

▶ **FILE #:** 6-E-10-UR

**AGENDA ITEM #** 35

**AGENDA DATE:** 6/10/2010

▶ **APPLICANT:** SARA MARTIN

OWNER(S): LANE HAYS

TAX ID NUMBER: 118 17321

JURISDICTION: County Commission District 6

▶ **LOCATION:** Northwest side of Corridor Park Bv., northeast side of Data Ln.

▶ **APPX. SIZE OF TRACT:** 3.7 acres

SECTOR PLAN: Northwest County

GROWTH POLICY PLAN: Planned Growth Area

ACCESSIBILITY: Access is via Corridor Park Bv., a local street with a pavement width of 28' within a 60' wide right-of-way

UTILITIES: Water Source: West Knox Utility District

Sewer Source: West Knox Utility District

WATERSHED: Turkey Creek

▶ **ZONING:** BP (Business and Technology) / TO (Technology Overlay)

▶ **EXISTING LAND USE:** Office and research facility

▶ **PROPOSED USE:** Building expansion

HISTORY OF ZONING: Previous development plans for this site were approved by MPC in 1999 and 2004

SURROUNDING LAND USE AND ZONING: North: Vacant land / BP/TO Business & Technology

South: Business / BP/TO Business & Technology

East: Vacant land / BP/TO Business & Technology

West: Business / BP/TO Business & Technology

NEIGHBORHOOD CONTEXT: The site is located in the Corridor Park commercial park. Tenants in the area are engaged in manufacturing, research and office uses. Zoning in the area is BP/TO (Business & Technology Park / Technology Overlay).

**STAFF RECOMMENDATION:**

▶ **APPROVE the request for the building expansion and the construction of the solar panels as shown on the development plan subject to 4 conditions**

1. Meeting all applicable requirements of the Knox County Zoning Ordinance
2. Meeting all applicable requirements of the Tennessee Technology Corridor Development Authority
3. Provide engineering calculations pertaining to the reconfiguration of the detention basin to the Knox County Dept. of Engineering and Public Works
4. Place a stormwater easement around the reconfigured detention basin as may be required by the Knox County Dept. of Engineering and Public Works

With the conditions noted, this plan meets the requirements for approval in the BP (Business and Technology) zone and the other criteria for approval of a use on review

**COMMENTS:**

The applicant is proposing to construct a solar auto charging station on this site as part of the research efforts of the current tenant which is the Electric Power Research Institute. The small building that will be constructed as part of this project appears to project into the existing detention basin. For this reason, the applicant will have to submit new calculations to the Knox County Department of Engineering and Public Works that will illustrate the impact of the new building on the storage capacity of the basin. If the new construction will decrease the storage capacity below the required minimums, the applicant would then be required to enlarge the basin.

**EFFECT OF PROPOSAL ON THE SUBJECT PROPERTY, SURROUNDING PROPERTY AND THE COMMUNITY AS A WHOLE**

1. The proposed construction will have no impact on local services since all utilities are in place to serve this development.
3. The proposal is compatible with the surrounding development because it will allow for the expansion of a technology based business.

**CONFORMITY OF THE PROPOSAL TO CRITERIA ESTABLISHED BY THE KNOX COUNTY ZONING ORDINANCE**

1. With MPC and TTCDA approval, the proposed construction meets all of the requirements of the BP (Business and Technology Park and TO Technology Overlay) zones.
2. The proposed construction is consistent with the general standards for uses permitted on review: The proposed change is consistent with the adopted plans and policies of the General Plan and Sector Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. The use is compatible with the character of the neighborhoods where it is proposed. The use will not significantly injure the value of adjacent property. The use will not draw additional traffic through residential areas.

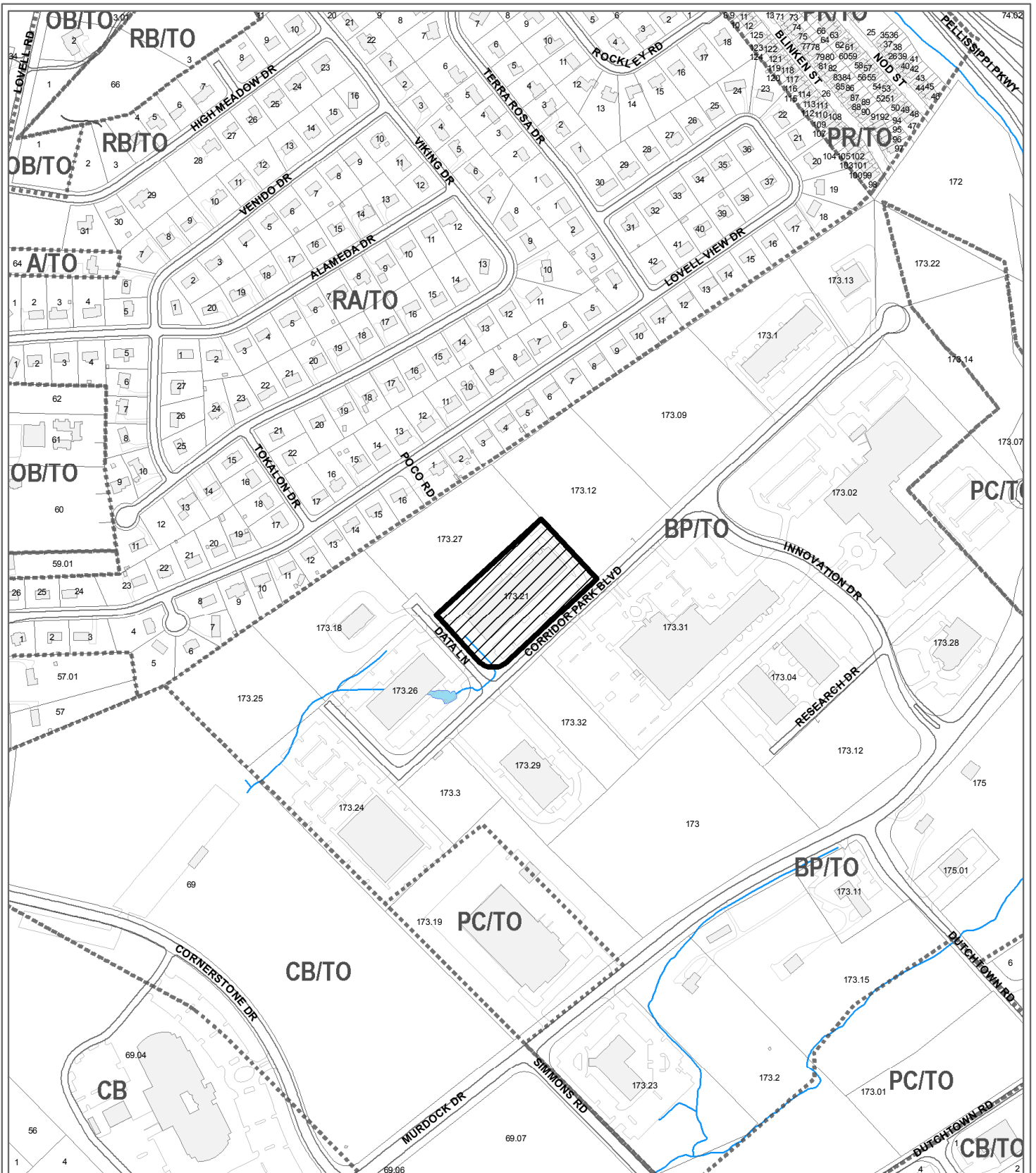
**CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS**

1. The Northwest County Sector Plan identifies the property for technology park use. The proposed construction is consistent with the recommendations of the Sector Plan.

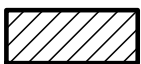
ESTIMATED TRAFFIC IMPACT: Not calculated.

ESTIMATED STUDENT YIELD: Not applicable.

MPC's approval or denial of this request is final, unless the action is appealed to the Knox County Board of Zoning Appeals. The date of the Knox County Board of Zoning Appeals hearing will depend on when the appeal application is filed. Appellants have 30 days to appeal an MPC decision in the County.



**6-E-10-UR  
USE ON REVIEW**

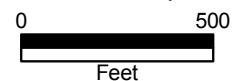


Building expansion in BP (Business and Technology) / TO (Technology Overlay)

Original Print Date: 5/20/2010      Revised:  
Metropolitan Planning Commission \* City / County Building \* Knoxville, TN 37902

Petitioner: Martin, Sara

Map No: 118  
Jurisdiction: County



## The Electric Power Research Institute/Tennessee Valley Authority SMART Station

The Electric Power Research Institute (EPRI) and the Tennessee Valley Authority (TVA) are working together to deploy specialized electric vehicle charging infrastructure. The project's goals are to develop, build and evaluate the use of solar power, battery storage and vehicle charging in an integrated system. The system is called the TVA Smart Modal Area Recharge Terminal, or TVA SMART. As part of this project, it is proposed that such a facility be constructed at the EPRI facilities in Knoxville, TN. The system's primary function and use will be research and development with goals including, but not limited to:

- Public Education in the area of transportation electrification
- A laboratory to investigate control and operation strategies for such combined systems
- Understanding consumer charging habits
- Quantifying the system impact on the electrical grid
- Enabling construction of additional sites in the Tennessee Valley region and nation wide
- Evaluation of access control methods and point-of-sale hardware (note that this is a research function - fees will not be collected for system use)

As mentioned, the system has three key features:

- A solar array to collect sun energy; this energy is used to offset the energy used by the vehicle charging; a canopy, integral to the overall design provides for support of the array; as an added benefit, the array also acts as a sun and rain shade for the parking area
- A battery storage system to allow for limiting the Smart Station impact on the electric grid during peak demand hours
- Vehicle charging infrastructure

The proposed system location at the EPRI Knoxville facility was chosen based on a number of factors:

- Prominent location on property to showcase the SMART Station to the hundreds of utility industry visitors that come to EPRI each year
- Site is readily visible from the EPRI main entrance
- Open, South facing area to enhance solar collection
- Slope of canopy will drain rain away from parking area
- The shadow of the canopy falls on the parking area and not on vegetation
- The location provides a pleasing aesthetic and fits the overall geometry of the property
- The site allows the equipment building to be adjacent to the canopy which is desirable to minimize wire run lengths

G-E-10-02  
4/26/2010

6/2/2010

# Metropolitan Planning Commission - Use On Review

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*Additional Information for Application File Number 6-E-10-UR  
For the June 10, 2010 MPC Meeting*

The Electric Power Research Institute Smart Station – Solar Assisted Vehicle Charging with Battery Storage

Updated Application Correspondence Contact:

**John Halliwell**

Electric Transportation  
Electric Power Research Institute (EPRI)  
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Knoxville, TN 37932  
Phone: 865-218-8149  
Mobile: 865-748-5613  
Fax: 865-218-8001  
Email: [jhalliwell@epri.com](mailto:jhalliwell@epri.com)  
[www.epri.com](http://www.epri.com)

John Halliwell of EPRI attended the TTCDA meeting of May 10, 2010. In addition, Mr. Halliwell spoke by phone with Dan Kelly of the MPC on May 25, 2010 regarding this project. This document seeks to answer questions raised by TTCDA members and Mr. Kelly related to EPRI's application for construction of a solar vehicle charging system at their West Knoxville property.

Specific concern was expressed related to the location of a building at the site that houses electrical equipment and a battery storage system. Of primary concern was that the battery storage building was located outside the normal property line set back of 50'. EPRI has worked with their design contractor to address this concern. By selecting equipment that minimizes the overall footprint of the building and by relocating the structure, we are now proposing a site plan that addresses the TTCDA's concern. The overall length of the building has been reduced from 22' down to 16'. In addition, the proposed site for the building has been shifted North by about 20' from the initially proposed site. These two factors in combination result in a structure that resides within the 50' setback. A revised site plan provided by our design contractor is attached. The relocation requires slightly longer wire runs than the initial proposal, but still meets the needs of our project.

Mr. Kelly asked that Mr. Halliwell contact Leo Lacamera of the Knox County Engineering Department related to the storm water detention pond and storm water run-



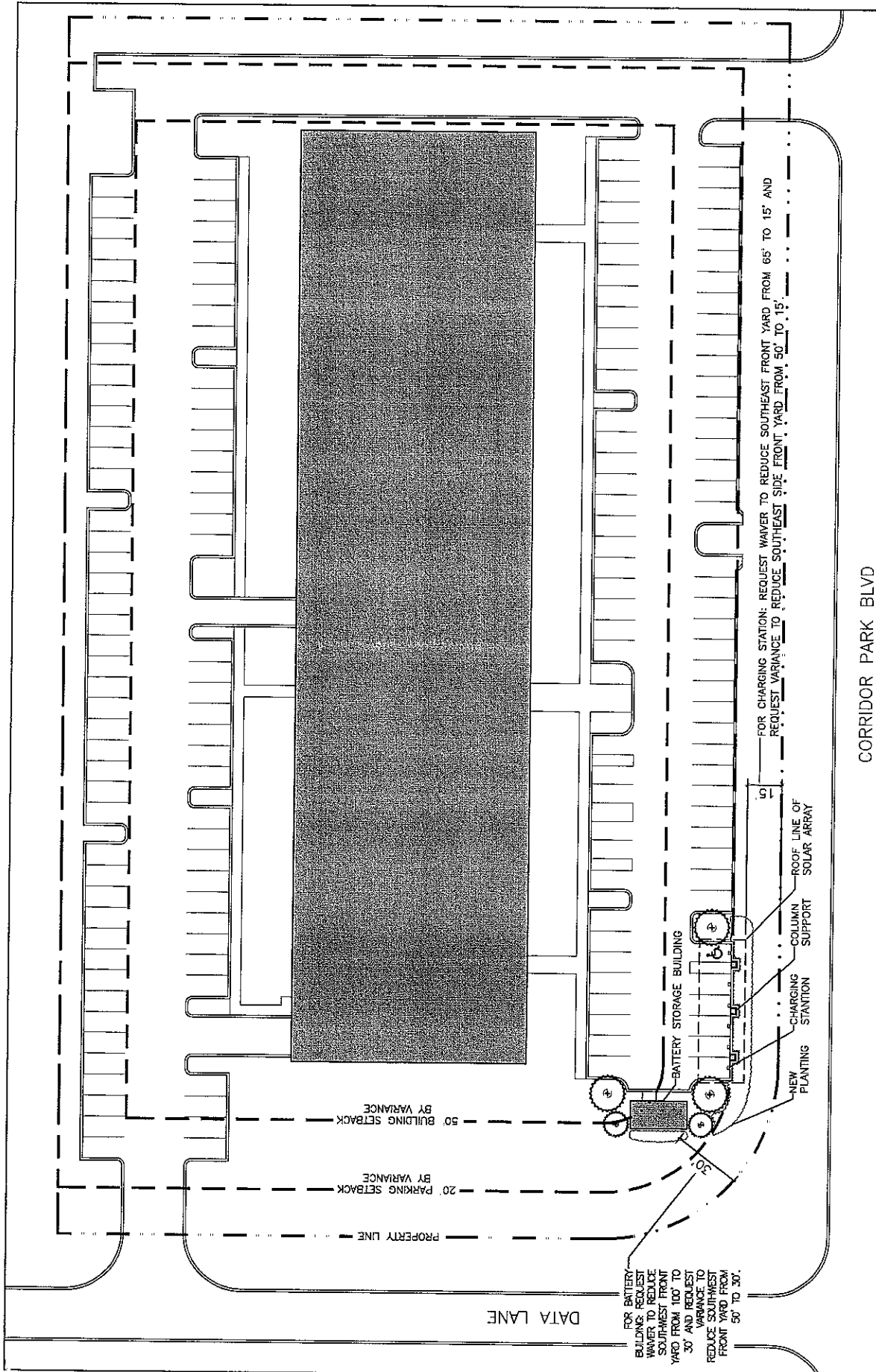


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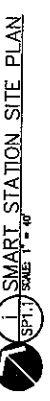
SMART STATION  
KNOXVILLE, TENNESSEE  
ELECTRIC POWER RESEARCH INSTITUTE/TENNESSEE VALLEY AUTHORITY

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PROJECT NUMBER: 10003  
ISSUE DATE: 04-12-2010

SITE PLAN  
SP1.1



6-E-10-UR



CORRIDOR PARK BLVD

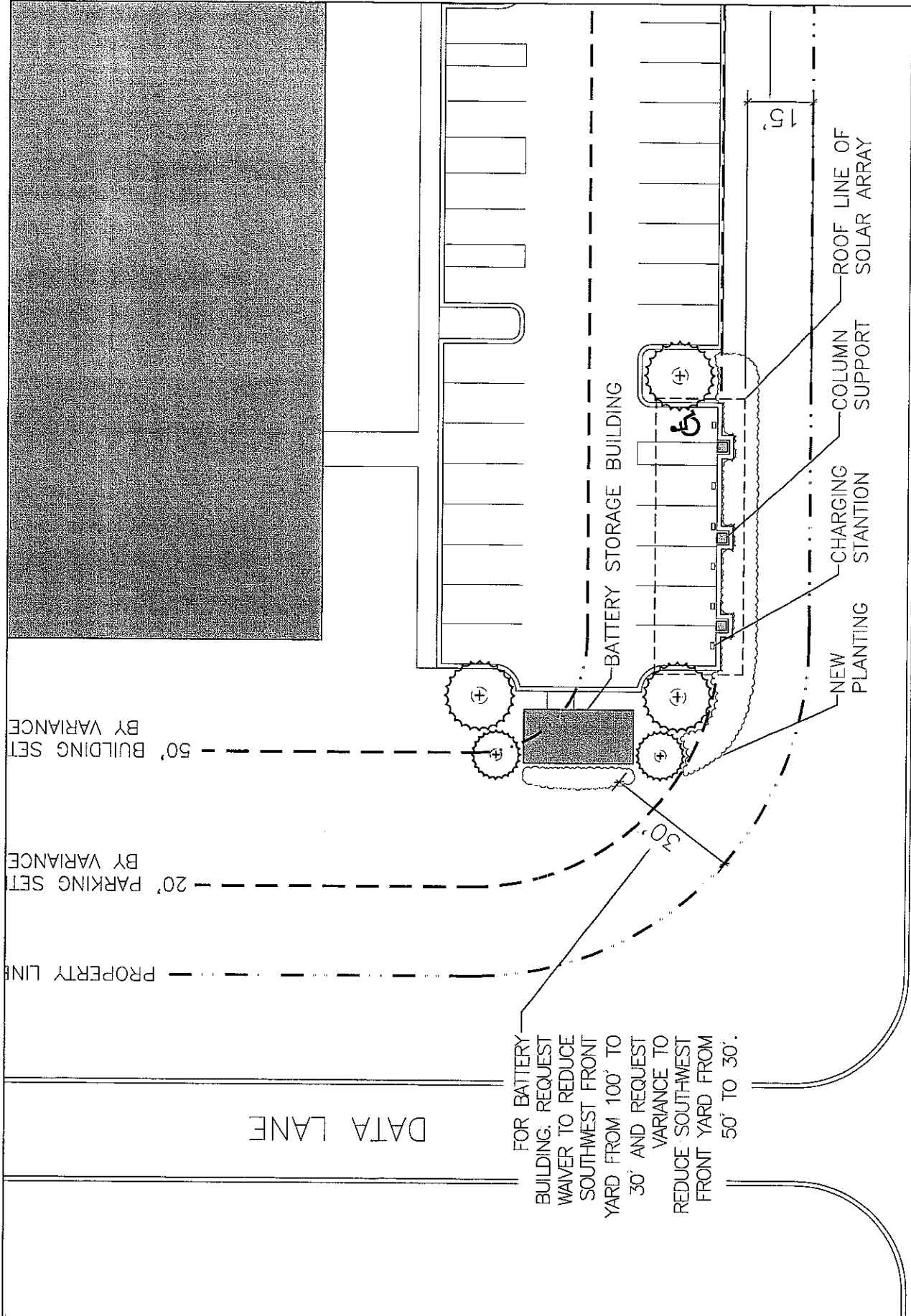


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 423 S. Gay Street, Suite 310  
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**SMART STATION**  
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**SPI.1**  
 SITE PLAN



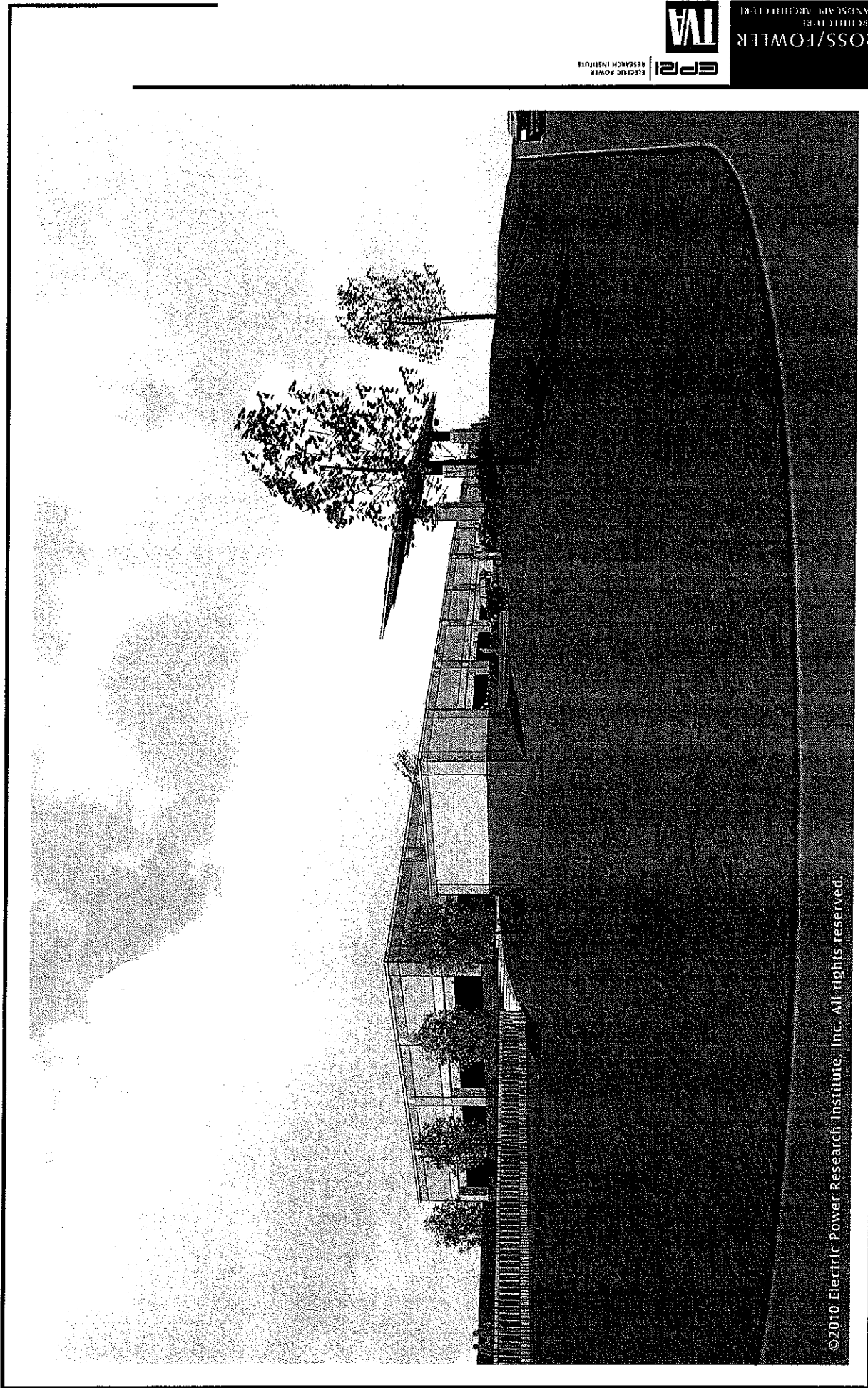
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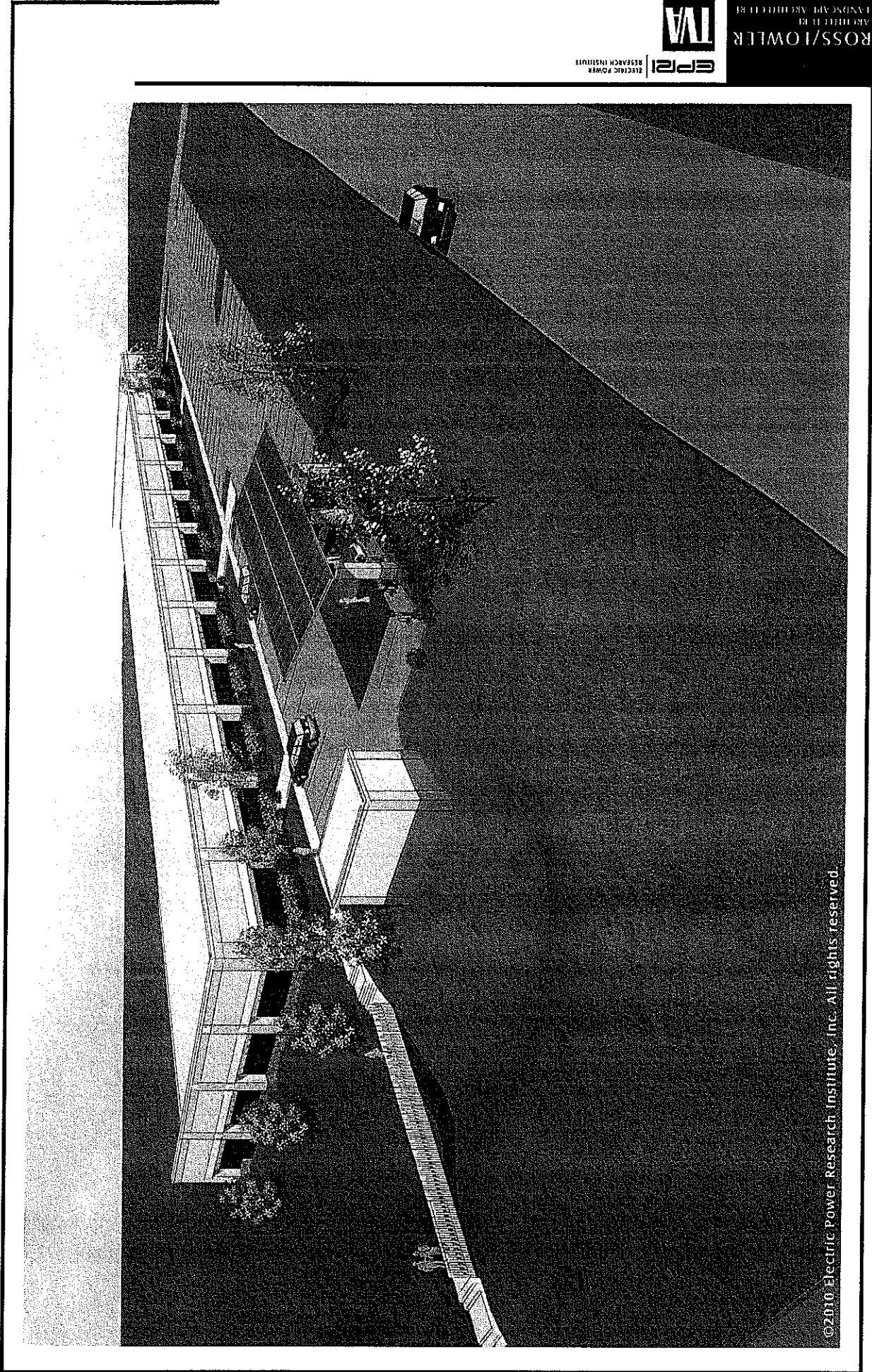
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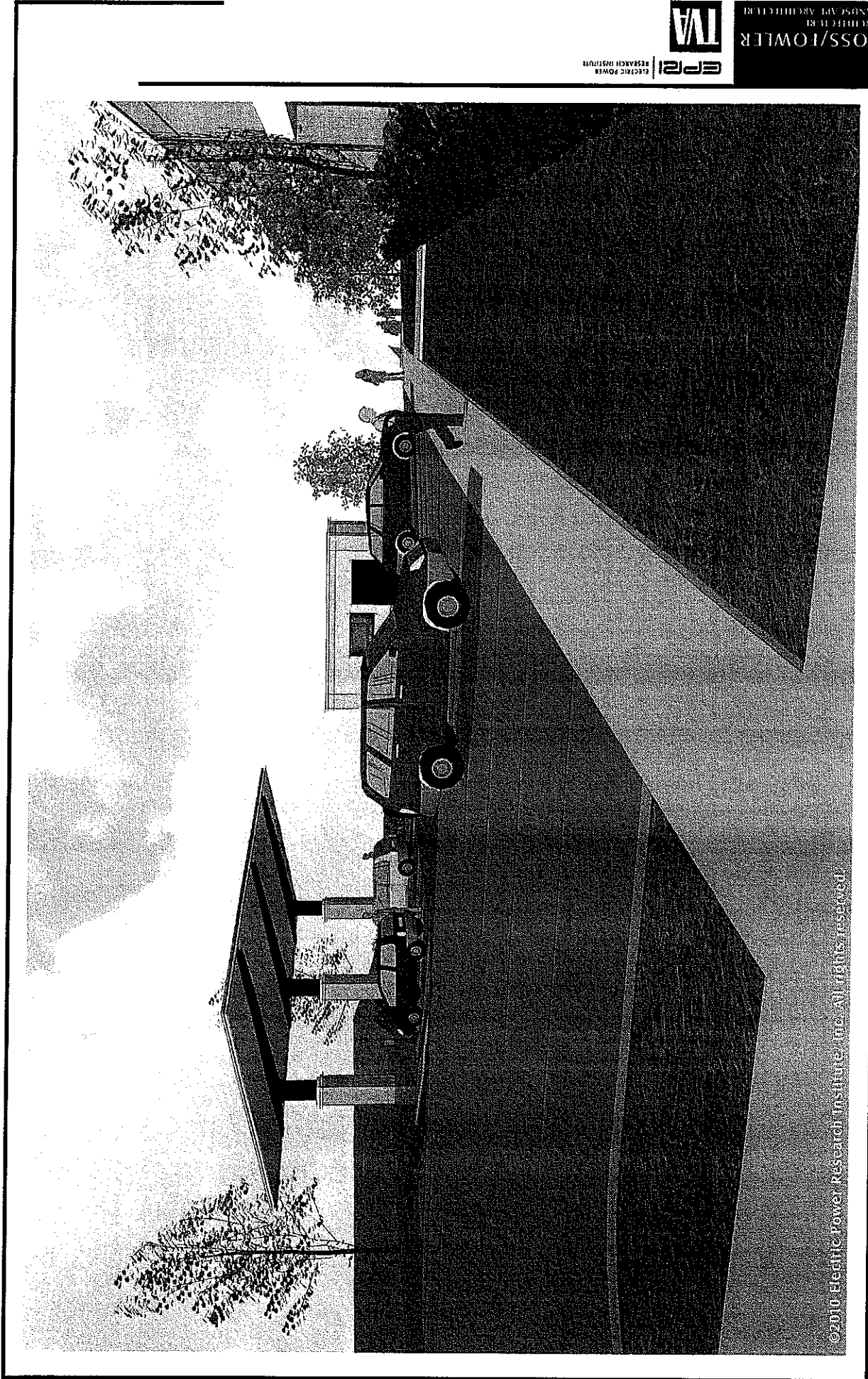
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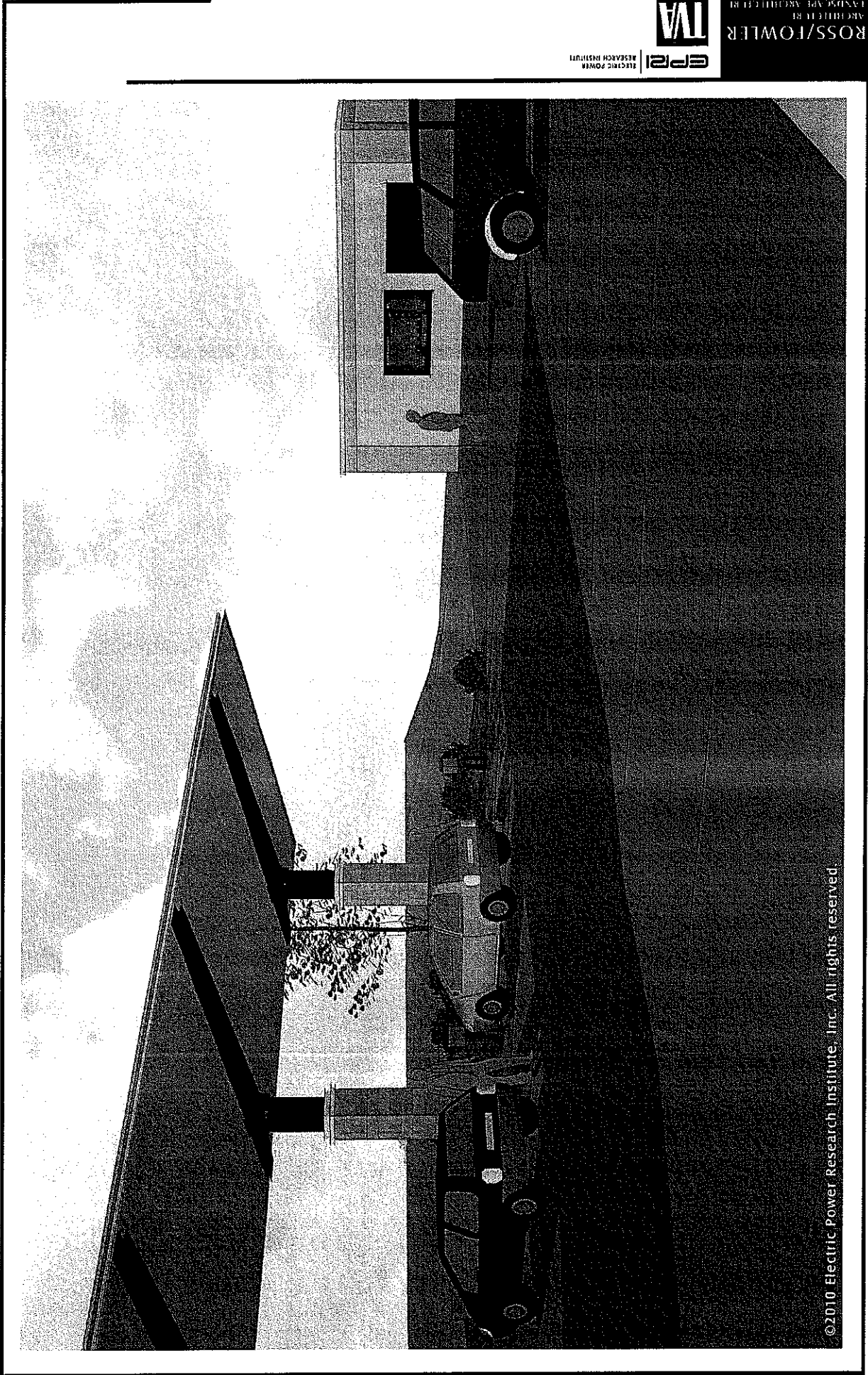
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