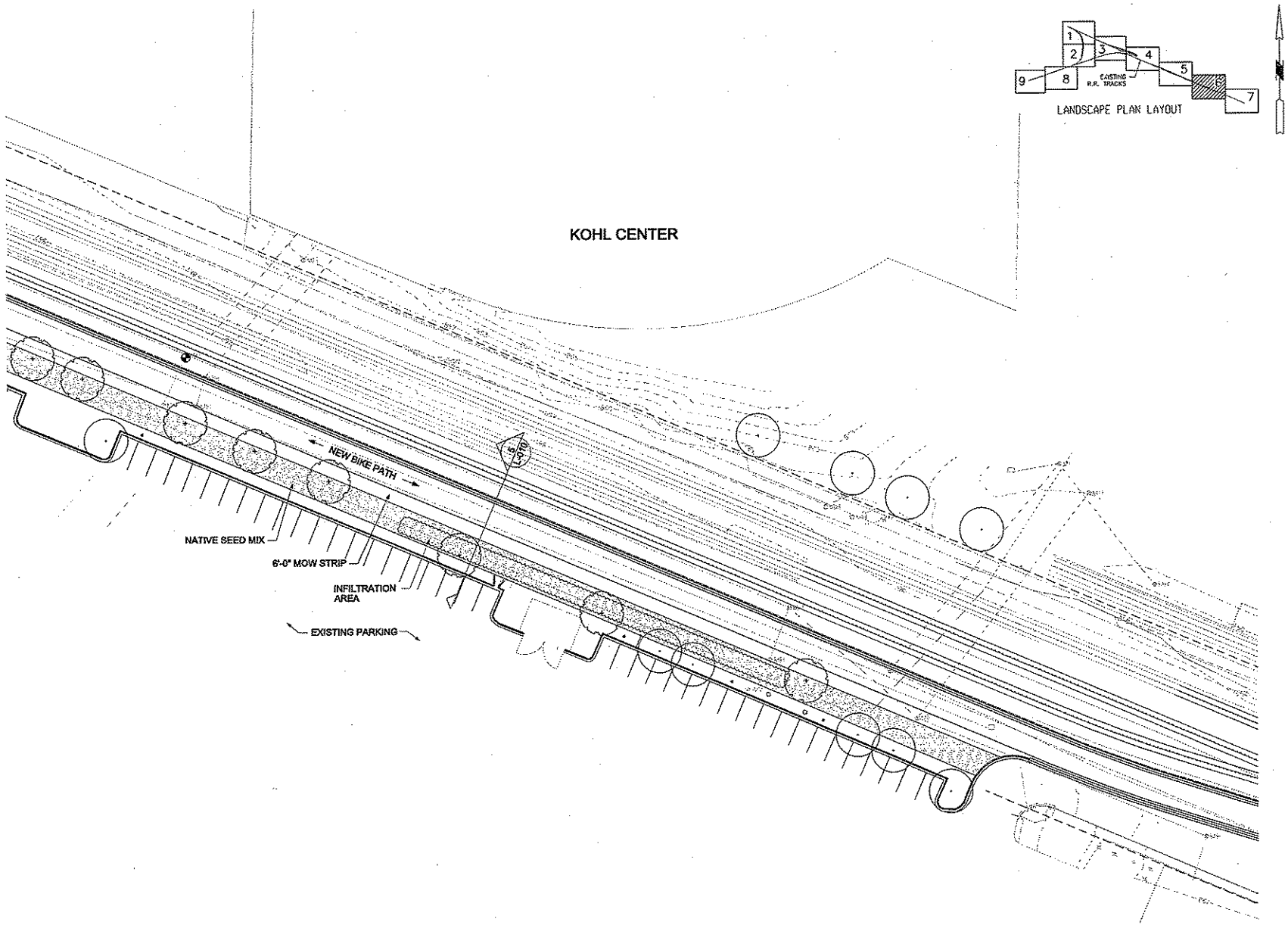
Project Location: MADISON, WI.

Sheet Title: GDP LANDSCAPE PLAN

Revisions: No	Date:	By:	Description

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	L-005

9



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Agency / Institution:
UNIVERSITY OF WISCONSIN, MADISON

Project Title:
CHARTER STREET REBUILD

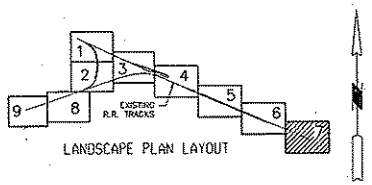
Project Location:
MADISON, WI.

Sheet Title:
GDP LANDSCAPE PLAN

Revisions:			
No.	Date	By:	Description

Graphic Scale	
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	L-006

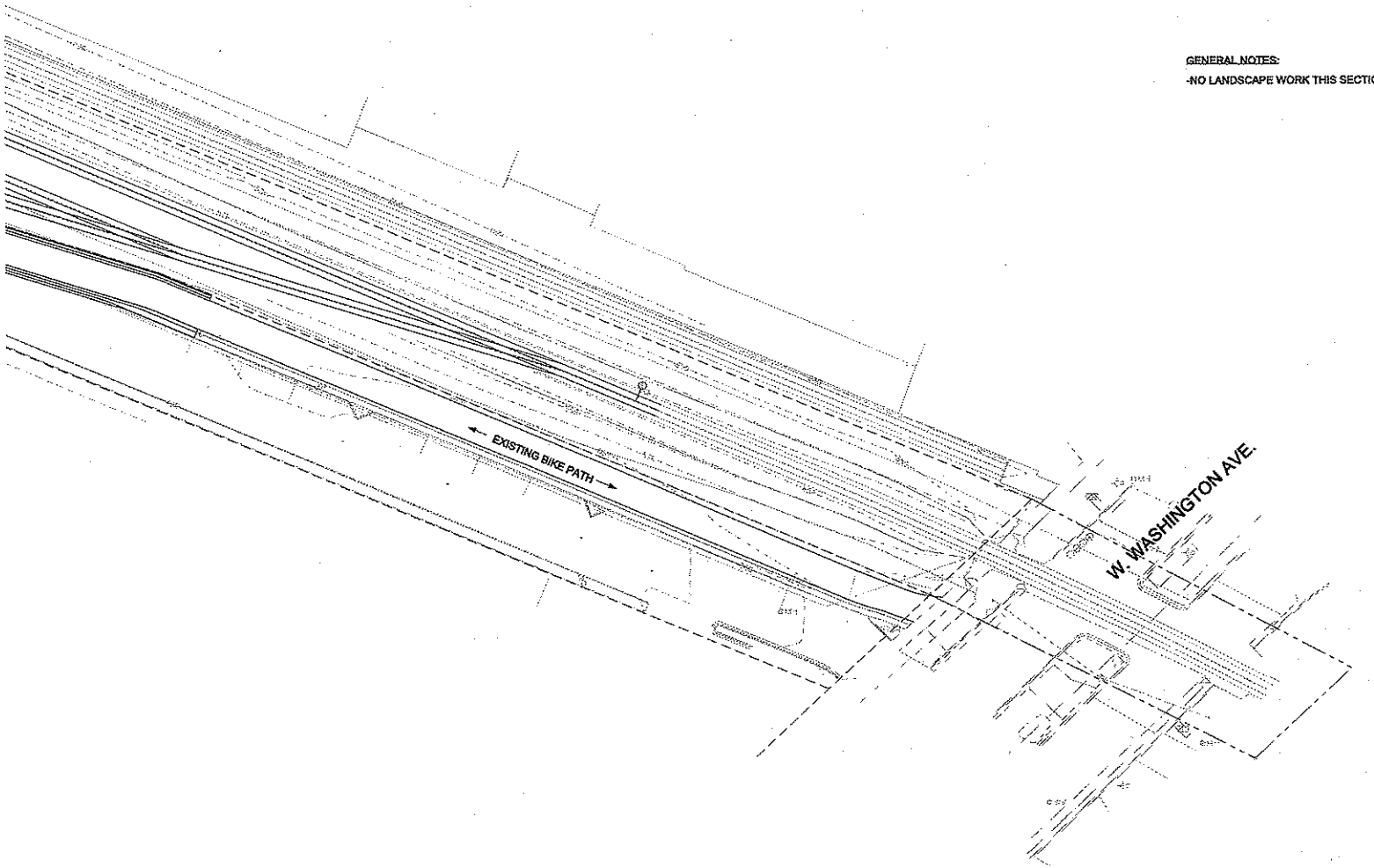
KEN SAIKI DESIGN INC.
LANDSCAPE ARCHITECTS



LANDSCAPE PLAN LAYOUT

GENERAL NOTES:

-NO LANDSCAPE WORK THIS SECTION-



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Agency / Institution:
UNIVERSITY OF WISCONSIN, MADISON

Project Title:
CHARTER STREET REBUILD

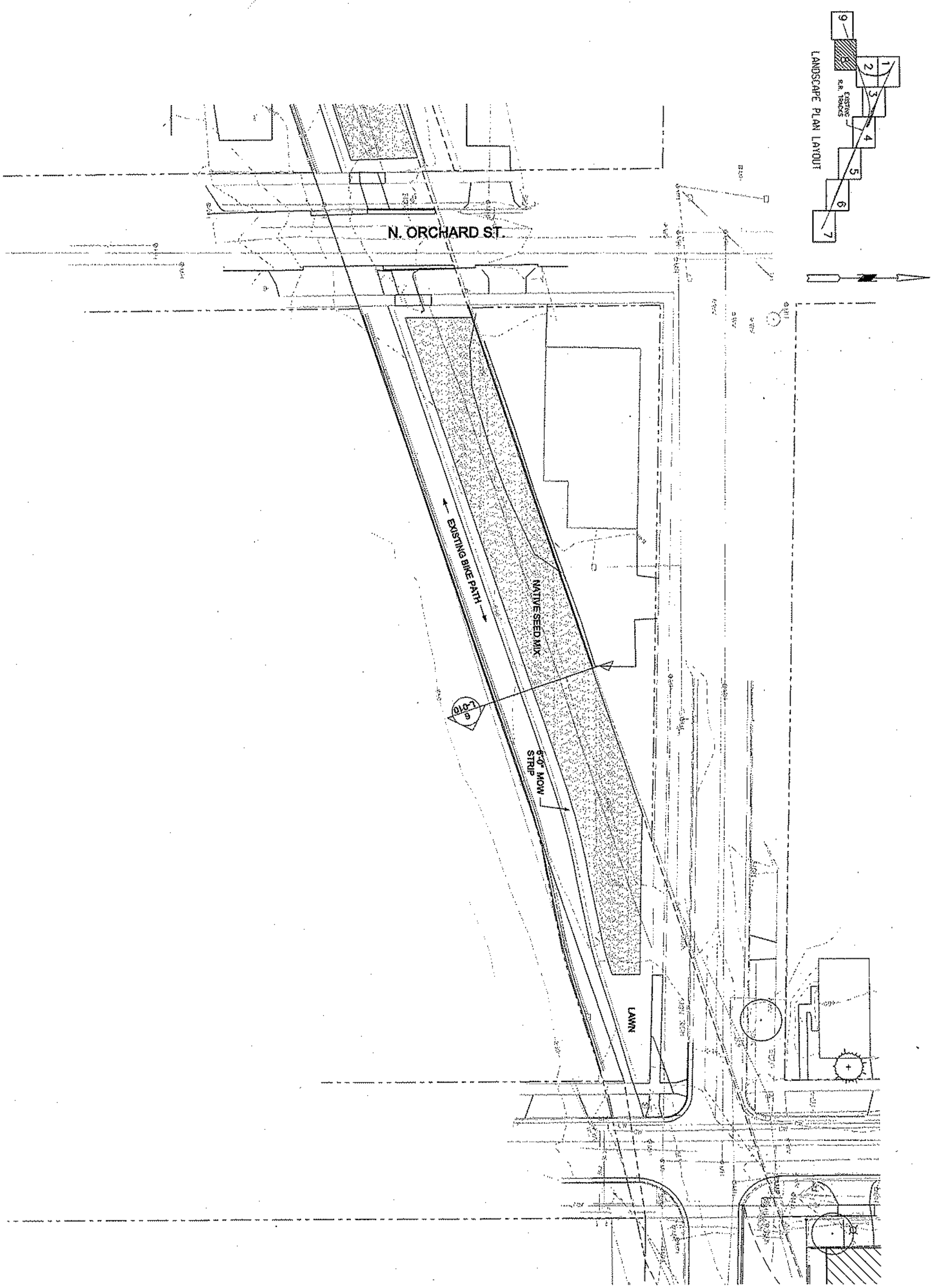
Project Location:
MADISON, WI

Sheet Title:
GDP LANDSCAPE PLAN

Revisions:

No.	Date:	By:	Description:

Graphic Scale	0 10 20
DSF Number	09A2L
Sel Type	PR
Date Issued	03-10-10
Sheet Number	L-007



Project Title: CHARTER STREET REBUILD

Project Location: MADISON, WI.

Sheet Title: GDP LANDSCAPE PLAN

State of Wisconsin
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Division of State Facilities

Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

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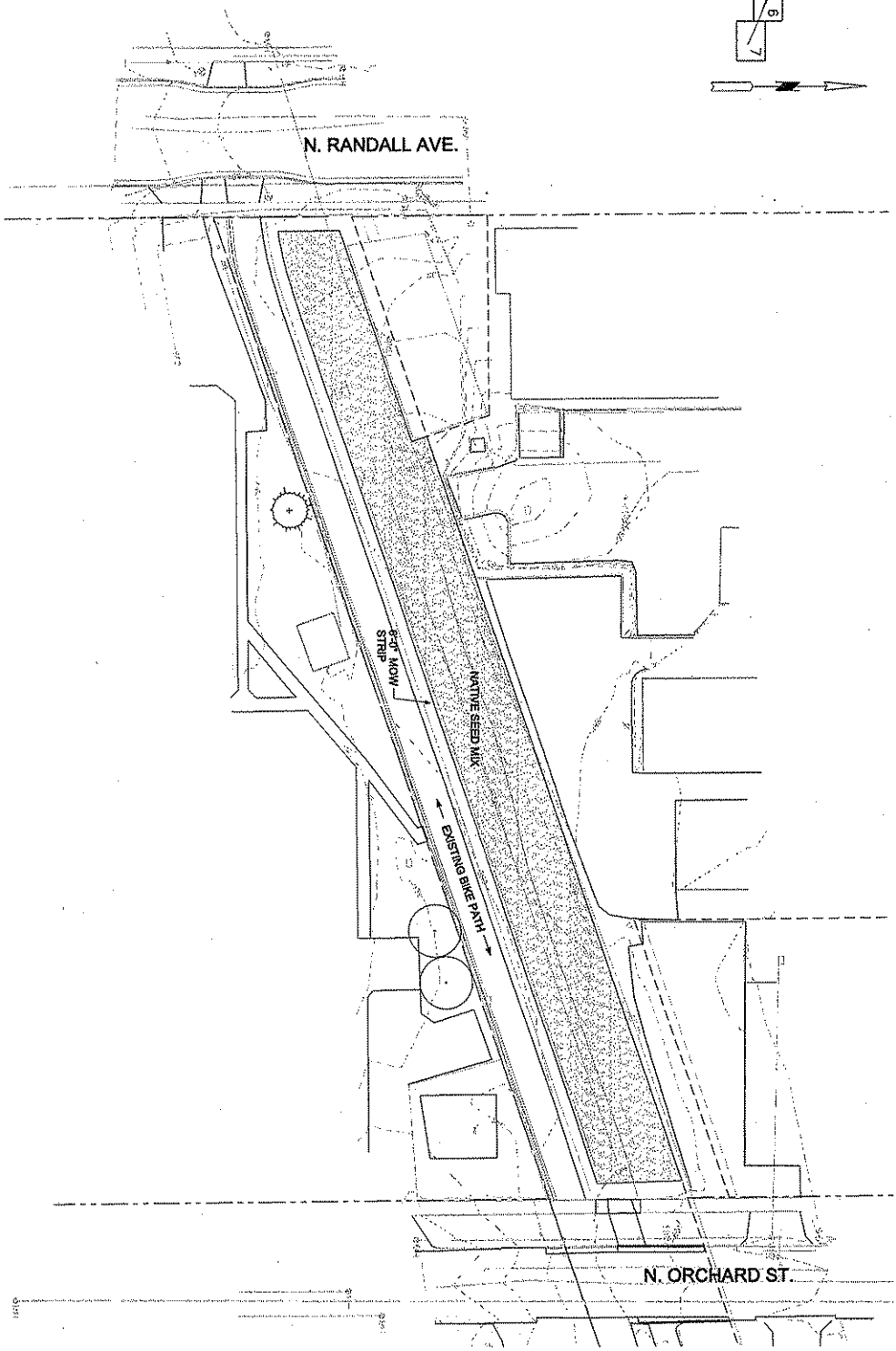
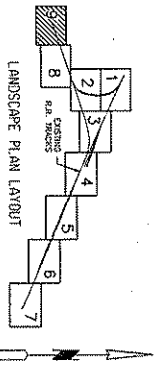
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	L-008





Project Title:	CHARTER STREET REBUILD
Project Location:	MADISON, WI.
Sheet Title:	GDP LANDSCAPE PLAN
Agency / Institution:	UNIVERSITY OF WISCONSIN, MADISON
State of Wisconsin	Department of Administration, Division of State Facilities
Sheet Number	L-009
Date Issued	03-10-10
Set Type	PR
DSF Number	09A2L
Graphic Scale	
Revisions: No. / Date / By / Description	

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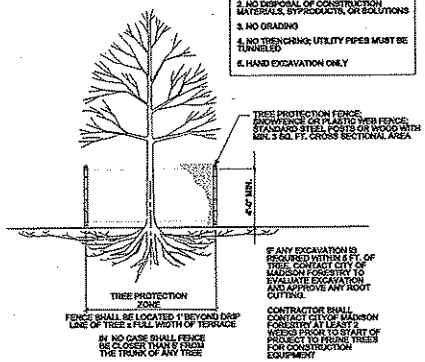
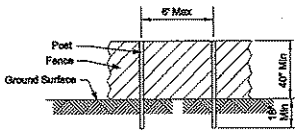


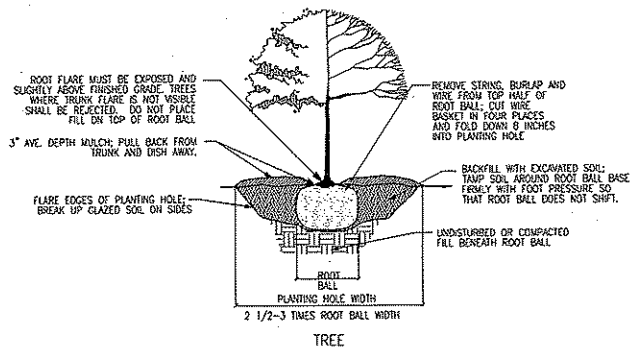


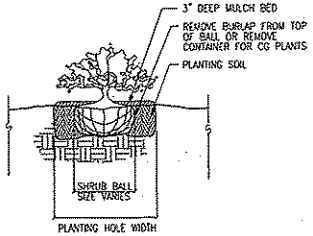
NOTES:

1. FENCE POSTS SHALL BE EITHER STANDARD STEEL POSTS OR WOOD POSTS WITH MIN. CROSS SECTIONAL AREA OF 3.0 SQ. IN.

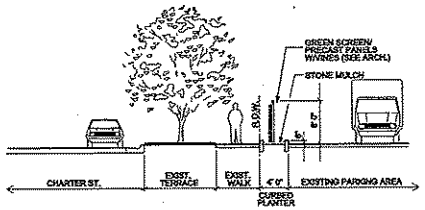
2. FENCE MAY BE EITHER 40" HIGH SNOW FENCE OR 40" PLASTIC WEB FENCING.

1 L-010 TREE PROTECTION DETAIL
NTS

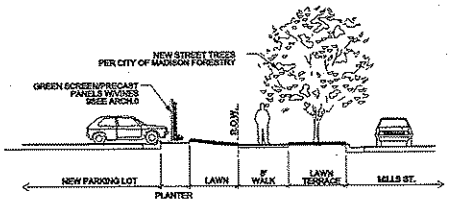




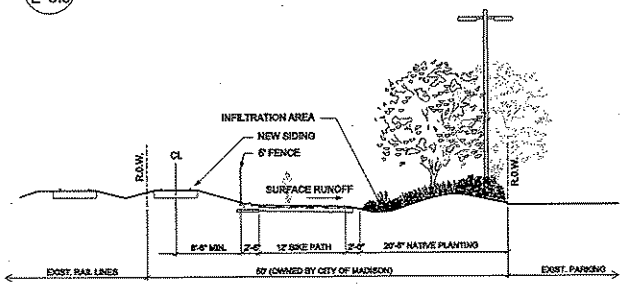
2 L-010 TYPICAL PLANTING DETAILS
NTS



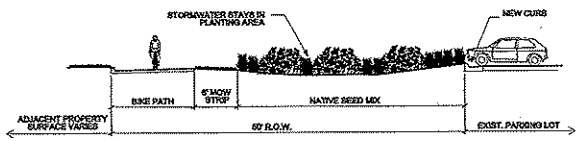
3 L-010 SECTION • CHARTER STREET
1/8"=1'-0"



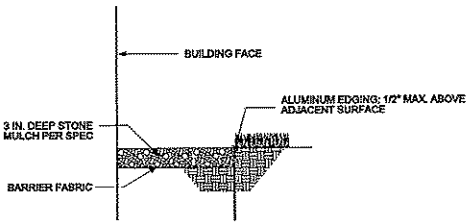
4 L-010 SECTION • MILLS STREET
1/8"=1'-0"



5 L-010 SECTION • BIKE PATH AND NEW PARALLEL SIDING
1/8"=1'-0"



6 L-010 SECTION • BIKE PATH - RANDALL ST. TO CHARTER ST.
1/8"=1'-0"



7 L-010 STONE MAINTENANCE EDGE
1"=1'-0"

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Agency / Institution: UNIVERSITY OF WISCONSIN, MADISON

Project Title: CHARTER STREET REBUILD
Project Location: MADISON, WI.
Sheet Title: GDP LANDSCAPE DETAILS

Revisions:

No.	Date	By	Description

Graphic Scale	0 6 12
DSF Number	09A2L
Set Type	PR
Date Issued	03-10-10
Sheet Number	L-010

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